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Campus Entrepreneurship Enterprise Network (CEEN) is the Irish national network for promoting and developing entrepreneurship and enterprise at third level.

CEEN aims to create a sustainable national platform for raising the profile, extending engagement and further developing entrepreneurship across the Irish HEI sector.

Overview

- Entrepreneurship, entrepreneurial mindset and competences

- Policy context

- Research on entrepreneurship education and employability

- Research on Entrepreneurial teaching and assessment

- Conclusions

Entrepreneurship

- Entrepreneurship refers to an individual's ability to **turn ideas into action.**

- It includes creativity, innovation and taking calculated risk, 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." (European Commission, 2008)

Policy Background

• **Recommendation** of the European Parliament and the Council (2006): entrepreneurship a key competence for all.

•**Oslo Agenda** on Entrepreneurship Education in Europe (2007): a detailed menu of actions

•**EU 2020 strategy**: focus school curricula on creativity, innovation and entrepreneurship (2010)

Ireland

Recent entrepreneurship policy developments place new education targets on HEIs. For example, **the 2014 National Policy Statement on Entrepreneurship in Ireland** (DJEI, 2014) identified a role for HEIs in supporting entrepreneurship and innovation by way of embedding entrepreneurship in the education system across all levels of education.

The **HEA report on the HEI engagement activities with enterprise and society (HEA, 2015)** -focus on partnerships and employer participation in entrepreneurship education.

Report by the OECD and the European Commission (2017) on **"Supporting Entrepreneurship and Innovation in Higher Education in Ireland recommends developing links with innovative HEIs abroad, mentoring and industry engagement.**

8 | Entrepreneurship education activities in the institutional compacts of Irish higher education institutions (2016) - HEA

Table 1.10. **Entrepreneurship education activities in the institutional compacts of Irish higher education institutions (2016)**

Institution(s)	Details
University College Dublin, Trinity College Dublin	Provision for entrepreneurship jointly through the Innovation Academy; both are committed to mainstreaming entrepreneurship into the wider student experience.
University College of Cork (UCC)	UCC is planning to have an entrepreneurship component available to all programmes by 2016.
Institute of Technology Tralee	The Centre for Entrepreneurship Education Development targets all aspects of entrepreneurship and embeds it across the Institute. The Institute has an emphasis on researcher entrepreneurship and at present has particular emphasis on the food industry and on intergenerational entrepreneurs.
Galway-Mayo Institute of Technology	In GMIT, employability, including entrepreneurship, is identified as a key driver of its teaching and learning strategy; and GMIT aims to have an entrepreneurship module provided to all students by 2016.
Dublin Institute of Technology	Entrepreneurial skills and competence is a core part of the mission, vision and values of DIT, and these inform its research strategy. DIT has a formal objective to include an entrepreneurship module in 30% of programmes.
Cork Institute of Technology (CIT)	CIT treats entrepreneurial skill as a core graduate attribute which it aims for all CIT graduates to have.
Dún Laoghaire Institute of Art, Design and Technology (IADT)	IADT recognises that a high proportion of its graduates will be employed as sole trading entrepreneurs and seeks to embed preparation for this in its programmes; regionally it is focused on provision of entrepreneurship education for the creative industries.
Tallaght Institute of Technology	IT Tallaght has student entrepreneurship awards from its incubation centre.
National University of Ireland, Galway (NUIG)	A core principle of NUIG's research strategy is that research should be entrepreneurial.
University of Limerick	Junior entrepreneurship programme in Shannon consortium. Entrepreneurial Research Culture.

Historically

- We thought teaching business and finance was enough

- We neglected to make distinctions between creativity-based thinking and analytical thinking

- We limited our evaluation to business start ups and easy measurements

Now…

- Distinction between being entrepreneurial and being an entrepreneur

- Move from creating value to creating value for others (Lackeus, 2015).

- National and EU guidelines on EEE

Entrepreneurial mindset

The entrepreneurial mindset refers to a **specific state of mind** which orientates conduct towards entrepreneurial **activities and outcomes** (Fayolle *et al.*, 2014)

Individuals with entrepreneurial mindsets are often drawn to **opportunities, innovation and new value creation**.

Ireland *et al* (2003) define an entrepreneurial mindset as a **growth oriented perspective through** which individuals promote flexibility, creativity, continuous innovation and renewal

Competences

"Using the skills, knowledge and personal attributes which are needed to apply creative ideas and innovations to practical situations. These include initiative, independence, creativity, problem solving, identifying and working on opportunities, leadership and acting resourcefully to effect change"

(Rae, 2003)

Entrepreneurship as a competence

○ *Entrecomp* defines entrepreneurship as a **transversal competence**, which applies to all spheres of life: from nurturing personal development, to actively participating in society, to (re)entering the job market as an employee or as a self-employed person, and also to starting up ventures (cultural, social or commercial).

Entrecomp Competence Framework (2016)

Entrepreneurship competencies

(Gibb, 2007)

Behaviours	Attributes	Skills
Opportunity seeking	Self confident	Problem solving
Taking initiatives	Perseverance	Negotiating
Self management	Determination	Proposing
Networking	Creativity	Networking

What are the benefits to developing an entrepreneurial mindset and competencies?

1. Job creation – Entrepreneurship and innovation are primary paths to growth and job creation (Jones & Iredale, 2010)

2. Economic success – Renewal processes are fundamental to the vitality of economies (Kuratko, 2005)

3. Globalisation, innovation and renewal – Deregulated markets require individuals with higher level general skills (Henry et al., 2005)

4. Joy, engagement, creativity – creation/value creation/creativity are sources of joy and pride for people (Amabile & Khaire, 2008)

5. Societal challenges – Social (cultural etc) entrepreneurship can solve problems society has failed to address (Volkmann et al., 2009)

6. Prepares students for an uncertain work/life future" (Gibb & Cotton, 1998)

Irish Research - Employability

- To identify critical skills, attitudes and attributes sought by employers in Ireland, and compare their perceptions

- To determine if employers consider entrepreneurial skills critical for employability

- To find out how well HE in Ireland contributes to the development of crucial employability skills

Methodology

- Research in which the perspectives of three distinct groups on skills and attributes that increase graduate employability were studied:
  - **Educators** who design and teach at the Faculty of Economics of Josip Juraj Strossmayer University in Osijek and across all faculties at Cork Institute of Technology
  - Senior **students** at the Faculty and employers from companies of all sizes from the region and Senior undergraduate students across all faculties in CIT
  - Graduate **employer**s in Ireland and Croatia.

- Data was collected by means of self-administered questionnaire.

- 32 dimensions of graduate employability.

- Focus on Irish data from 29 employers, 161 senior level students and 39 educators.

Entrepreneurial Skills - Employer Ranking

Entrepreneurial Related Skills	Rank
Opportunity recognition	23
Making judgments on the basis of limited information	25
Taking initiative	11
Thinking outside the box and innovativeness	17
Independence	22
Desire for achievement	15
Work under pressure	14
Critical thinking	13
Positive attitude towards change	8

Employers Ranking of Employability Skills

Willingness to work	**1**
Enthusiasm and motivation	2
Teamwork	3
Work ethic	4
Learning skills	5
Application of knowledge	6
Diligence	7
Positive attitude towards change	8
Problem solving	9
Establishing & maintaining interpersonal contact	10
Taking initiative	11

Educators View – Skill Importance

Enthusiasm and motivation	1
Work ethic	2
Willingness to work	3
Teamwork	4
Establishing & maintaining Interpersonal contact	5
Learning skills	6
Application of knowledge	7
Problem solving	8
Diligence	9
Taking initiative	10
Critical thinking	11

Students View

Learning skills	1
Making Judgements based on limited information	2
It Usage	3
Thinking outside the box	4
Opportunity recognition	5
Desire for achievement	6
Deligence	7
Application of knowledge	8
Persuasion	9
Teamwork	10
Sense of humour	11

HE Contribution to Skill Development - Employers

Skill	Rank
Subject knowledge	1
Learning skills	2
Written communication	3
Teamwork	4
IT usage	5
Application of knowledge	6
Problem solving	7
Public speaking	8
Critical thinking	9
Work under pressure	10
Intelligence	11

HE Contribution to Skill Development - Educators

Skill	Rank
Subject knowledge	1
Teamwork	2
Learning skills	3
IT usage	4
Work under pressure	5
Written communication	6
Public speaking	7
Application of knowledge	8
Problem solving	9
Practial Experienece	10
Self confidence	11

HE Contribution to Skill Development - Students

Skill	Rank
Negotiation skills	1
Critical thinking	2
Positive attitude towards change	3
Sense of humour	4
Self confidence	5
Work ethic	6
Work under pressure	7
Written communication	8
Use of social networks	9
Teamwork	10
Problem solving	11

Contribution of Entrepreneurial Activity to Employability

Activity	Average Score out of 7
A student summer internship developing student business ideas	6.1
Partaking in college competitions showcasing innovative business ideas	5.9
Being part of a society that encourages entrepreneurship and innovation	5.8
Taking part in education covering all aspects of starting and running your own business	5.7
Taking part in social initiatives that benefit communities eg. volunteering	5.7
Taking part in a Tech based competition to win "Best App Idea"	5.3
Having a designated student role promoting entrepreneurship on campus	5.2
Competing in a Dragons Den style competition showcasing entrepreneurial ideas	4.9

Approach to Teaching Entrepreneurship

- Approaches vary between countries and institutions (KyrÖ, 2005)

- Need to consider intended learning outcome

- Focus on 'learning' rather than 'content'

- Dominant trend is still the lecture …but changing

- Continued focus on the business plan – buy why?

- Are more 'entrepreneurial' approaches actually better? (Carrier, 2007)

Learning Outcomes and Assessment in Entrepreneurship Education

Entrepreneurship and Enterprise Learning Outcomes

❑ Key entrepreneurial behaviours, skills and attitudes have been developed.

❑ Students clearly empathize with, understand and 'feel' the life-world of the entrepreneur.

❑ Key entrepreneurial values have been inculcated.

❑ Motivation towards a career in entrepreneurship has been built and students clearly understand the comparative benefits.

❑ Students understand the process (stages) of setting up an organisation, the associated tasks and learning needs.

❑ Students have the key generic competencies associated with entrepreneurship (generic 'how-to').

❑ Students have a grasp of key business how-to associated with the starting and running of an organisation.

❑ Students understand the nature of the relationships they need to develop with key stakeholders and are familiarised with them.

NEAR PROJECT

National Entrepreneurship Assessment Review

Aim to complete a review of the current assessment practices of entrepreneurship educators across all disciplines and faculties in Irish HEI's

AIM OF RESEARCH

Document Assessment practice in Entrepreneurship

Provide Typology of Different forms of Entrepreneurship Education

Training, Knowledge & support gaps of Entrepreneurship educators

Gain Insight in to Student perspective on assessment

Online Survey:
32 Educators
13 HEIs in Ireland
CIT, NCI, DIT, IT,
Sligo, DCU, IT
Carlow, DKIT,
NUIG, AIT, WIT,
UL, MIC, GMIT

Focus Groups:
45 Students
- Cork (CIT)
- Dublin (IADT)
- Kerry (ITT)

ENTREPRENEURSHIP MODULES DELIVERED ACROSS LEVELS & DISCIPLINES

TOURISM
180 Students

SOCIAL CARE
40 Students

MARKETING
72 Students

RECREATION & LEISURE
140 Students

ENERGY& CHEMICAL ENGINEERING
40 Students

COMMERCIAL SOFTWARE DEVELOPMENT
14 Students

ENGINEERING
78 Students

SOCIAL SCIENCE
30 Students

MUSIC
131 Students

CULINARY ARTS
63 Students

OCCUPATIONAL & PHYSIOTERAPHY
60 Students

MECHANICAL & BIOMEDICAL ENGINEERING
200 Students

ARTS IN CULTURE & HERITAGE
20 Students

VISUAL COMMUNICATION & DESIGN
15 Students

DIGITAL MEDIA & SOCIETY
10 Students

BUSINESS
1850 Students

Context…

Entrepreneurship education is identifiably not one thing (Gibb, 2002; Pittaway and Cope, 2007). It varies between:

❑ Forms (about, for, through and embedded)

❑ Theme of the course (Science, Technology, Arts, Engineering, Maths, Medicine etc)

❑ Learning outcomes desired from the course, the underlying disciplinary stance (even between disciplines within business schools)

❑ Educational philosophy applied by the educator

ENTREPRENEURIAL BEHAVIOUR, ATTITUDE AND SKILLS ASSESSED

1. Initiative-taking
2. Opportunity-seeking
3. Strategic thinking
4. Commitment to see things through
5. Ownership of a development
6. Personal locus of control
7. Achievement orientation
8. Intuitive decision-making with limited information
9. Networking capacity
10. Selling/persuasive capacity
11. Negotiation capacity
12. Incremental risk-taking

METHODS OF ASSESSMENT IN ENTREPRENEURSHIP

INVOLVING OTHERS IN THE ASSESSMENT PROCESS

27% 28% 49% 54% 81%

S S A A A

FOCUS GROUP

"I learn better
if I go out and do it, rather than sitting in
and reading"

"We learn about entrepreneurs, we learn
about what they have done, but we
never learn from when they started, we
learn about when they are at their peak"

FOCUS GROUP

"Include industry and entrepreneurs on panels and involve in marking and assessing business ideas, viability etc."

"There should be a balance between different types of assessment"

"The role of the educator is key, as is having real live data and material for assessment."

Final Thoughts…

Developing Entrepreneurial Effectiveness (source: QAA)

Learning in the curriculum - examples

Formal education 'about' enterprise and employability or guided assignments that raise awareness

Education 'for' enterprise. Opportunity centred learning and creative problem solving that intergrates business and e-learning

Group and individual projects/venture planning/innovation and design-based tasks, work placements and experiential & reflective contextualised learning

Self directed negotiated learning such as dissertations, projects and consultancy - ideally with external input and influence

Enterprise Awareness Understanding what enterprise means to me

Developing an Entrepreneurial Mindset Participating in enterprising learning & activities

Developing Entrepreneurial Capability Developing Capability & confidence through guided experience and practice

Entrepreneurial Effectiveness Independent self-direction/ Progressing individual goals and approaches

Specialist Start Up Units, Careers support, Student Union support and enterprise society interactions. Social media and distributed media

Business ideas generation, competitions, careers guidance and development of social and career networks. Enterprise Society events and engaging with business

Taking responsibility for social enterprise and community-based projects, organising activities and events. Student representation roles and engaging with business

Pre-incubation and venture planning, venture creation, coaching and being coached, internships and pro-active networking

Learning outside the curriculum - examples

- Preparing students for an uncertain work/life future …spiralled into addressing a set of complex economic and societal challenges.

- Suggestion that entrepreneurship education is somehow able to produce "superskilled" graduates who will be:

  entrepreneurially effective and capable of thinking creatively, solving problems, analysing business ideas, identifying opportunities, innovating, effecting economic growth, empowering others and creating both jobs and value for society (WEF, 2009).

  - Balances approach between mastery of the discipline and entrepreneurial skills, particularly at postgraduate level (Dooley and Kenny, 2015)

  - Use the supports, models and frameworks that are available at National and EU level and tailor to own needs

  - Use existing elements of the entrepreneurship ecosystem on each campus

Thank You

Questions?