



3E CONFERENCE PROCEEDINGS

Book of Abstracts

3E Conference – ECSB Entrepreneurship Education Conference

2017

3E CONFERENCE – ECSB Entrepreneurship Education Conference

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ECSB European Council for Small Business and Entrepreneurship

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Preface

Dear colleague,

It is with great pleasure we welcome you to the *3E Conference - ECSB Entrepreneurship Education Conference 2017*. This book presents the abstracts of the fifth 3E Conference held on 10–12th May 2017 in Cork, Ireland. The Conference is hosted by the Cork Institute of Technology, The Hincks Centre for Entrepreneurship Excellence and the European Council for Small Business and Entrepreneurship (ECSB).

Entrepreneurship Education is recognised as a way to support learners, at all levels of education, to develop the skills and attitudes to work within, and adapt to, a changing global economy. However, we should not lose sight of the capacity to help learners to engage critically with the drive for entrepreneurship; encouraging them to engage with the positive and negative impacts; and exploring new and diverse ways of creating value for European society and the economy. In doing so, we can also help them to understand their role as enterprising employees, as well as discovering and developing their entrepreneurial potential. This context requires us to reflect upon what we teach, how we teach and ultimately the rationales for our chosen approaches. As educators we also need to engage those outside the academia, sharing our experiences and creating a dialogue with practitioners and policy makers at all levels and with local, national and international business communities.

Through an innovative and unconventional format, the 3E Conference has established a new approach for entrepreneurship conferences. Unlike many conventional academic events, the Conference focuses on problems and questions rather than on ready-made solutions and presentations of research findings. It offers an exclusive and engaging opportunity for educators, researchers, practitioners and policy makers to debate and exchange experiences of the major challenges and advances in enterprise education, with a special focus on Europe.

The theme of 3E 2017 is “*Building for the Future – Entrepreneurship Education, Training and Policy*”. Following the success of last year’s three-day model, this year there were also two calls, one for research papers and one for practitioner development workshops (PDW). The first day, 10th May, is dedicated to 24 practitioner development workshops. On 11–12 May 35 research papers are presented. We wish to thank the reviewers and session chairs for their valuable work.

On behalf of the organisers, we want to thank all the presenters and authors for their papers and wish you an exciting and stimulating 3E Conference.

Breda Kenny
Conference Chair
Cork Institute of Technology

Robert Blackburn
President of ECSB

In cooperation with:



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PRACTITIONER DEVELOPMENT WORKSHOPS

WHAT WILL ENCOURAGE MORE WOMEN TO APPLY FOR VENTURE CREATION AND TEAM ENTREPRENEURSHIP PROGRAMMES AT UK UNIVERSITIES?

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Joan Lockyer, Coventry University

Carol Jarvis, University of the West of England

Abstract

With the notable exceptions of Lackéus and Williams Middleton (2015) and Tosey et al (2015), very little research on Venture Creation Programmes (VCPs) and Team Entrepreneurship Programmes (TEPs) has been published. This work does not address the gender imbalance on these programmes in the UK.

However, whilst entrepreneurship education is now seen by many as an important part of the future of Higher Education, encouraging student engagement and fostering the development of an entrepreneurial mindset which is so important to thrive in the workplaces and start-ups of the 21st century, women are currently under-represented on these programmes in the UK.

Whilst data on female entrepreneurs (and entrepreneurs more generally) can be inconsistent, they do suggest that in the UK, women are under-represented on entrepreneurship education programmes in relation to the proportion of women entrepreneurs, a picture not necessarily replicated internationally. For example, in each year since they started, VCPs (from 2006) and TEPs (from 2013) in the UK have typically attracted cohorts where less than a quarter of students are women. This compares with estimates that suggest women make up a little over one-third of entrepreneurs generally. The number of women entrepreneurs across Europe grew from 10% to 10.4% in the period 2003 and 2012 (EC, 2014), so perhaps this level of engagement is the most we can expect.

In 2011 Enterprise Educators sponsored the first known research in the area. The results of the research in how to encourage women to develop their entrepreneurial spirit, by engaging in study that supports business start-ups (VCPs) were presented at IEEC in 2012. The research also produced a “Guide to entrepreneurship educators on how to encourage women to join VCPs”. Since 2012 some of the VCPs and TEPs have seen a slight increase in the number of women applicants, but women on our programmes still make up a significantly lower proportion of the cohort than they do of practicing entrepreneurs. By contrast, the proportion of women on the equivalent TEP programmes in Finland and Spain are slightly above the proportion of women entrepreneurs. We aim to use this workshop to explore this issue on our programmes and to help shape our research and practices going forward.

Our provocations in this Practitioner Development Workshop are to enquire into:

1. What lies behind the gender imbalance on these programmes in the UK?
2. Does the gender imbalance matter or should we just accept that the proportion of women attracted to entrepreneurship is marginal.
3. What can we learn from the experience of others or generate through shared discussions that may help to address the issue?

This is a highly interactive workshop and we welcome active participation from all present, both to gain new insights into the design and practice of entrepreneurship programmes and into developing new avenues for applied research in the area.

References

European Commission (2014) “Statistical Data on Women Entrepreneurs in Europe”, see

[file:///C:/Users/aa7114/Downloads/Statistical%20Data Women%20Entrepreneur Report.pdf](file:///C:/Users/aa7114/Downloads/Statistical%20Data%20Women%20Entrepreneur%20Report.pdf)

Lackéus, M. and Williams Middleton, K. (2015). Venture creation programmes: bridging entrepreneurship education and technology transfer, *Education + Training*, 57(1), 48 – 73.

Tosey, P., Dhaliwal, S. and Hassinen, J. (2015) ‘The Finnish Team Academy model: Implications for management education’ *Management Learning*, 46(2), pp175-194.

TEACHER'S PAIN - HOW TO MANAGE COOPERATION WITH LOCAL COMPANIES. PRACTICAL CASES IN VOCATIONAL AND HIGHER EDUCATION

Kaija Arhio, Centria University of Applied Sciences (kaija.arhio@centria.fi)

Leena Eskola, University of Oulu

Heidi Hietala, JEDU Federation of Education

Abstract

In this workshop cooperation between educational organizations and local companies will be described with two practical cases: one case from vocational education and another from higher education. From the theoretical point of view this is a qualitative case study based on authentic learning. The background of this study rises from a regional entrepreneurship education strategy, which was done by using participatory method of strategy building.

Entrepreneurship education in schools is seen to be significant in developing welfare in Europe. In Finland entrepreneurship education has been systematically developed. In Northern Ostrobothnia entrepreneurship education has been put into practise in various different ways. In the beginning of 2016 the common strategy for entrepreneurship education for the whole region was published (www.minunpolkuni.fi) .

Goal of the common strategy is to unify and develop entrepreneurial competencies in all levels of education from kindergarten until university. To make sure that the strategy will be implemented to practise in teaching, the teachers were involved in this strategy process. Putting the strategy in practise means continuous development in education and curricula. One important element in entrepreneurship education in vocational and higher education is practical cooperation with local companies.

During the strategy building process some data has been collected also through web-based measurement tool for entrepreneurship education. Through the results of this survey we have got results of the level of entrepreneurship education practices in vocational and higher education. One element measured with this tool is cooperation with local businesses. It is remarkable that most of the companies in our area are SME's. To deepen our knowledge concerning the cooperation some teachers were interviewed both in vocational education and higher education organisations.

During the workshop we describe two different cases of cooperation – one from vocational education and another from higher education. In this workshop we will focus on the question: How to manage cooperation with local companies? By presenting these practical cases of cooperation we share our experiences and the audience will be inspired. They will also get ideas to be used when developing entrepreneurship education in different levels of education.

ACTIVATING UNIVERSITY TEACHERS TOWARDS ENTREPRENEURIAL TEACHING THROUGH IMPLEMENTING ENTREPRENEURSHIP EDUCATION STRATEGY

Kaija Arhio, Centria University of Applied Sciences (kaija.arhio@centria.fi)
Marja-Liisa Kaakko, Centria University of Applied Sciences

Abstract

According to the European Commission's Entrepreneurship 2020 Action Plan school-based entrepreneurial learning is a key issue in ensuring the development of the European welfare. Many national strategies have been written during last decade to enhance entrepreneurship education. However, the reality in schools may look different. The teachers are not necessarily engaged to entrepreneurial education.

The discussion about entrepreneurial universities has been active since Oslo agenda. According to OECD (2013) "entrepreneurial higher education institutions are designed to empower staff and students to demonstrate enterprise, innovation and creativity in research, teaching and pursuit and use of knowledge across boundaries". One important character of entrepreneurial university is entrepreneurship development through teaching and learning.

As a background of our case is an EU-funded regional project (2015-2017) developing entrepreneurship education. The objectives of this three year project focus at first stage on preparing an entrepreneurship education strategy and operating model for our region. This strategy covers all educational levels from kindergarten until university.

After strategy process the most actual question is "How to make this happen in educational organizations?" Objective of this case is to open the process in higher education. We always argue that we are an entrepreneurial university, but is this the reality? Every teacher needs entrepreneurial mindset and new ideas to develop entrepreneurial learning with the university students. This session will focus on practicalities when implementing the strategy in practice.

In this case the implementation plan of entrepreneurship education strategy has been introduced and discussed during the common staff meetings. The first teachers training sessions has been implemented and further meetings planned. Before the training sessions the teachers have been answered some questions about entrepreneurship education. This includes methods used and future ideas to be implemented. As a result of this we get a collection of entrepreneurial education practices. These good practices need to be shared among all members of staff. This case is also contributing the discussion about entrepreneurial university.

CASE STUDIES IN ENTREPRENEURSHIP EDUCATION

Tom Cooney, Dublin Institute of Technology (Thomas.cooney@dit.ie)

Workshop Summary

This workshop is targeted at people who wish to develop their ability to write case studies for teaching purposes. It will address the key challenges involved in identifying and writing case studies, plus offer a range of techniques and guidelines to enable academics to write effective cases. This work can be used to support teaching activity and cases also have the potential to be published in journals such as Small Enterprise Research (<http://www.tandfonline.com/toc/rser20/current>).

Workshop Style

The workshop will follow the format of the 3E Conference and will be without PowerPoints. The workshop will begin with an overview of the key techniques that can be adopted when writing cases and will then open into a Q&A session to allow participants to have their specific concerns addressed.

Expected Outcomes

At the end of the workshop, participants will have gained an insight into the structure and techniques involved in writing case studies for teaching purposes, plus they will have support materials that can be utilised when they begin writing. It will debunk some of the myths surrounding case writing and enable participants to appreciate the process involved in case writing.

Details of any related research

Free case studies can be downloaded for use in the classroom at <http://www.eecsrc.eu/>. Additionally, a 90-minute webinar, plus PowerPoint slides, on writing case studies can be viewed at <https://icsb.adobeconnect.com/a828399639/p2eyuv9miy/?launcher=false&fcsContent=true&pbMode=normal>.

IMAGINING ENTREPRENEURSHIP: EXPLORING ENTREPRENEURSHIP USING IMAGE-BASED METHODS

Katarina Ellborg, Linnaeus University (katarina.ellborg@lnu.se)

Workshop Summary

This workshop is based on the challenge that entrepreneurship educators address various groups of students (e.g. science, humanities, engineering, health care). Since the end of the twentieth century, entrepreneurship has been widely established as an essential subject in higher education. This development of entrepreneurship education concerns both business and non-business students. But what are we talking about when we talk about entrepreneurship in education? To date, few studies investigate methods to capture students' preconceptions of entrepreneurship, or how students from different disciplines relate to this concept. Taking inspiration from image-based research, this workshop intends to discuss the following question: If and how can we use image-based teaching in entrepreneurship education to create a student-based learning approach and capture students' preconception of entrepreneurship? The participants are invited to share and learn from each other's definitions of entrepreneurship and examine an image-based exercise that has been used in entrepreneurship education at Linnaeus University, Sweden. The method offers a way for students to create meanings about entrepreneurship by relating photos to their past experiences and beliefs. Hopefully the workshop raises awareness about students' different perception about entrepreneurship and how this can affect entrepreneurship education and contribute to research in this area.

Workshop Style

The workshop will be conducted, primarily, as an exploration of a *Photo-Elicitation* process, where theme and values are generated on the basis of the participants' apperception of various images. The session is therefore mostly interactive and focuses on sense-making in entrepreneurship education and development of image-based teaching-methods.

Expected Outcomes

- Learn more about how images-based research-methods can be used as image-based teaching in entrepreneurship education.
- Exchange experiences of entrepreneurship education based on images.
- Participate in the development of an image-based teaching-method.

Details of any related research

Entrepreneurship education requires the perspective that entrepreneurship can be taught and learned. The challenge seems to be how? Within psychology and narrative research, images are used to approach abstract concepts and to share subjective interpretations. The *Thematic Apperception Tests* and *Photo Elicitation* are examples of proven image-based research methods, which can be transferred to different contexts. Following Gartner (2011), connecting these methods to entrepreneurship education, might be one way to implement a student-centred attitude, assuming that learning, and sense-making, starts with what we already know. The method mirrors Gartner's policy Delphi in *What are we talking about when we talk about entrepreneurship?* (Gartner 1990) but focus on students and their interpretations. The aim is to create relevance and compose a sense-making education in a complex area.

Gartner, W. B. (1990). What are we talking about when we talk about entrepreneurship? *Journal of Business Venturing*, 5(1), 15-28.

Gartner, W. B. (2011). Re-imagining The Achieving Society. In K. Hindle & K. Klyver (Eds.), *Handbook of Research on New Venture Creation*: Edward Elgar Publishing.

CAN THE SUCCESS PRINCIPLES OF IRELAND'S MOST ACCOMPLISHED MEN AND WOMEN BE APPLIED BY ASPIRING ENTREPRENEURS TO HELP THEM REACH THEIR GOALS?

John Finnerty, Life Coach, Limerick (johnfinnerty1@gmail.com)

Workshop Summary

Success leaves clues. To achieve success in any walk of life one need only research who has already done what you want to do. I have interviewed 13 of Ireland's most accomplished men and women (and hope to interview another 25 or so in the coming year). I have distilled this knowledge into a number of principles which all have a commonality and a universal application. If these principles work in practice, can fledging Irish entrepreneurs apply them to their own lives and careers? To achieve success in the marketplace entrepreneurs must take a number of definitive steps and actions. The development and delivery of entrepreneurship courses must reflect this action-based approach in my view. I have designed such a course. This workshop is designed so that participants are fully engaged throughout the process. It is they who come up with the ideas and it is they who draw their own conclusions and move the concepts forward in a fashion that is most practical and applicable.

Workshop Style

This workshop is experiential, practical, innovative and exploratory in nature. The participants are divided into groups and asked to come up with solutions, specific issues and opportunities. Their responses are reinforced by examples of real life stories from Irish men and women who've achieved considerable success in their respective niches, both nationally and internationally.

Expected Outcomes

Participants will emerge with new insights on how such entrepreneurship strategies can be developed. Participants have full ownership of the process and the outcomes. The emphasis is on practical, real-life opportunities and strategies as opposed to the solely theoretical.

Participants will emerge with a good understanding of how some of Ireland's top achievers succeeded despite the normal barriers and adversities they faced along the way. The "impossible" is made possible by relating real-life practical examples of entrepreneurs and demonstrating how the challenges they overcome to achieve their goals vary little from the challenges we all face in our daily lives.

Details of any related research

I have interviewed 13 of Ireland's most successful men and women in Business, Sport, Politics, Investment, Activism and Adventuring including Brian and Luke Comer, Billionaire Property Developers and Investors, Niall O' Dowd, New York based businessman and key mover in the Northern Ireland peace process, Stephen Roche, former pro cyclist and winner of the Tour De France and Enda O Coineen, entrepreneur and adventurer.

GRADUATING FROM HIGHER EDUCATION IN YOUR OWN STARTUP? SUPPORTING STUDENT-ENTREPRENEURS IN FINISHING THEIR BACHELOR WHILE BUILDING THEIR BUSINESS.

Martin Haring, University of Applied Sciences Amsterdam (m.haring@hva.nl)
Ingrid Wakkee, University of Applied Sciences Amsterdam

Workshop Summary

Around the world universities are experimenting with forms of entrepreneurship education that include the startup of an actual new venture by students. While many students abandon this venture at the end of the course, some students persevere and try to develop their business while finishing their education.

As the final semester typically involves the writing of a thesis or academic paper based on literature and field research combining the two is often a challenge. Indeed, both processes necessitate significant time and intellectual investments but require different logics. Particularly because many thesis supervisors are rather hesitant towards the idea of allowing students to focus their final project on their own venture, for fear this will compromise academic rigor and the required level of abstraction. Consequently many students who would like to combine starting a venture with finishing their higher education fail in either one or even both of these process.

In order to solve this problem at the Amsterdam University of Applied Sciences a small group of enthusiastic teachers has set up a program to support students who want to pursue this dual trajectory. The aim is to guide the student by developing their company to a higher level through a targeted research project and to help him to deliver a thesis that meets the standard of his bachelor education and within the timeframe set for it. So far, this program has yielded mixed results both in terms of organizational support and student outcomes.

Workshop Style

In this workshop we would like to share our experiences in this program and evaluate the process on the basis the case of the “Oystergal”. We will discuss the selection and admission process, the research problem formulation, mentoring, and evaluation. We will engage in a debate with the workshop participants who have tried deal with similar issues in their institutions to see how we can improve upon our practices and help students. In our workshop we will make use of the results of a questionnaire filled out by the participants: <http://bit.ly/2nRul4g>

Expected Outcomes

Some guidelines on how this process can be implemented in your university or how to improve the process you already started.

Details of any related research

Bacigalupo, M., Kampylis, P., Punie, Y., & Van den Brande, G. 2016. *EntreComp: The Entrepreneurship Competence Framework. Luxembourg: Publication Office of the European Union.*

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HOW CAN ENTREPRENEURSHIP EDUCATION HELP BACHELOR STUDENTS TO GET INTRINSICALLY MOTIVATED?

Martin Haring, University of Applied Sciences Amsterdam (m.haring@hva.nl)
Ingrid Wakkee, University of Applied Sciences Amsterdam

Workshop Summary

When experiencing with classes from 2006 till this moment we found that it was not enough for the students in the bachelor phase of the university to be confronted with cases of entrepreneurs or with writing a business plan, but that the real thing made their heart tick. So we developed a 30 ECTS course called minor entrepreneurship to which students from all the faculties of the university of Applied Sciences could apply with the assignment to start their own business during this period. The process of starting a business of their own also confronted the students with their own strengths and weaknesses.

During the minor entrepreneurship we facilitated support for the main three processes of entrepreneurship: discovering and exploiting profitable opportunities (Shane and Venkataraman, 2000), the access, mobilization and deployment of resources in order to exploit the opportunities (Garnsey, 1998) and the obtaining of legitimacy with the help of the students network and the universities network (van der Ven, 1993). We used the theory of effectuation (Sarasvathy, 2001) as a guideline for our students.

We like to share our experiences with you and hope we can help each other in finding ways to reach our students by using the vehicle of entrepreneurship.

Workshop Style

Story about the way we intrinsically motivate our students. Then we have a discussion about the topic how we can intrinsically motivate our students using the vehicle of entrepreneurial education. We can end the session singing "always look at the bright side of life".

Expected Outcomes

We might learn from our experiences with ways we motivated our students and tell each other how we sometimes failed completely and other times won the hearts of our students.

Details of any related research

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MAKING THE TEACHING AND PRACTICE OF SOCIAL ENTREPRENEURSHIP COME ALIVE FOR STUDENTS: INTEGRATING CLASSROOM AND FIELD EXPERIENCES THROUGH ENACTUS

Scott A. Johnson, The College of Idaho (sajohnson@collegeofidaho.edu)
Bastian Thomsen, The College of Idaho

Workshop Summary

This workshop examines the implementation of teaching social entrepreneurship to undergraduate business students through course development, an extracurricular team (part of the international organization Enactus), service-learning projects, international excursion, and personal reflection. It first explores the components of what makes up social and entrepreneurship individually, and how to ensure students comprehend the impact each has on a given project. It proceeds to proffer how to link the two critical approaches together theoretically to strengthen student comprehension of their individual and collective impact on the community they are serving to increase sustainability and cultural awareness. To put this approach of social + entrepreneurial education into action, the educators leveraged the social entrepreneurship organization Enactus with its campus-based team of students interested in “entrepreneurial-based projects that empower people to transform opportunities into real, sustainable progress for themselves and their communities.” Initial feedback suggests that the integrated Enactus framework improves student comprehension and understanding by testing social ideas in an entrepreneurial format. The workshop will conclude by emphasizing the need to include cultural considerations, working with other organizations, and ensuring that even well-intentioned social entrepreneurship projects are sustainable and do not force acculturation upon the host community.

Workshop Style

- 10 minutes: Discussion of our approach to teaching social entrepreneurship utilizing the Enactus model.
- 30 minutes: interactive conversation regarding questions that explore potential challenges and problems with our approach. It will conclude with a brief overall summary of how to potentially implement audience feedback into future projects and research.

Expected Outcomes

Expected outcomes of this workshop include a pivotal discussion in background research highlighting the strengths of social and entrepreneurial programs, how Enactus improved student learning, potential pitfalls, and how to apply these concepts in different areas of the world, by emphasizing the importance of cultural understanding, collaboration, and sustainability.

Details of any related research

Attending this conference with students as an Enactus international excursion and complementary service-learning project is part of our overall research agenda. A sub-theme of this research is to examine the perspectives and experiences of the international students participating in this excursion who are not from the US. We anticipate that mixing multiple cultural backgrounds will lead to different perspectives, and are intrigued if they create positive outcomes or potential conflict within the Enactus structure.

HOW CAN WE BRING GENDER IN TO THE ENTREPRENEURSHIP EDUCATION CLASSROOM?

Sally Jones, Manchester Metropolitan University (SJones@mmu.ac.uk)

Workshop Summary: This workshop offers insights into an 11-week undergraduate module on Gender and Entrepreneurship. We will work through some exercises and group tasks that I use on this module to engage students with critical concepts in gender and entrepreneurship. The module is underpinned by critical, social feminist theory and pedagogy and I will introduce these concepts and how they relate to the aims of the practical exercises and the module. We will also consider the potential for stereotype threat (Steele and Aronson, 1995) and stereotype lift (Walton and Cohen, 2003) when bringing gender into the classroom. I will give a brief overview of the module and share two classroom exercises that I use to sensitize students to aspects of gender theory. I will encourage discussion, debate and the sharing of personal insights into the effects of gender, as I do with students on the module. These tasks are: 1) The Entrepreneurial Personality Index¹, 2) Zone of Relevance. I will share some of the media articles that are used in class to draw out some critical and feminist debates that relate to entrepreneurship. These are used to help students make links between theory and practice. I will also outline how assignments can be used to help students critically engage with gendered representations of entrepreneurship in the media. The session ends with a discussion of how *you* bring gender in and if you don't, or feel you can't, what the barriers may be. You will be encouraged to send me your own exercises, resources, and experiences of 'bringing gender in' to share with other attendees after the conference.

Details of any related research: There is an emerging body of feminist and critical research exposing entrepreneurship as a masculinized phenomenon (Ahl, 2006, Marlow and McAdam, 2013). However, the recognition of, and challenges to, the gendering of entrepreneurship has yet to be consistently brought into the classroom. Although educators may be conscious of such arguments and concerns, particularly given the increase in female HE students globally, Drudy and Chathain (2002) suggest that teachers' concerns about gender are often located in the structural and curriculum levels, rather than in classroom practice. Much emphasis is placed on role models in entrepreneurship education (Anat *et al.*, 2011), and while an important aspect, I suggest it is not enough simply to provide students with role models and to use a diverse range of businesses. We also need to engage with the students themselves, drawing out their own gendered attitudes and assumptions and supporting them to understand how gender can and does affect them on a day to day basis and as potential entrepreneurs. My own research highlights the potential to reproduce damaging, masculinized discourses if we keep gender out (and are gender-blind or gender-neutral), and where we emphasize meritocracy and agency without considering social context (Jones, 2014, Jones, 2015). However, if gender *is* brought into the classroom in an unreflexive way, it has the potential to promote stereotype threat (Steele and Aronson, 1995) and stereotype lift (Walton and Cohen, 2003) in female and male students, respectively (Jones, 2013). A critical social feminist approach is useful here, as it questions mainstream constructions of successful entrepreneurship and entrepreneurs. It also emphasizes the broader role of social structures such as the family, education and the media, and how these can shape the opportunities, experiences, aspirations and motivations of men and women differently. As such social feminism "... (recognizes) difference but in a context of equality. This difference arises essentially from socialization processes which shape gendered forms of behavior." (Marlow and Patton, 2005:721).

What should participants do in advance: Reflect on how you bring gender into the classroom and be prepared to share examples of practice during and/or after the session. If you would like to bring gender in and/or have found it difficult, please reflect on why this is and what sort of help you might need.

Expected participant outcomes and takeaways:

- 1) Insights into the planning, development and delivery of a module on Gender and Entrepreneurship.
- 2) An understanding of the role of critical and feminist pedagogies and some links to explore further.
- 3) Some practical exercises that you can use in your classes.
- 4) The opportunity to reflect on your own gendered attitudes and assumptions.
- 5) Access to further, practical examples of how other attendees bring gender in

¹ It would be helpful if delegates had access to a calculator for this (bring your smartphone!)

DEVELOPMENTAL PROJECT TO CREATE A TRANSPORTABLE LEARNING ENVIRONMENT TO ENHANCE ENTREPRENEURIAL COMPETENCIES

Minna Riikka Järvinen, Development Centre Opinkirjo (Minnariikka.jarvinen@opinkirjo.fi)

Workshop Summary

In the autumn of 2016, a developmental project was set up to design a learning environment for entrepreneurial learning for 1st to 9th graders (7-16 year olds) and place it in an ocean container. The idea is to create an effective learning environment that can be transported anywhere and that contains the equipment needed to enhance entrepreneurial competencies. In this practitioner development workshop, I call upon researchers of entrepreneurship education to design the solutions essential for entrepreneurial learning as well as the research settings we will require to gather evidence on the effectiveness of the transportable learning environment. Our aim is to use other researchers to plan how the pedagogical design process should be carried out and how the effectiveness of the solutions should be assessed.

Key Questions

- 1) Which key entrepreneurial competencies should we choose to focus on?
- 2) What are the key pedagogical methods and practices that should be used?
- 3) How should the desired outcomes be evaluated, i.e. how should the effectiveness of the learning environment we have created be evaluated?

Theories, models, and pedagogies informing the approach

The need for 21st-century skills and entrepreneurial competencies has influenced the design of the core curriculum for basic education in Finland, as it has in many other countries (Binkley et al., 2012; Vahtivuori-Hänninen et al., 2014; Kankaanranta & Vahtivuori-Hänninen, 2011; Salo et al., 2011; Vahtivuori-Hänninen & Masalin, 2012). These competencies overlap with entrepreneurial competencies such as creative problem solving and innovation, risk-taking, and grit (see Lackéus, 2015).

Workshop Style

Expected number of participants: 12-18 persons.

Division of groups into 4-6 persons, i.e. 3 groups. Double team -method. 40 min.

Expected Outcomes

Participants in my session will get as a takeaway the summary of the results (the opinions of the working group about the key competencies, pedagogical methods, and ways of evaluating the topic).

To cite my reviewer: *"If we keep boiling the soup down to a very small and condensed cube, what would it taste like? What few tools would you bring to a deserted island? It is a great idea to use the container as a reason for boiling entrepreneurship education down to its very essence. What do entrepreneurship educators see as the essence of entrepreneurship education, since the container is only able to hold a few essential elements?"*

INNOVATIVE ENTREPRENEURSHIP ASSESSMENT

Breda Kenny, Cork Institute of Technology (breda.kenny@cit.ie)
Therese Moylan, Dún Laoghaire Institute of Art, Design + Technology

Workshop Summary

This workshop is designed to surface key issues and share experiences regarding assessment within entrepreneurship education programmes. The rationale and content of this workshop is practitioner led and based around the NEAR (National Entrepreneurship Assessment Review) research findings. This workshop will allow participants to explore innovative and authentic assessment methods for the various forms of entrepreneurship education relevant to their teaching. Participants are required to work through a framework for designing entrepreneurship assessment.

Workshop Style

This workshop will start with a short overview of the key findings of the NEAR research. Participants are then required to work in pairs or groups of 3 or 4 to apply a framework for designing innovative and authentic assessment methods for entrepreneurship. The final part of the workshop will gather feedback and discussion from each group on the assessment ideas designed and also on the usability of the model for practice.

Expected Outcomes

The workshop will provide an overview of the range of assessment practice in entrepreneurship education across the higher education sector in Ireland along with an insight into the student perspective on assessment practice in entrepreneurship education. A framework for designing innovative and authentic assessment methods for Entrepreneurship education will also be provided.

Details of any related research

Recent entrepreneurship education literature notes that assessment practice is an important consideration and that it has been somewhat neglected by researchers (Pittaway and Edwards, 2012; Gibb, 1998). It varies between: forms of entrepreneurship education (about, for, through and embedded); the theme of the programme or module (e.g. food entrepreneurship, creative entrepreneurship, technology entrepreneurship); the learning outcomes desired, the underlying disciplinary stance (even between disciplines); and, the educational philosophy applied by the educator. To understand assessment practice in entrepreneurship, we need to observe actual practice through empirical research and do so in a comprehensive way to appreciate the different forms and types that entrepreneurship education might take.

The aim of the NEAR research was to complete a review of the current assessment practices of entrepreneurship educators across all disciplines and faculties in Higher Education in Ireland. An online survey for entrepreneurship educators was developed and disseminated to educators in all HEIs in Ireland. 32 useable responses were received from 13 HEIs. For the student perspective, three focus groups were conducted in Cork (CIT), Dublin (IADT) and Kerry (ITT). Each Focus group followed a standard protocol and the findings from all three were collated and analysed. A total of 45 students participated in the focus groups.

HOW CAN SOCIAL LEARNING MEDIA FACILITATE ENTREPRENEURIAL EDUCATION?

Martin Lackéus, Chalmers University of Technology (martin.lackeus@chalmers.se)

Workshop Summary

Assessment is a vexing issue in entrepreneurial education (EE), given its strong emphasis on experiential learning. Rigid educational structures require EE teachers to focus on teaching that can be easily measured, making assessment a conundrum. By combining performance assessment, reflective assessment, learning analytics and experience sampling, a new category of IT tools has been formed and labeled social learning media (SLM), signifying social media that is optimized for social learning. This development could be of particular importance to EE. The workshop aims to crowdsource new insights around SLM through a learning-by-using-SLM approach. SLM is different from neighboring concepts such as learning management and social media in a number of significant ways. The focus of SLM is on digitally mediated one-to-one teacher-student relationships through trustful reflective dialogue by means of mobile apps and web. This allows for formative assessment and quantification of the educational experience, contributing to both practice and research. SLM has been used by EE teachers to structure action-based learning processes into digitally managed task packages, and to facilitate assessment through mandatory task-based reflection. For EE research SLM has provided new kinds of data on what goes on in the “black box” of EE. SLM has also been used to drive change in educational institutions.

Workshop Style

Participants will select one of four working groups; teaching, assessment, research or organizational development. The groups will focus on how/why SLM can be applied: 1) in your own EE teaching, 2) for advancing EE assessment, 3) for advancing EE research and 4) to promote school/university organizational development around EE.

Expected Outcomes

Given that the above stated usefulness of SLM is merely exploratory, this workshop serves to generate ideas for additional ways and settings where SLM can contribute. This will be attempted through the question: How can SLM contribute to advancing EE teaching, assessment, practice and organizational development?

Related research and practice

SLM builds on performance assessment, reflective assessment, learning analytics and experience sampling. Performance assessment is about letting students perform meaningful real-life tasks and assess them on task accomplishment (Isaacs et al., 2013). Reflective assessment is about assessing students by letting them reflect on their experiences (Bond & Ellis, 2013). Learning analytics is about improving learning environments by collecting electronic data generated by students as they learn (Martin & Sherin, 2013). Experience sampling is a research procedure for studying people’s thoughts, actions and emotions in real-life settings (Larson & Csikszentmihalyi, 1983). SLM was identified as a new category through action-based research in EE (Lackéus, 2016). An example from practice is a teaching module focused on sales for entrepreneurs facilitated during four months through SLM. The SLM tool was used to assign 14 action-based tasks to the students, to collect mandatory reflections, emotional pleasantness and categorizing labels around each task. This resulted in rich data on each student’s learning journey, facilitating assessment and research.

Mandatory preparation of 30-60 minutes: Three mini-tasks

All participants are required to register on www.loopme.io with the invitation code ARR572. This takes you to a group with three mini-tasks that are mandatory to complete and reflect upon before the workshop. This will take 30-60 minutes. Internet connection is needed. Your reflections might be used in the workshop in anonymized form if submitted at least one day in advance.

MULTI-DISCIPLINARY APPROACHES TO ENTREPRENEURSHIP EDUCATION

Colman Ledwith, Dundalk Institute of Technology (colman.ledwith@dkit.ie)

Abstract

The aim of the workshop is to explore the use of a multi-disciplinary approach as a means of developing entrepreneurial skills of students.

Multi-disciplinary education is collaboration between different disciplines. The extent to which the collaboration occurs can range from the co-delivery of a lecture to the total integration of different disciplines in a programme or a module. Some disciplines are well suited to such collaboration, for example, technical and business disciplines.

The workshop will commence with an introduction of the topic. This will be followed by an example of a multi-disciplinary programme. The example used is from a third level college where resources from business and engineering departments are combined with an input from the technology transfer office. Findings of research carried out with graduates of the programme will be included in the discussion.

The workshop will be opened to the floor as a means of gaining an insight into the extent to which the multi-disciplinary approach is used in entrepreneurship education. Based on the interest and experience of the audience members the workshop should produce interesting examples, as well as a discussion on the benefits and challenges of a multi-disciplinary approach.

In conclusion, the question “does a multi-disciplinary approach enhance the entrepreneurial experience of the student and thus by extension better prepare the graduates for the challenges of their work environment?” will be addressed.

The outcome of the workshop should provide useful information to those charged with developing new and innovative modes of education.

EFFECTUATION AS THE COUNTERPART TO CAUSAL THINKING

Jane Leonard, Cork Institute of Technology (jane.leonard@cit.ie)

Workshop Summary

One of the key challenges educators face, is how to stimulate and promote more entrepreneurial attitudes and behaviours in students, especially non-business students from Science, Engineering, or Arts departments. When these non-business students encounter traditional entrepreneurial education they often find it is based on a causal thinking model where students are encouraged to create plans, take risks, and identify and exploit opportunities. This process can be a real barrier to non-business students who do not have experiences in these areas. They also may be working within constraints and frequently do not have access to resources or finance.

Some researchers have developed an alternative model of thinking about and teaching entrepreneurship as a means-driven, risk averse and circular process involving effectuation and entrepreneurial bricolage. Effectual thinking can help develop the students' self-efficacy and ability to solve problems creatively and collaboratively. In such situations, bricolage, may also act as an enabling framework, as it focuses on resource constraints and encourages reworking of existing resources to solve problems. Both methods have a focus on experiential learning and action. So, non-business students can quickly adopt the first entrepreneurial processes in developing their ideas.

The aim of this workshop is to consider how effectual and bricolage approaches can be used to enhance the development of entrepreneurial mind-set in students. Whether they are conducting research, working on projects or developing business ideas. It will give the educators an opportunity to use the effectuation thinking style to explore how we can support and develop the students' abilities. They will also have an opportunity to share how they currently approach entrepreneurship education and some ways they have developed new resources, case studies or pedagogies. It will present a framework for educators to encourage students to adopt a more effectual approach toward the entrepreneurial process, as opposed to the causal logic associated with the more traditional business planning process. This can help the non-business students develop the attributes and competencies that form the basis of an entrepreneurial mindset.

Feedback

I have started to use effectual thinking with non-business students who are conducting research as part of their masters' programme. It has been very well received and has led to richer discussions in class.

Workshop Style

The workshop will be informal, interactive and participant led. It is designed for group participation and delegate involvement after a very brief introduction. The groups will use an Effectuation Grid and post-its to create a collaborative canvas.

In Advance of the session: Participants are asked to download the Effectuation document.

Expected Outcomes

Practitioners will gain an insight into the 5 principles of effectual logic. Effectuation is an evolving idea; this workshop represents an opportunity for exploring how it might develop in education.

Details of any related research

The research suggests that one of the key challenges is to stimulate the entrepreneurial mind-sets in students who are not studying core business or engineering subjects. The goal is to create students who are competent and confident in their own creativity, initiative, risk-taking, autonomy, self-confidence, and leadership. These competencies will all lead them to consider the development and exploitation of business ideas. The core business and engineering students will also benefit from mixing with students from other faculties and with different backgrounds.

POTENTIAL LIABILITIES AND RISKS ARISING OUT OF ENTREPRENEURSHIP COMPETITIONS

Robert L. Malach, University of Calgary (robert.malach@haskayne.ucalgary.ca)
Sandra Malach, University of Calgary

Workshop Summary

Student entrepreneurship competitions are commonly used by business faculties to encourage, generate and reward entrepreneurial thinking and activities. These competitions generate great enthusiasm and interest in and beyond the entrepreneurship streams at Universities where they are held. While the prizes to be won are avidly sought after by students, there may be insufficient thought from the students or their faculty about the potential these competitions have for generating animosity that potentially leads to a legal dispute.

The workshop will raise and address questions that arise in the context of these competitions including:

- 1) What is the impact of the disclosure of innovative business ideas on resulting patent and intellectual property rights?
- 2) How can the potential for conflict amongst team members regarding ownership of the business and related compensation/liability issues be addressed via student codes of conduct or other dispute resolution measures?
- 3) How can entrance applications to entrepreneurship competitions be best structured to protect both participants and supporting institutions from potential liability risks, including conflict of interest?

Workshop Style

We will introduce the above concepts in the context of a hypothetical competition illustrating how these of issues can arise and then inviting discussion on the likelihood of these issues arising and how to best prevent them from occurring. We have some practical experience with these issues and look forward to sharing some legal/business tips.

Details of any related research

Unfortunately, we are not aware of any literature or other academic discussion surrounding this topic. However, the presenters have knowledge of the applicable legal principles. This workshop is relevant due to the pervasiveness of these types of competitions and of significant interest in light of the scarcity of literature describing the potential harms that can arise from these types of competitions.

Expected Outcomes

Participants will gain a better understanding of the potential liabilities and risk management strategies associated with entrepreneurship competitions.

WHY ARE YOU MAKING ME DO THIS ASSIGNMENT?

Sharon McGreevy, IADT Institute of Art, Design + Technology (Sharon.mcgreevy@iadt.ie)

Workshop Summary

This workshop seeks to question and explore how to further encourage student engagement and retention through the completion of course assignments in the first year of a level 7 & 8 entrepreneurship programmes in a Faculty of Enterprise and Humanities in an Irish IOT with a particular focus on entrepreneurship and enterprise development. Transitioning into higher education can be extremely challenging for some students (Thomas 2012). Entrepreneurship students typically identify with entrepreneurial activity but may experience difficulty transitioning into a higher education environment. The purpose of this workshop is to question and explore how to further enhance engagement through embedding elements into first year modules on an entrepreneurship programme. Brinkworth et al (2009) identify a range of social, cultural and academic transition issues that impact on students. As entrepreneurship educators we need to conceptualise further changes to our teaching practice, adopt flexible learning and teaching strategies, promote a climate of inclusiveness and encourage persistence and perseverance amongst learners.

Central to a more innovative approach to entrepreneurship education is creating an opportunity for students to feel entrepreneurial this approach creates very real challenges for higher educational institutes' and may be difficult to place within the traditional academic curriculum. This will involve the piloting of an innovative pedagogic and assessment strategy in year one which is explored in the workshop. This is specifically designed to enhance interest, self-confidence and motivation as well as achieve social integration amongst new entrepreneurship students whilst simultaneously addressing the skill deficits and challenges previously identified.

Workshop Style

The workshop will be structured into two parts. A brief synopsis of the proposed pilot scheme and secondly, a brainstorming exercise and discussion will follow with input from the participants to explore alternative approaches and how the pilot could operate. This will provide a forum to explore challenges and share evidence of successful practice.

Expected outcomes

This session will provide a forum for idea generation in terms of how to engage entrepreneurial students more effectively in transitioning into higher education and improve their motivation, self-esteem and sense of purpose. It addresses and explores first year skills deficits and provides tangible examples of possible approaches to entrepreneurial education in the early stages of a programme.

Details of any related research

Previous and related research has tended to focus on the significance of transitioning skills for students in a generic context such as the National Strategy for Higher education to 2030. This report has focused attention on the requirement to address deficits in student skills in first year, specifically around time management, information literacy and self-directed learning. Brinkworth et al (2009) report that students do not feel adequately prepared for HE and that it represents a "reality shock". In addition, research around retention has also been widely published. Current Irish research O'Reagan et al (2016) reveals similar issues. There is a gap in published research specifically exploring entrepreneurship education and engagement at first year level and the challenges inherent in providing learning opportunities for students whilst simultaneously supporting their transition into a higher education environment. There are a small but significant number of students who display what Hockings et al (2008) identify as resistance to learning and engagement which forms part of the workshop discussion on student engagement. One key challenge is attendance and those with poor sporadic attendance frequently become socially isolated. Social isolation and / or lack of friends can be one of the most significant impediments to success in HE (Thomas 2012).

IMPLEMENTING THE EU HEINNOVATE ENTREPRENEURSHIP MEASUREMENT TOOL: EXPLORING THE 5 WS

Annmarie McHugh, Dundalk Institute of Technology (Annmarie.mchugh@dkit.ie)
Colette Henry, Dundalk Institute of Technology

Workshop Summary

The EU/OECD-led *HEInnovate* is an on-line tool designed to systematically assess a Higher Education Institution's (HEI's) entrepreneurial and innovative potential. *HEInnovate* has been used by over 800 HEIs across the globe, however it may be new to the conference participants. This workshop will address the theme of Entrepreneurial Universities, exploring the 5Ws of *HEInnovate*: W^1 - What is it? W^2 - Why should you use it? W^3 - Who should use it? W^4 - Where should you use it? W^5 - When should you use it? The workshop will discuss the challenges of implementing *HEInnovate*, and help identify potential solutions. Discussions will be based on actual experiences of using the tool at one of the Irish Institutes of Technology. The following structure will be adopted:

1. Using pre-printed flipcharts, an overview of *HEInnovate* will be provided
2. Discussion focuses on W^1 and W^2
3. Participants are split into groups (based on their experience of the tool) and are given flip sheets with the remaining 3 Ws to explore how they might introduce *HEInnovate* in their own Institutions, identifying potential challenges and solutions
4. Groups will summarise their main points on a flipchart
5. Final wrap-up & next steps

Workshop Style

Interactive, informal workshop style, beginning with introductions. A highly personable approach, with participants split into smaller groups to facilitate in-depth discussion, with an opportunity to exchange experiences and learning; a forum for practical questions/answers. Finishing with an outline plan per participant of their next steps in their Institution.

Expected Outcomes

Participants will have a better understanding of *HEInnovate*, its benefits and challenges, and gain 'tips' from the facilitators' experience of using the tool, practical, in-depth discussion notes on the 5 Ws and will identify next steps in their Institution.

Related research

Some empirical research on *HEInnovate* has been undertaken and is available on the *HEInnovate.eu* website (see, for example, *HEInnovate* 'Country Reports' and 'Case Studies'). Some theoretical research has also been conducted (see EC Reports). Underpinning this research is the body of academic literature linked to entrepreneurship evaluation, effectiveness and impact (see, for example, Fayolle et al., 2006; OECD, 2007; Oldsman & Hallberg, 2001; Storey, 2000; amongst others). More specifically, Henry's (2015) publication, which focused on both the challenges and opportunities associated with implementing *HEInnovate*, will be useful here. Future research could be carried out in a number of different areas, including the following:

- A comparative study of *how* various HEIs in Ireland have implemented the *HEInnovate* tool.
- A study comparing *what* various HEIs in different countries have done in response to their *HEInnovate* survey findings.
- A comparison of lessons learned from the above experiences and an identification of potential 'good practice' examples.

It is our understanding that the *HEInnovate* Expert Group will continue to improve the knowledge and experience of users of the tool during 2017, and hence, it is our intention to use the outcomes of this workshop to provide some empirical evidence that will help inform such changes.

ENTREPRENEURSHIP IS EVERYWHERE: PAVING THE PATH FORWARD WITH ENGAGEMENT

Mona Anita K. Olsen, Cornell University (olsen@cornell.edu)

Workshop Summary

Entrepreneurship is for everyone; we each embody the ten talents necessary to innovate, create, and contribute to the entrepreneurial landscape. Entrepreneurship is everywhere, yet it can be difficult to aggregate entrepreneurship resources across an ecosystem to enable a student to determine a best path for engagement on his or her entrepreneurial journey at a university. How do universities determine which entrepreneurial resources provide the most value given their goals? How do universities then articulate paths forward for engagement for stakeholders, allowing new stakeholders into the network and scale accordingly?

In this workshop, participants will be introduced to the Wheel of Life Diagram that has been adapted for Entrepreneurial University Planning and the Network Diagram for Ecosystem Development. Participants will engage in critical partner pairings and then as larger groups to review the strategic activities and then open-up for a group discussion on best practices that are being used around the world. An example from an institution in the United States will be provided and the workshop will conclude with each participant committing to one item of action on the group's Paving the Path Forward with Engagement diagram.

Workshop Style

In this highly-interactive workshop, participants will work in pairs and groups to complete two facilitated activities; these activities encourage participants to think about strategic delivery of entrepreneurial services provided at their home institutions and how to ask for support from stakeholders to build the entrepreneurship engagement across a university.

Expected Outcomes

As a result of the session, participants will network and engage in a critical friend pairing to complete activities (the Wheel of Life for Entrepreneurial University Planning and the Network Diagram for Ecosystem Development). Participants will discuss best practices from around the world to increase entrepreneurship engagement for stakeholders.

Details of any related research

There is research taking place regarding the Gallup Entrepreneurial Profile 10 (EP10) Assessment. The latest meta-analytic findings suggest that EP10 coaching and feedback increases likelihood of students' starting a business by 38%. The research finding is based on the quasi-experimental study to test the efficacy of EP10 program on college students. The study was conducted in 2016-17 across five colleges and universities in the US. The data collection and analysis is completed and the writing of an article for publication is underway.

WALKING THE TIGHTROPE - RE-DISCOVERING CREATIVITY IN BUSINESS STUDENTS

Rebecca Roper, IADT Institute of Art, Design and Technology (rebecca.roper@iadt.ie)

Workshop Summary

This workshop is for teachers and facilitators of entrepreneurship education within a business context in higher education. The focus of the workshop is as follows; how can creativity be taught to students who do not identify as 'creative'? Over the 40 minute session, case study findings will be presented and a myriad of creative practices will be introduced to help educators tackle and unleash the creative student within entrepreneurship, enhancing their practice and building their students' confidence.

Creativity is an essential component in every successful entrepreneurial venture. However, the cultivation of creativity can be challenging, and fraught with resistance. A lack of self-efficacy in creativity within business students poses particular resistance, and diminished self-confidence, with the resulting lack of seen relevance, can indicate significant stumbling blocks to facilitators and participants. As part of their entrepreneurship programme, IADT (Institute of Art, Design and Technology, located in Dun Laoghaire, Co. Dublin) includes a new module entitled 'Creativity and Innovation' in their third year business offerings. The module includes Design Thinking (Brown, 2009), d.School Crash Course (Stanford, 2013), Petty's ICEDIP process (Petty, 1997) SCAMPER and Brainwriting/Brainstorming techniques (Osborn, 1942), journal writing (Cameron, 1992), divergent thinking (Guildford, 1967), Tina Seelig's Innovation Engine (Seelig, 2012) and a host of other creative practices. An experienced lecturer in film, theatre, creativity and communications leads the module. So what do the students think? What is their evaluation of the process and the module? How do they view their own creativity and what was their experience? This case study uses student feedback across the module to explore the challenges facing lecturers and students in uncovering the creative entrepreneur within. It also offers advice and learning for others who may wish to design their own creativity modules for entrepreneurial programmes.

Workshop Style

The style of the workshop will be round table activities and discussion; leading with the findings from the third year module and introducing a variety of creative practices that each workshop participant will experience.

Expected Outcomes

The outcomes for the workshop participants will be two-fold; in the first instance, data from student feedback (self-reported) will be mapped. This will identify challenges, particularly in the definition of 'creativity' in a business context. Additionally, larger issues of self-efficacy and intrinsic versus extrinsic motivation will be discussed as represented in the particular student cohort. The second expected outcome for the workshop participants is in the actual experience of the creative practices. Each can be adapted to be utilized in the participants' own educational practice.

FROM THE VOICES OF GENERATION Z: WHAT DOES IT MEAN TO BE “SOCIAL” AND “ENTREPRENEURIAL”?

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Workshop Summary

Recent multinational surveys suggest that ‘Gen Z’ students (born after 1995) generally are highly entrepreneurial and strongly passionate about social issues. Yet, these students’ perspectives on what it means to be social entrepreneurs may not fit the traditional framework debated and redefined for the last 20 years. Are the notions that educators hold about social entrepreneurship valid for newer generations? Seemiller (2016) suggests that “Higher education’s definition of serving the community is too limiting for Generation Z.” How then can educators create the optimal learning environment for students to learn about social entrepreneurship that is meaningful to them? While there has been significant research regarding student perspectives in learning outcomes, insights into the meaning and lived experience of being “socially entrepreneurial” from the voice of the students is lacking. Through students’ own stories of critical incidents, we build thematic frameworks that help educators better understand what it means to be “social” and “entrepreneurial” as we teach and learn about social entrepreneurship. In turn, how can we extend this understanding to influence a more relevant culture of being social + entrepreneurial in the classroom and throughout the curriculum? Where does this fit in students’ own identities and vision for their future lives?

Workshop Style

10 minutes- Students will share highlights of their process of learning about the “social” and “entrepreneurial” dimensions of social entrepreneurship, and how they apply those insights in the community projects.
30 minutes- Interactive discussion among students and attendees concerning the proposed key questions, challenges, and problems that lead to self-discovery

Expected Outcomes

- A critical review of the learning journey incorporating student voices
- Crucial conversations about improving the learning process, and how the student perspective may alter educators’ approach to teaching
- Input and feedback regarding how this learning process may change (or need to be adapted) in different contexts and cultures.

Related Research

In keeping with the approach of phenomenological inquiry (Cope, 2005), we deliberately did not influence students with existing theoretical constructs related to social entrepreneurship prior their learning journey. Rather than starting with existing theoretical constructs, we invited students to explore and document their learning journey toward achieving social impact through team projects. What did they discover about how they approached the projects (their preferences, passions, talents, abilities to partner with others to accomplish goals)?

GROWTH MINDSET AS A BASIS FOR ENTREPRENEURIAL EDUCATION

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Workshop Summary

In any education, a focus on the learning of the students is often seen as central. For entrepreneurial education, this is even more accentuated as the student here is expected to be more responsible for and in charge of his or her learning process. Dweck's (2017) concept of mindset based on robust research provides a tool for understanding why learning and development is avoided by some individuals and cherished by others. Persons displaying a fixed mindset believe intelligence and abilities are more or less innate, leading to that learning has no real role to play. Instead education (and life) is about to display these innate qualities. On the other hand, people displaying a growth mindset believe intelligence and abilities are possible to develop throughout life and thus learning plays a central role. Education (and life) is about development and becoming increasingly more competent. Contemporary neuroscience clearly supports the growth mindset view. Since mindset can be changed through deliberate actions it makes sense to figure out how we as educators can help each other and our students to adopt a mindset that is more growth-oriented than fixed. It may then be the base we can build the education on.

Workshop Style

After a short introduction of the mindset theory, participants will work in small groups to discuss how the theory can be applied in their respective contexts regarding teaching and teacher collaboration. After each group has presented their results an overall discussion about how introducing mindset can improve entrepreneurship education.

Expected Outcomes

Each participant should have an awareness of mindset and how it may hinder and assist learning. Moreover, as a result of the process, every participant should get concrete tips that can be applied in their own organization to change mindsets of both teachers and students to become more growth-oriented. The participants are also invited to join a network

Details of any related research

Professor Carol Dweck at Stanford University has been studying what is today known as Mindset in more than 25 years and numerous studies have been published by her or associated researchers. It is important to note that the two mindsets are not mutually exclusive but rather exist side-by-side in all of us, but in different proportions. In many cases it is the situation that determines whether we tend to lean towards a fixed or a growth mindset. Studies show that the way we praise (i.e. give feedback) is central for what mindset we lean towards. Praising results and ability leads to a fixed mindset and praise for process (including effort and use of strategies) leads to a growth mindset, showing the importance of formative feedback if learning and development is focused. It has also been shown that organizations where leaders display more fixed mindset are more competition-driven and stressful, while organizations having a more growth-oriented mindset among leaders favor collaboration and induce less stress.

GENDER IN ENTREPRENEURSHIP EDUCATION: A QUESTION WE CARE ABOUT BUT WHAT DO WE DO?

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Gustav Hägg, Lund University

Workshop Summary

Entrepreneurship is a gendered phenomenon (Ahl, 2006) both in research as well as in practice. This is not least seen in entrepreneurship education – where male students dominate our classrooms and where hegemonic masculine-framed foundations of entrepreneurship are taken for granted and often become unchallenged (Jones, 2014, 2015). As educators we shoulder the responsibility of taking a critical approach to entrepreneurship and what we do. The question is: how do we bring in gender in our education?

In the workshop we depart from a “doing gender” perspective (West and Zimmerman, 1987), and argue that gender is embedded in everyday interactions. It is not a sex or a variable but something we do in interactions. Many courses and programs in entrepreneurship apply an experiential learning approach (e.g. Gielnik et al., 2015; Pittaway & Cope, 2007). Although this approach should balance both masculine and feminine values the stereotypical view of the action man still dominates how we tend to plan courses and programs (with presentations and pitching); implying that we have made our own interpretations of pedagogical and theoretical lenses.

Workshop Style

In this PDW we critically discuss how we conduct entrepreneurship education from a gender perspective, in particular within traditional domains of entrepreneurship education such as business schools and engineering schools. The take-off for this PDW is the question: How do we bring in gender in our entrepreneurship courses and programs?

Outcomes

We hope to develop our understanding on how we do gender, consciously or unconsciously, in entrepreneurship education processes, and how meanings and experiences are constructed (Carter and Shaw, 2006; Ahl and Nelson, 2010). When leaving the session we hope to have inspired the participants in thinking about how adoption of pedagogical perspectives influences and creates room for both gender blindness and gender differences among students. By this we hope to tap into taken for granted assumptions around how we treat and implement current best practices that are being promoted in entrepreneurship education and how these normative perspectives continues to create the norm of the stereotypical picture of the actionable entrepreneur as a proactive and outspoken individual.

ENHANCING STUDENT TRANSITION & ENGAGEMENT THROUGH ENTERPRISE

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Alison Riley, University of Sheffield Enterprise

Workshop Summary

Enterprise offers new opportunities to support students' transition into and engagement with HE. This workshop will examine student-centred, authentic problem-based learning, whilst acknowledging barriers that some students face to participating in HE. We will begin with a case study of our own approach to engaging widening-participation students in learning experiences built around projects that are of business value to our institution, and explain how an authentic learning experience excited and motivated them, whilst enabling them to recognise what the University experience can offer beyond their academic department, and encouraging them to challenge barriers to their engagement. We will introduce our Capability Connect approach to embedding University of Sheffield Enterprise's Five Capabilities Model of Enterprise Education (2013), and an accompanying visual design tool. Delegates will then have the opportunity to explore this approach, and try applying it for themselves through a practical module design activity that considers how students can achieve intended learning outcomes in core curriculum knowledge whilst also achieving wider learning benefits, including a greater sense of belonging within their institution, self-efficacy, and skills as autonomous learners.

Workshop Style

In groups, you will explore the value of enterprise in supporting student transitions. You will create modules that embed enterprise capabilities, using our specially-designed Capability Connect visual design tool. The activity promotes discussion of student-centred learning, and consideration of intended and unintended learning benefits.

Expected Outcomes

You will consider how enterprising projects might: support students' transitions into HE; enhance students' engagement by overcoming systemic/perceived barriers; and enable students to see their subject learning in the wider University context. You will take away a spark of inspiration and a new design tool to shape your own project.

Related Research

This workshop will draw on our recent experience of delivering an enterprise learning experience for students in our Department for Lifelong Learning. The basis of our approach is University of Sheffield Enterprise's Five Capabilities Model of Enterprise Education (2012), which was developed through an EEUK-funded research project exploring students' perceptions of enterprise in the curriculum (2013), and our work on mapping enterprise across curricula at the University of Sheffield (2015).

RESEARCH PAPERS

NORDIC DESIGNS FOR REACHING THE ENTREPRENEURIAL MIND-SET IN EDUCATION

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Questions we care about

Previous studies aiming to identify the different educations' approaches and designs have found differences and heterogeneity in entrepreneurship education without taking the student perspective into account. Hence, we have the following two research questions: How are entrepreneurship educations designed to reach their objectives? and How do the students view their entrepreneurship education?

Approach

We collected information about the entrepreneurship education from two universities in each of the five universities. In total we conducted 32 interviews with teacher or course managers and 12 group interviews with students, which resulted in approximately 40 hours of recorded interviews and over 400 pages of transcribed data. In the analysis we structured the information using how and why as a starting point.

Results

The use of interdisciplinary, entwined entrepreneurship courses in different disciplines occur at several universities, just as much as unique programmes in entrepreneurship alone. The idea that entrepreneurship education is only for new ventures does not exist at any of the investigated cases. The perception of entrepreneurship education is rather that it is to create value, change the status quo and explore new ideas, both in new ventures and established firms, public and private, or in volunteer work. However, regarding the objectives of the education, and the immediate understanding of the objectives and activities of enrolled students, there seem to be important issues to explore. For students enrolled in programs, their understanding of the connection between objectives and activities were mostly aligned with faculty's view and plan. However, for the individual courses, much more variation were present. In the courses that were well implemented in the students' study program, for instance illustrating the need for their knowledge in an entrepreneurial setting, the students found a meaning in the activities that was aligned to the objectives of the course. On the other side, if the students did not see the ideas behind the different activities, and did not understand how they could participate, the learning seem to decrease and their perception of the objective of the course differed compared to the intended objectives stated by the faculty and university.

Implications

This shows us that mandatory courses could be of great value when introduced to the students in a proper way, that is, when the courses are planned with the students' study program in mind.

Value/Originality

As this research explores the students' view on their entrepreneurial education in addition to the view of faculty, it differentiate itself from previous work on Nordic entrepreneurship education focusing only on the faculty.

Keywords: Entrepreneurship education; program; course; faculty; student; Nordic

WHAT CRITICAL ENTREPRENEURSHIP EDUCATION CAN LEARN FROM CRITICAL MANAGEMENT EDUCATION

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Questions we care about

The last decade or so has witnessed the rise of 'critical' entrepreneurship studies (CES). CES question dominant images and conceptualizations of entrepreneurship and the entrepreneur. It is timely to interrogate if and how such contributions and insights have entered our classrooms. With students interested in the entrepreneurship phenomenon merely expecting the 'standard' (instrumental) approach towards the same, and for their lecturers to stipulate the importance of new venture creation in relation to our economy's health and vitality, the critical entrepreneurship scholar might see the need to stipulate how entrepreneurship is broader than that, that there are multiple 'versions' of it, and that the entrepreneurial identity is a layered one, and not without its repercussions.

Approach

This paper offers a review of the extant critical management education literature so as to formulate potential lessons (insights) for critical entrepreneurship educators. We have collected – through snowball techniques – prominent critical management education contributions, as well as prominent critical pedagogy literature. We compare this with extant literature purporting a critical view towards entrepreneurship education, and formulate roads ahead for a critical entrepreneurship education studies.

Results

With the critical pedagogy literature, entrepreneurship as the route towards freedom and creativity is problematized. From our (concise) review of the critical management education literature we can see how the contributions generally emphasize how we can come to enact management education and managerial practice differently, an opening up towards other, new constructs and ideas

Implications

With the critical pedagogy literature, and critical management education insights, we can see how a critical entrepreneurship education might take the shape of an interplay of *deconstruction* versus *reconstruction*.

Value/originality

This is insofar as we are aware of the first attempt at reviewing critical pedagogy and critical management education contributions so as to formulate potential lessons for critical entrepreneurship educators.

Key words: Critical pedagogy, critical entrepreneurship studies, critical entrepreneurship education, critical management education

HOW CAN I, AS AN ENTREPRENEURSHIP EDUCATOR, CONTRIBUTE TO CHANGING A “LEARNING FOR EXAM” PRACTICE INTO A “LEARNING FOR LIFE” PRACTICE?

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Questions we care about

How can I, as an entrepreneurship educator, contribute to changing a “learning for exam” practice into a “learning for life” practice?

Approach

We use the same educational approach that we prescribe for students – but we use this approach on ourselves. We take the problem of “learning for exam” and bring it through the phases of our own entrepreneurship education approach.

Results

The paper has addresses a central problem in modern education and contributed by being not only conceptual and contemplative – but as a showcase of how educators can act entrepreneurially themselves in order to solve some of the problems in our educational system.

Implications

The paper suggest that we see our role in the educational system not only as teachers and researches – but allow ourselves also to be entrepreneurial educators; meaning that we can eventually use our courses and teaching activities as a form of practical criticism.

Value/Originality

The paper has also shown that educators can act entrepreneurially themselves. In this way, the paper serves as an example of how entrepreneurship educators can use their own educational approach to act entrepreneurially in the education system.

Key Words: Learning for life, practical criticism

WE NEED TO TALK ABOUT COMPETITIONS: A THEORETICALLY FLAWED EE INTERVENTION?

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Questions we care about

There *is* a push by policy makers for the introduction of entrepreneurship education at an ever-earlier age, and ‘competitions’ and ‘competitive pedagogy’ are the most visible interventions in this endeavour. But *why are* competitions offered up to educators as a model of good practice and an effective entrepreneurial learning method? Why are they prescribed, dispensed and consumed regardless of differences in social, cultural and economic context? What might the unintended consequences be for students, teachers, schools and even wider society? Is it possible that the outcome for some children is the same as that which has been observed to occur in competitive sports, with winners experiencing a sense of achievement and entitlement, while losers feel disengaged and de-motivated? It has been argued that entrepreneurship education can be considered a success if it dampens unrealistic expectations and fulfils a type of ‘sorting’ according to aptitude and ability (Von Graevenitz et al., 2010). Does this argument still have relevance when such ‘sorting’ is introduced in secondary or primary education? Or if such ‘sorting’ reproduces disadvantage and social inequality?

Approach

The authors adopt a realist logic of enquiry to reveal and critique the underlying programme theories inherent in the use of competitions in entrepreneurship education, using European policy and guidance as a theatre of study. The approach involves isolating and testing the theories which underpin their use to better understand whether the *taken-for-granted* assumptions and benefits that underlie the rollout and adoption of competitions are justified.

Results

The process of making the underlying programme theories explicit, and comparing these to evidence from within and beyond entrepreneurship education demonstrates inherent theoretical flaws in the assumptions that competitions will ‘work’ for all. Some of the most prevalent intended outcomes – that competitions will motivate young people; that they will enable young people to develop entrepreneurial skills; and, that young people will be inspired by their peers – are challenged by theory and evidence from other fields.

Implications

Competitions constitute one of the most visible and widely recommended elements of entrepreneurship education strategy and practice for schools across Europe. This paper illustrates that they may produce perverse outcomes – reducing certain groups’ interest in pursuing the discipline, diminishing motivation, constraining entrepreneurial learning and reinforcing social inequality.

Value/Originality

This work uses a realist logic to shed new light on entrepreneurship education’s most recognisable format – the competition – in order to provide a richer, more sophisticated and critically enlightened picture to those promoting and practicing its use.

Key Words: Entrepreneurship Enterprise Education Competitions

FOSTERING ENTREPRENEURIAL COMPETENCES THROUGH ENTREPRENEURSHIP EDUCATION: LEARNING TO BE PROGRAM

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This research paper describes an innovative teaching program called “Learning to be”, aimed at fostering entrepreneurial learning of non-business students, through an experimental learning methodology inspired in the Design Thinking process. In this program, students were challenged to develop viable solutions to real-case problems proposed by several companies. To comprehend the impact of entrepreneurship education program on students an ex-ante and ex-post testing design was used. The questionnaire was based on the General Enterprise Tendency (ET) Test developed by Sally Caird and Cliff Johnson (Caird, 2013). Although it was observed an increase in students’ GET scores when taking the Learning to be Program, this increase was not statistically significant. Nevertheless, though individual item analysis it is possible to observe that Program “Learning to be” had a significant impact on students’ need of autonomy. In this case, students had improved their ability to work as entrepreneur, and as a valuable member of an organizational team. The enrolment of companies in the Program has contributed to this improvement by providing students with a clearer understanding about companies’ reality, as well as the concrete problem they face. This is a relevant outcome since most entrepreneurship education programs and initiatives are not focused on developing intrapreneurship, which is acting like an entrepreneur within an existing company. Thus, this research may contribute to improve pedagogies in entrepreneurship education in order to improve its impact.

Key words: Entrepreneurship education, experimental learning, teaching program, Design thinking

STUDENT AUTONOMY: HOW TO FACILITATE ENTREPRENEURSHIP THROUGH INTER-ACTION BASED LEARNING IN VENTURE CREATION PROGRAMS

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In this paper we ask the question: How to facilitate entrepreneurship through interaction-based learning in Venture Creation Programs? We highlight the role of student autonomy in the process of identifying, evaluating and choosing business ideas, and how this is facilitated through inter-action with social and physical elements in a university incubator affiliated in a Venture Creation Program (VCP). Based on an illustrative case we suggest that entrepreneurship emerge through spontaneous creative action in relation with (1) social elements such as fellow students, alumni-network, external partners, mentors and (2) other contextual factors such as official curricular elements, espoused theories and theories in use, and pedagogical models. The paper presents three illustrative examples from a VCP, and suggests some possible short- and long-term implications of its pedagogical strategy. Here, pedagogy is associated with a specific mindset of education, particularly as stamped out by pragmatist thinking which focuses on action and practice as a basis for learning. The program in mind runs an incubator, which has won the national prize as “best service provider” in 2014, and been granted “Center for Excellence in Education” (SFU) within entrepreneurship by NOKUT (the Norwegian Agency for Quality Assurance in Education) in 2016. We develop a conceptual model, which depicts that collective learning is a source of both individual autonomy and entrepreneurship. Further, it depicts that collective learning may induce entrepreneurship of a larger, institutional kind, where particular norms, values and mindsets shape, and are shaped by, those students participating. We focus on how collective learning can be a precursor for entrepreneurial autonomy, so as to provide a basis for spontaneous creativity. This indicates an important, often overlooked, connection between autonomy on the one hand and social belonging and recognition on the other. One implication of our study, is that entrepreneurship, to the extent it flows from autonomy, can only be taught to the extent individuality and novelty is kept part of the equation, something which presupposes an open-ended view, learning continuously from inter-action, embracing conceptuality and novelty, expanding on the situation where students actually are instead of where they should be.

Key words: Student autonomy; Venture Creation Programs; Inter-action based learning.

LEAN COLLABORATION ON CAMPUS? A SOCIAL NETWORK AND BRICOLAGE APPROACH

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Questions We Care About

We are interested in developing and testing creative solutions to support student entrepreneurship at universities facing resource constraints and other obstacles to change. In service of that goal, our primary research question for this study is: how can we more effectively drive interdisciplinary collaboration around student entrepreneurship with no additional resources and no structural changes?

Approach

We draw on theories of social networks and bricolage to design a field experiment and we use engineering "capstone" projects and a business plan competition at a US research university as our empirical setting.

Results

Our results show that social networks and bricolage may be powerful tools to help increase STEM participation in entrepreneurship-related activities, boost collaboration between business and engineering students, and that these collaborations are effective in generating relatively high-quality new venture ideas.

Implications

Our study presents both theoretical justification and empirical evidence for an approach to increasing student engagement with innovation and entrepreneurship activities that is broadly feasible, easy to implement, and can catalyze greater change.

Value/Originality

Our study moves beyond broad advocacy or difficult to actualize calls for "changing the system" to a feasible, effective, and broadly applicable approach to increasing student engagement in innovation and entrepreneurship activities.

Keywords: networks, bricolage, field study, extra-circular activities, competitions

BLENDED LEARNING FOR CROSS-BORDER ENTREPRENEURSHIP

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Questions we care about

How to find the right combination of online networking and face-to-face knowledge sharing in order to prepare students for cross-border entrepreneurship?

Approach

Blended learning is needed for discovering cross-border entrepreneurship opportunities that are influenced by diversity of cultures, knowledge sources and co-operation options. Many growth-oriented start-ups are developed by cross-border teams and finance their innovation in cross-border co-operation with business angels. Our approach is based on the assumption that globalization leads to international mobility of entrepreneurs and to intensive cross-border search of business opportunities. In order to reflect contributions and challenges of educational practices that represent different ways to blend online networking and learning with face-to-face knowledge sharing, we used action research methods.

Results

Advantages of educational practices and related challenges were studied by reflecting the processes of applying international student teams in student enterprises, as “gatekeepers” in cross-border business information search projects for start-up enterprises, in X-Culture global project teams and in the Business Opportunities in Virtual Networks cross-border courses that link students in Tallinn and Helsinki to joint teams. Entrepreneurship Success Factors in Open E-learning (MOOC) course as combination of online and physical classroom knowledge sharing opportunities is also analysed. Action research results indicated that less structured approaches to online project team formation allow students to understand self-regulative features of social networking and related needs to align their priorities with other networkers and cross-border entrepreneurship project stakeholders such as busy entrepreneurs that are less active online. More supervised and structured approaches however gave to students regular feedback from other online team members and mentors in order to understand their strengths and weaknesses in cross-border networking and teamwork.

Implications

Educational policies in the field of entrepreneurship is that integration opportunities between cross-border online social networking and business networking processes have to be used more actively by educational institutions when combining face to face and online learning.

Value/originality

Explaining tools for taking into consideration pre-knowledge and earlier experience, attitudes and future aspirations of students, when applying self-organization or pre-determined rules of international team formation in process of cross-border entrepreneurial learning. A contribution of the paper is modifying and applying Kolb (2005) learning cycle approach to explain the facilitating role but also potential risks of learning through entrepreneurship by launching learner’s own start-up project or contributing to an export business of an internationally oriented foreign or domestic entrepreneur.

Keywords: entrepreneurship, blended learning, international business, networking, learning cycle

HOW CAN DESIGN APPROACHES BE INTEGRATED INTO ENTREPRENEURSHIP EDUCATION?

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Questions we care about

When educating students through entrepreneurship we are interested in *how can design approaches and processes be integrated into Entrepreneurship Education and what effect does this have on entrepreneurial learning?*

Approach

This is a conceptual paper which draws on data from a classic entrepreneurship course (mix of for- and through-approach) as well as a classic design course. Furthermore data from the iterative development of an entrepreneurship course with substantial design elements is a key data source. Overall, products and processes in the course have been analysed by scholars within both the design and entrepreneurship field to understand the potential of more fully integrating the design vocabulary and processes in entrepreneurship education.

Results

Overall we see a lot of potential in integrating design elements into EE, if it is done with careful reflection about the intention and how the elements fit with the entrepreneurship field. The proposed process model presented (Fig 3) primarily has potential to strengthen the awareness of the need to alternate between divergence and convergence many times through an entrepreneurial process. Apart from contributing to an overall potential process model the integration of design elements in the Profile course contributed with primarily two things: The students reflected on their values and general approach towards stakeholders through the 1st design workshop (focusing on design perspectives). This created a good foundation for an adequate and beneficial contact with stakeholders. Also the students got out and tested their prototypes with stakeholders and iterated on them – because of the 2nd design workshop focusing on prototype test.

Implications

The intention is that the proposed process model integrates divergent and convergent sub processes from the design sphere into the general effectual and causal processes of entrepreneurship education. The hope is to lessen – not eliminate -the frustration level among the students in the uncertain effectuation process by providing the students with more insight into and control over the process, without narrowing the potential outcomes of the entrepreneurial learning process. Apart from the model the paper presents some good practices from the entrepreneurship course with substantial design elements as well as some potential good practices for future testing.

Value/Originality

This paper contributes to the field of entrepreneurship education with the model that demonstrates how design thinking can be meaningfully integrated into entrepreneurship education when pedagogical approaches are questioned and reflected upon.

Key Words: entrepreneurship education, design, integration, process model

EMBEDDING ETHICAL AND SUSTAINABLE THINKING IN THE ENTREPRENEURIAL MINDSET

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Questions we care about

The topic of entrepreneurship education and its relevant competences is an ongoing challenge and subject of study. The European Commission has noted the importance of entrepreneurship calling it the discipline of the 21st century. "Entrepreneurship education is essential not only to shape the mindsets of young people but also to provide the skills, knowledge and attitudes that are central to developing an entrepreneurial culture" (European Commission, 2016, b p. 9). The recent financial crisis has focused our attention more on the importance of ethics in business and management. Indeed many authors call for more ethics by entrepreneurs in the running of their business. EntreComp, the European Commission Competence Framework (2016) defines entrepreneurship as a transversal competence. The research question has to do with whether the European Commission is right in proposing ethical and sustainable thinking as an entrepreneurial competence. What support is there in the literature for putting forward an ethical mindset as important for the entrepreneur?

Approach

The paper will provide a background to EntreComp, the European Commission Framework document on competences. It will also include definitions of ethics and sustainability, deal with ethical challenges that can arise in business and some justification from the literature for the inclusion of ethical and sustainable thinking as an entrepreneurial competence. It will also provide some thoughts regarding the contribution of ethics to management and some suggestions for the way forward.

Results

The paper suggests that in the light of developments in the economy, technology, legislation and other developments, the European Commission is justified in putting forward ethical and sustainable thinking as an entrepreneurial competence. The foundation and driving force for sustainability rests on ethical foundations, as well as entrepreneurial engagement. The positive contribution of a sustainable approach to business is highlighted.

Implications

This paper has implications for policy, training, educators as well as for the field of ethics in business. In relation to sustainability, effective management encompasses how business affects human development and looking at sustainability "through a holistic view of its economic, social and environmental dimensions. This means seeking not only economic results but also positive impacts on society and the environment" (Mele, 2012, p.128).

Value/originality

The paper provides some insight into the "EntreComp" framework and attempts to provide some support for having a competence such as ethical and sustainable thinking for entrepreneurship.

Key Words: entrepreneurship, EntreComp, competence, ethical, sustainable, mindset

WHY SO RELUCTANT? SOMETHING'S PREVENTING ENGINEERS FROM EMBRACING ENTREPRENEURIAL EDUCATION.

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Questions we care about

Entrepreneurial skills are widely identified as being highly desirable attributes for graduates to possess. Professional engineering accreditation bodies explicitly require many of these same attributes in graduates. Despite this seemingly near perfect match of requirements, there is little evidence to show that engineering undergraduates recognise the value of the learning achieved when undertaking Enterprise and Entrepreneurial Education (EEE). This poses a dilemma. If we use EEE as the vehicle to deliver professional skills sets, why do students not identify this as desirable learning? How can educators present the array of opportunities that EEE offers as a means to making EEE modules more attractive for engineers to study as undergraduates and implement in their professional practice as engineers?

Approach

The work presented is based on research conducted in a mid-sized HEI with 7500 full time students 20% of which are engineers. EEE is introduced into the engineering programmes in a variety of ways. Evidence has been collected on the level of student engagement, and the impact has been measured through a combination of ESE (Entrepreneurial Self Efficacy) tests, module feedback, and semi- structured interviews.

Results

Undergraduate engineer's engagement with elective and extracurricular EEE has not shown any increase. Some of those who did engage reported the experience as frustrating, and not as expected. In terms of mandatory EEE, there has been a steady increase in engineer's participation level, showing an interest at least from the academic staff to introduce this type of learning. Feedback from the students has generally shown a high level of enjoyment with the process, even if the workload and timing of the learning was not to their satisfaction.

Implications

If EEE is to act as the vehicle to deliver both entrepreneurial skills and to support the delivery of professional skills, there needs to be acceptance from the students (and academic staff) that the learning is worthwhile, has tangible value, and is not merely a peripheral activity.

Value/Originality

The work presented is designed to provoke an active debate on the very rationale for including EEE in undergraduate engineering student education. If EEE is to meet the professional needs of the graduate, it must play a vital role in building the graduate attributes or "toolkit" and must therefore be seen by the students to warrant the effort and focus required. If it is foster entrepreneurial endeavour, leading to graduates who act entrepreneurially, become entrepreneurs themselves, or act intrapreneurially with others, then it needs to be experienced as a formative, enriching and engaging process, and not one that is at odds with the engineer's sense of self identity.

Key Words: Entrepreneurial Learning, Engineering Attributes, Engagement.

MAPPING ENTREPRENEURSHIP EDUCATION: CAN WE PUT TOGETHER THE PIECES OF THE PUZZLE?

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Questions we care about

At every 3E conference we discuss: *What is entrepreneurship?* And derived from this: *What is entrepreneurship education?* Depth and intensity of these frequently emerging questions seem to underline their importance to the field. Even though the intention of the 3E-Community is to pose substantial questions of relevance, we assume that a map that is able to structure and order these questions might be fruitful for further discussions. Thus our purpose is to develop a consensus driven framework of entrepreneurship education. Questions we care about:

- What do we talk about, when we talk about entrepreneurship education?
- In entrepreneurship education, who is doing what to whom and why?

Approach

At a certain point evolution of scientific fields naturally includes, taking stock, looking back and forward. This was done for the field of entrepreneurship research several times (e.g. Low & McMillan, 1988; Shane & Venkatamaran, 2000; Gartner, 2007; Aldrich, 2012). For entrepreneurship education as issue of research, this was done at conferences (Blenker et al., 2014; Hägg & Gabrielson, 2014) as well as in the written debate (Pittaway & Cope, 2007). Looking deeper behind these results, we can find of course definitions of entrepreneurship education - e.g. entrepreneurship education as „all activities aiming to foster entrepreneurial mindsets, attitudes and skills ...“ (Fayolle, 2009, S.3). But within the field two perspectives are missed: First - reviews of the genesis of entrepreneurship education as issue of research seem to be decoupled. If research is – and this is suggested by action research as “participatory, democratic process ... [that] seeks to bring together action and reflection, ... in participation with others ...” (Reason & Bradbury, 2001: 1), this could be a perspective to structure our questions in constructive collaborative way. Second - definitions of entrepreneurship education as issue of research reduce perspectives and show mostly the single perspective of one or maybe few researchers.

Inspired by action research (Brydon-Miller et al., 2003), we intent to open up a new way of mapping the field of entrepreneurship education, in close contact with the researching and practicing community. Inspired by Gartner’s 2007 article, we are now calling for all the “Blind Men” of entrepreneurship education to describe their piece of the puzzle, enabling us to make a contemporary map of the field. Since Gartner believes “that the development of theory involves the creation of a community of scholars in dialogue about a specific set of problems and issues, and who hold similar beliefs about the relevance of certain methods for solving these problems” (ibid: 34), we believe, that the entrepreneurship education research and practice community is now at the stage where this dialogue can be opened up in a structured way, to map and frame the future of the field as a community.

To do so, we conceptualized our empirical research as an open and collaborative process with the 3E community, a Delphy study (Green, 2014) with at least three rounds:

The first round of data is analysed and results of this will be send back to the community for a deeper exploration. According to our plan, the map of the field of entrepreneurship education can be presented at the 3E conference with the purpose of getting a third round of feedback which will qualify the study further. To do so, we plan to continue the collaborative work at the conference by embedding entrepreneurial perspectives of design thinking and creative techniques on-site in the research process.

Results

Our results will be the impressions of this collaborative process and the specific results of the intermediate stages. The first round is finished. Data is collected through a questionnaire sent to the 3E research community

in summer 2016 (N=249). A total of 39 respondents completed the questionnaire. The respondents were educators and researchers from 13 different countries, with a total of 306 years of experience in research and 408 years of experience in educating within the field. We are currently able to reflect on following key questions: (A) What does the map of definitions in entrepreneurship education look like? Our map includes a variety of dimensions regarding educator, educated, process of education, effect, purpose and context. (B) What are our main topics in practice and issues in research? Our map includes a variety of topics in practice e.g. personal development, mind-set, creativity, opportunities, innovation, as well as issues in research e.g. assessment, old vs. new school, who and how of entrepreneurship education. (c) Which theories influence our practice and research in entrepreneurship education? Our map shows a spectrum from effectuation, constructivism, positive psychology, game based learning to social identity theory and organizational emergence. In the following steps, our mapping of entrepreneurship education will be reflected with those participants that allowed us to do so (Round 2). Finally, we aim to put together all pieces of the puzzle at 3E conference (Round 3).

Implications

With our paper, we wish not to reduce our debate in a common sense, but to paint a picture of what all of us might assume as entrepreneurship education. We aim to give educators and researchers within the field of entrepreneurship education a method to position education designs and research. With a map of the field it will become easier to decipher and understand upon which preconceptions education designs and research are based and with this knowledge a constructive dialog can emanate.

Value/Originality

This paper seeks to end the discussions of what entrepreneurship is and what the purpose of entrepreneurship education is by acknowledging the different positions of the field. By ending the internal bickering we can unite despite our differences and focus on moving the field forward from whatever position one may stand.

TRANSFORMATIVE, TRANSACTIONAL AND TRANSMISSIVE MODES OF TEACHING IN ACTION-BASED ENTREPRENEURIAL EDUCATION

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Abstract

This paper introduces the notion of holistic education into the context of action-based entrepreneurial education, in order to develop a framework for achieving and understanding whole person development. The aim of the framework is to connect with a wider set of teaching and learning paradigms as a basis for instructional design and assessment, to bridge some of the fragmentation apparent in conceptual frameworks for entrepreneurial education.

To facilitate this multi-faceted view on teaching and learning, we introduce a framework of transmissive, transactional and transformative teaching modes. In this framework, the transmissive mode relies upon traditional teaching methods; the transactional mode relies upon on self-directed problem-solving, collaboration and engagement in authentic learning environments; and, the transformative mode appreciates the whole learning person, how she connects with herself, others and the world. We argue that all modes are needed in order to achieve and understand whole person development, and that entrepreneurship teaching should be designed so that it offers a reservoir of rich and diverse experiences in an authentic learning environment.

The three teaching modes are analyzed and discussed in relation to a leadership course assignment and eight selected citations from student deliverables in 2007. The citations represent an extreme sampling as the students had been running a tech venture during almost a year as the major vehicle of learning in their program, they had no prior entrepreneurship experience, and all of the selected students became and have remained start-up entrepreneurs since their graduation.

The selected citations illustrate how transmissive, transactional and transformative teaching modes can be contextualized in action-based entrepreneurial education, and point towards that significant learning has emerged through the integration of different teaching modes. The richness of the citations indicate that action-based entrepreneurial education is a vehicle for a wide variety of learning outcomes. Accordingly, the introduced framework seems to hold promise as a basis for achieving and understanding whole person learning in this context. Practical teaching aspects are addressed, both around designing authentic learning environments as well as around designing and examining more tangible deliverables from students in such environments.

ENTREPRENEURSHIP EDUCATION AND LEARNING SITUATIONS OF DECISION-MAKING

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Questions we care about

There are high potentials within a university, but fear and uncertainty or ambiguity about the process itself prevents students from thinking about starting a business (Bijedić 2012a). For this reason, entrepreneurship education in our department supports students on the one hand to build up knowledge about entrepreneurship and on the other hand, we give them a chance to develop specific entrepreneurial behavior, focusing on different specific competences. Especially decision making prepares students to be able to handle uncertain situations or situations with ambiguity in the process of starting a business (Alalwany and Saad 2015, Petridou and Sarri 2011). This competence is what we are focusing now. Research questions:

- What kind of decision-making can be useful during the process of starting a business?
- What kind of methods are useful to identify the kind of decision-making a person is using?

Approach

The base of the research about entrepreneurial decision-making process is concentrated on decision-making logics in uncertain situations or situations with ambiguity. There are two ways of dealing with decisions in these situations. A decision can follow a causation or effectuation logic (Sarasvathy 2001, 2008). Further research has even developed combinations of these logics during decision-making processes (Murmman and Sardana 2012, Reymen et al. 2015).

Results

Research happened in summer and winter 2016 and continues in summer 2017. We have results from two perspectives:

1. Results about the participants through the perspective of our students.
2. Results from our perspective as scientists about the students, who observed the participants.

Implications

The results are able to influence higher education focusing on entrepreneurial behavior. Furthermore, the results provide opportunities to improve the start-up counseling and training of entrepreneurs in the field of decision-making.

Value/Originality

Situations of uncertainty or ambiguity cannot be calculated or estimated. Entrepreneurs in uncertain situations during a process of starting a business should use both decision-making logics for a wider range of entrepreneurial behavior.

Key Words: Entrepreneurship education, decision-making, causation, effectuation, logic, didactics

ENTREPRENEURIAL LEARNING IN AN EXTRACURRICULAR INITIATIVE

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Questions I care about

Extracurricular initiatives complement curricular activities by addressing a broader population of students (Passiante & Romano, 2016) and where students can learn about entrepreneurship in a supportive environment (Pittaway, Rodriguez-Falcon, Aiyegbayo, & King, 2011). Even though there exists extracurricular entrepreneurial activities at many universities (Pittaway et al., 2015) there is a lack of research about how learning occurs in extracurricular entrepreneurship initiatives. The purpose of this study is therefore to address learning processes through extracurricular entrepreneurship activities. This study follows up on the study by Pittaway et al. (2011) by providing in-depth insight into how learning occurs in an extracurricular initiative. The research question for this study is therefore the following: How do student entrepreneurs in an extracurricular student-driven initiative learn through the venture creation process?

Frame of Reference

I address the gap by using research regarding entrepreneurial learning in addition to topics relevant for the new venture creation process as a frame of reference, starting by introducing entrepreneurial effectuation as a perspective on the venture creation process. I use effectual approaches of student entrepreneurs as a lens to study student entrepreneurial learning in extracurricular initiatives. The concept of learning through critical incidents are then introduced to act as a point of entry to how learning occurs. Through developing a conceptual framework, the frame of reference is contextualized to student extracurricular initiatives at the universities.

Method

I performed an in-depth multiple case-study of five venture creation processes in an extracurricular initiative at a Norwegian university. I collected the qualitative data using 24 semi-structured interviews with the student entrepreneurs and their respective facilitators at three points in time over a twelve-month period as source of data. I use critical incidents as points of analysis to understand learning from the venture creation process by analyzing the responses to challenges in light of an initial framework.

Results

I have found that the extracurricular initiative offers a different way of learning. Students learn through a process involving critical incidents requiring action. The students may apply alternative approaches, in this case effectual approaches, which leads to a higher level of experience-based and reflective learning. This type of learning is likely to prepare the students to handle uncertainty and resource constraints in practice.

Value/Implications

This study has practical implications for entrepreneurship education and student entrepreneurship educators or facilitators by describing how extracurricular entrepreneurial learning occurs. Furthermore, Robinson, Neergaard, Tanggaard and Krueger (2016) and Pittaway et al. (2015) calls for more empirical studies of extracurricular initiatives. Neck & Greene (2011) calls for a more student-centered and method-oriented approach to entrepreneurship education and this study addresses these calls.

TRAINEE TEACHERS' ENTREPRENEURIALISM AS SELF-DETERMINATION AND CREATIVITY IN A BLENDED MUSIC LEARNING ENVIRONMENT

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Questions we care about

Our case revolves around compulsory music studies and primary school teacher education. The teacher's education has a dual role: enabling trainee teachers to have experiences about and to understand their own creativity and using these insights to design appropriate pedagogical solutions concerning the subject. The Finnish music education in basic education emphasises each pupil's participation and creativity. Additionally, teachers are expected to strengthen their pupils' generic competencies, including 'Working life and entrepreneurship'. The studied music learning environment has been organised by exploiting a blended learning approach. This blended learning environment is able to strengthen students' creativity and self-determination (andragogy, heutagogy) because the students are responsible for leading their own learning processes. Teachers also must learn academagogy, which refers to their understanding of who they are, what they want to do, the ways to achieve their objectives, and whom to ask support when needed. Based on these observations, we first asked how widely the trainee teachers utilised the offered blended learning possibilities. Second, we were interested in how the trainee teachers' self-determination manifested in the studied blended music learning environment. Third, we asked how the trainee teachers' creativity manifested and evidenced itself in the studied music course.

Approach

The context is a compulsory music course in one Finnish university. The data were collected during academic 2015–2016; to collect the data, we used questionnaires, videos about the lessons and trainee teachers' reflection diaries. The participants were one music lecturer and 90 first-year primary school student-teachers. The two authors of the current paper participated in the entire research process and were supported by two specialists in this constructive investigation. The analysis follows a theory-guided content analysis approach. The theoretical background is built from the theories about general music education, entrepreneurialism, blended learning and self-determination.

Results

The results indicate, however, that the interactive, moving cycle of the phases of pedagogy, andragogy and heutagogy became important. The path to the student-teachers' creative identity and capacity was apparent, to some extent. An awakened awareness about the students' own academagogy was also evident.

Implications

The study enhances our understanding of blended learning environments in teacher education and may strengthen student-teachers' creativity and self-determination. Blended learning approaches offer more flexibility to respond to students' needs than the traditional teaching–learning situations, but each element that is blended may not benefit every student.

Value/originality

The study combines many theoretical issues. We assert that entrepreneurialism as self-determination and creativity in a general education blended music learning environment is worthy of investigation. The findings may encourage scholars and educators to experiment and study these approaches in various learning environments, especially in arts education.

Key Words: Trainee teachers, music education, blended learning, entrepreneurialism, creativity, self-determination

CAREER TRAJECTORIES AFTER GRADUATING FROM A UNIVERSITY-BASED ENTREPRENEURSHIP CERTIFICATE PROGRAMME

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Questions we Care About

What unites entrepreneurship educators is the aim to create impact. However, the effects of entrepreneurship education are often far-distant and can only be estimated with traditional evaluation methods. Therefore, we asked ourselves: How can we systematically keep track of what entrepreneurship education graduates actually “end up doing” in the long-run?

Approach

We collected data by profiling graduates from the Academic Program for Entrepreneurship (APE) via the professional social networks LinkedIn and Xing. This allowed us to compile a robust dataset (n = 169, > 89 % of the target population) in a short period of time. Based on this data, we explore the overall entrepreneurial activity of our graduates, highlight different career patterns, and explore several individual career paths. Through a series of interviews with former graduates, we also explore the impact which the entrepreneurship programme had on their career choices.

Results

The analysis of the collected dataset only revealed subtle changes in the proportion of the chosen careers over time. Overall, the likelihood of (co-)founding and/or working for a startup is highest within two years of graduating from the APE and slightly declines after that. In addition to these startups, several graduates have also turned their experience from the entrepreneurship education programme into a service offering in itself by creating independent freelance consulting businesses. However, the majority of graduates joined established companies in non-entrepreneurship-related roles following their participation in the programme.

Implications

Career paths are multi-faceted and highly individual. While some entrepreneurship education graduates might use their acquired mindset and skills to start-up their own businesses, others will tend to apply these qualities in a corporate environment. Both outcomes should be respected in the design of entrepreneurship education curricula.

Value/Originality

The presented research approach provides a novel perspective on how the career paths of entrepreneurship education graduates can be tracked and evaluated.

Keywords: entrepreneurship education, impact assessment, entrepreneurial intention, curriculum design

MAKING SENSE OF ENTREPRENEURSHIP: BLURRING BOUNDARIES BETWEEN ACADEMIC AND ENTREPRENEURIAL WORK

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Purpose

The paper focuses on how participants in a 24-hour business idea development Camp organized for university faculty make sense of entrepreneurship and academic work, and of their own abilities in entrepreneurship.

Design/methodology/approach

Drawing from an ethnographic research methodology, the paper makes use of inductive analyses of the videotaped sessions, students' reflective notes after the Camp in combination with the researcher's field notes.

Findings

The findings highlight that in the collective-social sensemaking reflection-in-experience is strongly influenced by the Camp facilitators producing normative ideas of entrepreneurship and 'othering' it from academic work and lived experience of the participants. It is in the individual reflective essays, where the reflection-on-experience is strengthened giving the opportunities for individualised accounts of drawing parallels between entrepreneurship and academic work, and thus enabling 'constructing sameness'.

Research limitations/implications

Longitudinal research is needed for developing understanding of sensemaking and for example formation of entrepreneurial identities in the university context. Further research is also needed on how entrepreneurial universities are co-constructed between the different internal and external stakeholders.

Practical implications

(Multidisciplinary) universities consisting of several perspectives and viewpoints of (academic) entrepreneurship need to offer arenas for their faculty to support sensemaking. Facilitators knowledgeable of the university context may be better-equipped to support the faculty in their sense-making than external facilitators.

Originality/value

Research focuses on generating understanding how university faculty make sense of entrepreneurship in the university beyond a narrow focus on research commercialisation or entrepreneurship in teacher education.

Keywords: Academic entrepreneurship, entrepreneurial university, sensemaking, faculty, entrepreneurship camp, ethnography

ENTREPRENEURIAL IDENTITY MATCHING THROUGH CROSS-CULTURAL LEARNING

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Questions we care about

In this research, we explore how students' identity matching process unfolds through an international internship course in the US. Harmeling (2011) suggests entrepreneurship education programs to be powerful identity workspaces, where students through real-life practice make sense of who they can be as entrepreneurs. Such "work" entails dynamic and social learning where the learner is not only modifying himself or herself, but also are protecting who they are (Petriglieri and Petriglieri, 2010), which is the focus in this study. We outline the theoretical arguments by building on extant entrepreneurial identity research and cross-cultural learning literature and explore empirically why going abroad and entering into a new entrepreneurship culture offers an extra enabling dimension to identity matching through enhanced cultural awareness and self-awareness. We address the following research question: *How does cross-cultural learning influence students' identity matching process.*

Approach

Through a phenomenological in-depth study, we explore retrospective reflections upon modelled behavioural contrasts during entrepreneurial identity matching. We conducted qualitative research using the focus group method. We selected three student cohorts participating in an international internship program in 2013 and 2014, in USA. More specifically, we conducted three separate focus groups with three student cohorts, from two university master programs. Additionally, we analysed students' reflections from the internship course and collected narratives from students' reflections.

Results

Our findings show that all students were confronted with new ways of doing entrepreneurial tasks during the internship period. Consequently, students sometimes pushed their boundaries and they evaluated and contrasted the entrepreneurial modelled behaviours to themselves. Some students' assigned highly negative perceptions to particular American cultural mind-sets and behaviours like "talking big" and showing off in networking. Furthermore, the majority of students assigned positive values to American mind-sets and behaviours that supported a trial and error and risk taking mentality that differed from their home culture. In this sense, the cross-cultural learning experience added a richer repertoire of entrepreneurial behaviors for future role experimentation back home. The cross-cultural learning process most importantly contributed to develop a higher level of self-awareness. The cultural contrasts and comparative learning made their own values more explicit and additionally served to define and protect the students' own personal integrity and identity.

Implications

Our findings highlight the value of cross-cultural learning in entrepreneurship courses. Especially how cross-cultural learning may facilitate a clearer self-understanding of themselves in relation to their entrepreneurial identity. We provide new insights on how educators can approach identity matching in students' entrepreneurial learning.

Value/Originality

Our findings add new knowledge about how cross-cultural learning can influence an identity matching process among young learners. We additionally develop a conceptual model of identity matching process through cross-cultural learning.

Key words: entrepreneurial identity, identity matching, cross-cultural learning, cultural awareness, self-awareness

CAN ENTREPRENEURIAL EDUCATION ESCAPE BEING CAUGHT BETWEEN MARGINAL ('THE DEVIL') AND IRRELEVANT ('THE DEEP BLUE SEA') PRACTICES?

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Questions we care about

This article investigates the problematic situation that the common division into two main kinds of entrepreneurial education leaves many teachers 'caught between the devil and the deep blue sea'. On one hand, *entrepreneurship* education based on an organization creation focus remains marginalized due to its connotations with egoistic capitalism, making it difficult to integrate with most kinds of non-business education. On the other hand, *enterprise* education based on an opportunity recognition focus remains largely irrelevant due to its weak effects and vague state of being indistinguishable from the centuries-old progressive education movement. The article investigates the underpinning definitional starting points of these two established positions and contrasts them to a third novel definitional starting point based on new value creation, resulting in what is here termed 'value creation education'. A key question is posed: *could a new definitional starting point help entrepreneurial education escape a precarious situation characterized by marginalization and irrelevance?*

Approach

Six recent comparative impact studies conducted by the author and colleagues on 928 participants from all levels of education are reviewed. The six studies contrast three different kinds of entrepreneurial education based on three different definitional starting points. The studies were all conducted from 2012 to 2016 by the same team of researchers and with the same methodology, consisting of three different steps; (1) collecting emotional events from participants through a mobile app, (2) preparing, conducting and transcribing interviews with carefully selected students, and (3) analyzing the generated app and interview data. The six studies generated a total of 10855 completed mini-surveys from 928 participants and 300 in-depth interviews with students on all levels of education.

Results

Value creation education emerges as a possible escape from the dilemma of entrepreneurial education being caught between marginalization and irrelevance. Teachers no longer need to choose between effective but marginal practices and widely applicable but fuzzy and ineffective practices. Value creation education thus opens up a new solution space for entrepreneurial education theory and practice. It remains to be seen how large the new solution space is.

Implications

A definitional exploration has opened up new pathways towards higher relevance, applicability and impact of entrepreneurial education. Policymakers could thus need to reconsider many of the currently on-going initiatives to infuse entrepreneurship into education. The biggest potential for improvement of entrepreneurial education practice is likely to be found in enterprise education based practice. Nevertheless, a key question remains unanswered: What more unexplored definitional starting points for entrepreneurial education are out there?

Value / Originality

While almost all other impact studies in the field have been conducted on entrepreneurial education viewed only as organization creation, the six studies reviewed and contrasted here investigated entrepreneurial education based also on the two other definitional starting points outlined here. This has opened up for comparative conclusions and generation of further questions. A number of striking differences in characteristics and outcomes among the three different kinds of entrepreneurial education have surfaced empirically, indicating that entrepreneurial education based on new value creation could potentially be a way for teachers to escape being caught between the Devil and the Deep Blue Sea.

HOW DO STUDENTS CONSTRUCT GENDER BASED ROLE MODELS IN AN ENTREPRENEURSHIP EDUCATION SETTING?

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Objectives

Although entrepreneurial role models have become a familiar phenomenon, their occurrence, function and characteristics have, as yet, been studied only to a limited extent by academics. In this paper we attempt to fill this gap by discussing the construction, role and input of role models in an entrepreneurship education setting.

Approach

For the purpose of this study a qualitative approach will be adopted. This research will explore the use of George Kelly's (1955) repertory grid technique (RGT), the methodological tool of Personal Construct Theory (PCT). Data was collected by structured interviews and repertory grids.

Results

The results of this study show significant differences in how males and females construct entrepreneurial role models.

Implications

From a policy perspective, the research will inform entrepreneurship education and gender policy development. From a practical perspective, this research will provide empirical evidence of the role and impact of role models across the education system.

Value / Originality

The idea that educators have a positive role model effect on their students is a strongly held belief in the academic world. Understanding how students construct these role models in their minds is vital in order to develop relevant and effective entrepreneurship education strategies across the education system. Previous studies have also not focused on young adults (14-16 years old) a time when students are particularly sensitive to gender differences.

Keywords: entrepreneurs, role models, education, entrepreneurship education.

THE EFFECTS OF ONLINE-BASED ENTREPRENEURSHIP EDUCATION. RESULTS OF A RANDOMISED CONTROLLED TRIAL

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Questions we care about

Is role model based online education in entrepreneurship an effective method to equip young pupils with entrepreneurial attributes? How should the division of labour be structured between in-curricular education and online education?

Approach

A randomized controlled trial (RCT) has been performed in which the effectiveness of an online-based entrepreneurship programme was tested. The educational programmes consisted of four one-hour sessions. The sessions started with an instruction film, which was followed by assignments. Pupils in the control group got to watch documentaries focused on natural science. In October 2015, 3,000 randomly selected Danish ninth-graders (age 14-15) were invited to participate in the experiment. 580 pupils chose to participate and were randomly allocated to the experiment or the control group. Questionnaire data was collected on the pupils directly after the educational intervention and then again one year later. 366 pupils replied to the follow-up questionnaire and 366 to the endline questionnaire. 269 replied to all three questionnaires.

Results

The entrepreneurship programme had no influence on *general entrepreneurial self-efficacy (creativity, planning, marshalling of resources, managing uncertainty, financial literacy)*, but it did, in the short term, have a strong impact on the pupils' *perceived knowledge about entrepreneurship*, and it had a significant impact on *start-up self-efficacy, positive perceptions towards entrepreneurship and entrepreneurial intentions*. One year after the intervention the effects were smaller, but pupils in the experiment group still had significantly higher perceived knowledge about entrepreneurship as well as intention to pursue a career as self-employed. The analysis shows that other types of educational experiences that the pupils perceived that they had before and after the educational intervention had very limited influence on its effectiveness.

Implications

The result of this RCT indicates that a short online-based programme can be an effective method to make young pupils more interested in entrepreneurship. However, since this type of online-based educational intervention did not have a measurable influence on general entrepreneurial skills, the analysis shows that it can only function as a complement to teacher-led in-class education. When it comes to exposing young pupils to entrepreneurial role models, online-based programmes make good sense since it makes it possible to guarantee that pupils in different schools experience role models of a sufficient and similar quality.

Value/Originality

The use of online-based education has increased immensely during the past decades and it is expected to increase even more during the coming years. Still, there are very few studies of its effectiveness when it comes to entrepreneurship education. This study shows how online education in entrepreneurship can complement but not replace ordinary education. It thus opens up for the debate regarding the interplay between online education and in-class education.

Key Words: Programme evaluation, Randomized controlled trial, Online-education, Entrepreneurship education

FOR WHOSE BENEFIT? WHO REALLY GAINS FROM STUDENT HIGHER EDUCATION SOCIAL ENTREPRENEURSHIP PROGRAMMES?

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Abstract

This paper discusses the aims and achievements of a world-wide inter-HEI social entrepreneurship programme and competition established in the Republic of Ireland in 2011, and to what extent the primary stated aim of the programme – the empowerment of disadvantaged people and communities through student social entrepreneurship action - is achieved. Enactus, established in the USA in the 1970s as SIFE, now runs in 1,700 HEIs in 36 countries across the globe culminating in national competitions and a World Cup. Despite the scale and scope of Enactus, there has been very little empirical research conducted internationally on students' experiences with Enactus and the impacts of their projects. This paper is the first and only Irish research project on Enactus. It examines the impact Enactus has had on participating students in one Irish HEI and on the communities and people with whom they worked. It questions the nature and extent of the benefits for both students, and arguably more importantly, the disadvantaged people and communities they seek to empower. The paper also asks how can these social entrepreneurship programmes achieve greater impact for all stakeholders.

Keywords: Entrepreneurship education for non-business students; Social and civic entrepreneurship education; Engagement, impact and evaluation; Student incubator initiatives; Social innovation; Enactus; Ireland.

EXPLORING STUDENTS' CREATIVITY THROUGH A NATURAL EXPERIMENT

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Questions we care about

We ask if entrepreneurship education can enhance students' creativity during one semester course? Creativity is seen as an essential human ability employed in entrepreneurial behaviour. We therefore address whether students' creativity can be modified and this can be measured. Entrepreneurship courses with practice-based learning are expected to develop creativity, entrepreneurial competences and skills, strategic orientations and new learning styles. Yet, these learning outcomes would differ in their inherent natures, as some are more closely linked to individuals' personality and hence would be more difficult to change or modify, whereas others are more skill based, and therefore more easily acquired, being more malleable and changeable. We therefore adopt and translate ideas from the Savanna principle from evolutionary psychology. In line with this principle, we would assume that the expected learning outcomes defined as personality traits and orientations, competences and skills can be placed along a continuum, where some are assumed to be more innate and stable and hence more difficult to develop and modify, whereas others are more malleable and changeable and easy to develop.

Approach

We use a natural experiment design and a pre- and post-test survey in our research. The student population is engineering students enrolled in a compulsory entrepreneurship course with practice-based elements. The practice-based learning includes among others team-based idea development for a business model, and pitching. Students are exposed to using innovative tools and creativity exercises.

Results

Our preliminary results show that students enhanced their creativity measured by the Bisociative Thinking Mode (BTM) scale, but decreased with respect to the Bisociative scale (BS). The results only partly support our hypothesis. We plan to collect post-test data from a new student cohort of 400 students to achieve a higher *n* that may provide findings that are more conclusive.

Implications

BS is about preferring and enjoying, and BTM is about being able of doing and achieving something. We suggest that education might influence BTM to a higher degree than BS.

Value/Originality

To our knowledge, our study offers a novel longitudinal assessment of the changes in biosociative thinking during an exposure to entrepreneurial activities in the context of a natural experiment.

Key Words: Creativity, Bisociative thinking, Engineering students, Savanna principle

HOW CAN HIGHER EDUCATION INSTITUTIONS (HEIS) SUPPORT THE DEVELOPMENT OF ENTREPRENEURIAL MINDSETS IN LOCAL COMMUNITIES?

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Questions we care about

Promoting an entrepreneurial culture through the development of entrepreneurial mindsets has become an important mission on the education and enterprise policy agenda of many governments and supranational organisations. Higher Education Institutions (HEIs) have responded to this call by developing entrepreneurship / enterprise education pedagogies that now place a greater focus on engendering entrepreneurial competencies within individuals rather than on the creation of new ventures. Such competences are relevant for all aspects of an individual's life and may assist them in navigating the ever changing, chaotic, global world in which they live. However, some commentators have argued that this development is elitist as HEIs have primarily focused their support on better educated individuals and high-technology based enterprises. Indeed, it has also been suggested that HEIs are less proactive in the development of entrepreneurial mindsets more broadly in society, particularly amongst disadvantaged communities. This paper explores how HEIs can move outside of their formal education setting and dynamically support the development of entrepreneurial competencies and mindsets amongst people within their local communities.

Approach

Based on an interdisciplinary review of the literature covering entrepreneurship / enterprise education and community engagement, the concept of developing entrepreneurial mindsets is explored and discussed. Identifying a gap in the literature, this theoretical review builds a knowledge base that culminates by offering future researchers a series of considerations from which they can shape their research on this topic.

Implications

Investigating current practice in entrepreneurship / enterprise education and community engagement, this paper facilitates a synthesis in knowledge in this emerging research area. It maps existing knowledge in terms of the relationship between entrepreneurship / enterprise education and community engagement and it highlights the necessity to include the perspectives of multiple stakeholders in considering future practice.

Value/Originality

While the literature is abundant with various pedagogies, models and frameworks that support the development of entrepreneurial mindsets and entrepreneurial capabilities in the formal education setting, there is little evidence of how entrepreneurial mindset may be developed more broadly in society, particularly in disadvantaged communities. This paper addresses this gap in the literature by identifying the roles that HEIs may play in this regard.

Key Words: Entrepreneurial Mindset, Community Engagement, Higher Education Institutions, Enterprise / Entrepreneurship Education

WEB PORTALS FOR DISRUPTIVE INNOVATION: DESIGN FOR TRUST

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Questions we Care About

Why would entrepreneurs trust and engage with a web interface to canvas ideas? The rationale for this question is to include digital intermediaries, i.e. web portals in entrepreneurship education research and practice. Divergent thinking and a design philosophy ask for open mindset, opinions and evaluations from as many potential stakeholders as possible. Web portals like crowdfunding intermediaries allow entrepreneurs to access a distinct crowd and get immediate feedback (and potentially) funding of their innovative idea. The authors intend to address the question on what creates, builds, and maintains trust between the entrepreneur, the web portal, and the crowd in the ideation phase.

Approach

The focus of this research is to investigate the use of crowds and of web portals such as 'Kickstarter' or 'Crowdfunder' to generate ideas, get inspiration and funding to support new ideas. We have identified from previous work that trust is key to using these sources and the perceived lack of trust is a major constraint to the effect development of entrepreneurial ventures. The crowd recruiting, idea generation and the attraction of funding depend on how trustworthy the web portal as the digital intermediary is. The assessment of trust and designing for trust is a complex and under researched area. We propose to build on previous research to identify the process of trust building in the intermediary by conducting two case studies and undertaking a behavioral experimental approach to optimize the design and operation of web interfaces to maximize trust. Two in-depth case studies of interfaces were used to attract innovative ideas and an investigation using the experimentation approach of Conjoint Analysis to understand what people value in terms of trust when encountering a web platform designed to collect innovatory ideas and eventually funding. This experiment will be exposed sets of individuals to three innovation platforms to score the platforms on trust dimensions in a fractional factorial experiment under the framework of conjoint analysis a respected marketing and product development methodology. The experimental subjects were one group of 12 entrepreneurs and another group of postgraduate business students. This approach was used to evaluate web portals which means that participants use the portal and answer a series of questions to measure good and bad points and how they found the experience and if they had trust. From the analysis of the results design recommendations were formed. This is an investigation in an important area in contemporary business and there is a need to overcome the constraint of lack of trust in third party interfaces. If digital intermediaries can be better designed then doors will be opened to facilitate and excel the entrepreneurial process.

Results

From the cases studies it is clear that conveying the image of professionalism increases the credibility of the web page. Adopting an open and ethical perception adds to trust. There was a remarkable degree of agreement between the survey results sand policy is also very important. Thus, it seems clear and open formatting of the questions and clear branding are important to build trust. Also important are external independent reviews and the experience and simplicity of using the interface. No gender or experience differences were found. Establish propositions how the trust level at each stage of the crowdfunding process and for each of the input variables can be enhanced (e.g. reputation of the intermediary, former experience with external expert monitoring, etc.)

Implications

Shown in this paper is a method to assess the effectiveness of web-based portals, which are becoming increasingly common in entrepreneurial research. These portals are only effective for canvassing ideas to foster entrepreneurial success if they are trusted. The results suggest that simple professional design is essential as is to secure external independent reviews. For entrepreneurial education the importance of intermediaries and trust has been proved as important and beneficial to overcome critical constraints.

Value/Originality

The presented research approach provides a new perspective on how the understanding of trust in digital intermediaries adds to the benefit of entrepreneurs and, hence, defines the need to integrate trust in curricular development. Applying the recommendations from this work will improve web based portals used are interfaces to facilitate disruptive innovation, this will make the portals more attractive and useful so should push the innovation process. It also have value in teaching of entrepreneurship and innovation as it illustrates how students can learn skills of experimental design, in this case Conjoint Analysis to design and improve products and services. We believe that the application of a case study and experimental approach to web based interfaces is completely original and gives insight in to how to encourage disruptive innovation.

Key Words: entrepreneurship education, web portal, digital intermediary, crowd triad, trust

AN EXPLORATION OF THE VALUE OF DESIGN THINKING TO ENTREPRENEURSHIP EDUCATION, IN PARTICULAR THE RELATIONSHIP BETWEEN DESIGN THINKING, CREATIVITY AND OPPORTUNITY IDENTIFICATION.

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Questions we Care About

Based on the still growing popularity of Design Thinking in the management field and early success stories of its application in entrepreneurship education, the questions we care about are: What is the nature of the relationship between design thinking, creativity and opportunity identification? Is design thinking an effective pedagogical method that will increase an individual's ability to identify opportunities? How does design thinking complement analytic perspectives and methods?

Approach

This paper aims to explore the link between design thinking, creativity and opportunity identification in entrepreneurship education through an initial search of the literature.

Results

Design thinking is an accessible and highly effective way of stimulating creativity that can lead to effective problem solving and opportunity identification, however the causational view and inductive, analytical style is still the main approach to problem solving in business and entrepreneurship education. From an initial search it is clear that gaps in the literature exist in relation to the link between design thinking, creativity and opportunity identification both in the business domain and in entrepreneurship education.

Implications

From an initial search it is clear that gaps in the literature exist in relation to the link between design thinking, creativity and opportunity identification and the aim of the author would be to explore this in more detail.

Value/Originality

This paper explores the recent literature on design thinking and opportunity identification and aims to link the two.

Key Words: Entrepreneurship Education, Design Thinking, Creativity, Opportunity Identification.

ENTREPRENEURSHIP EDUCATION AND INITIAL TEACHER EDUCATION IN IRELAND: A CASE STUDY

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Questions I care about

Initial Teacher Education (hereafter ITE) “lays the foundations of a professional mind-set and provides the new teacher with a basic toolbox to make meaningful learning happen” (Caena, 2014, p. 1). In turn, the inclusion of entrepreneurship education in ITE lays the foundation for implementing entrepreneurship education (European Commission, 2014). The purpose of this study is to explore the inclusion of entrepreneurship education at one ITE institution in Ireland. This exploration is contextualised within an examination of the wider policy framework in Ireland, as related to entrepreneurship education and ITE. The following question is posed: How is entrepreneurship education included at the case institution?

Approach

This paper presents a systematic review of the literature on entrepreneurship education and ITE, followed by an exploratory case study on the inclusion of entrepreneurship education at the case institution. An exploratory case study methodology is utilised, as this study’s aim is to present an in-depth examination. Multiple sources of data are used to ensure systematic triangulation, including two surveys, multiple interviews and documentation analysis.

Results

The findings of this case study are presented at three levels of analysis; the macro policy level, the meso institutional and programme level, and the micro teacher educator and student teacher level. The findings illustrate an approach to entrepreneurship education which is both implicit and driven from the micro level. This bottom-up approach to the inclusion of entrepreneurship education is rooted in the practice of teacher educators, and the capacity of student teachers.

Implications

The implications are predominantly for the case institution, as it seeks to enhance the inclusion of entrepreneurship education.

Questions coming from the study

Given that an exploratory case study is presented, the aim is to provide for further inquiry (Yin, 1994). Further questions include: What now for the case institution on the inclusion of entrepreneurship education? What lessons can be learned (if any) for the wider ITE network in Ireland?

Value/Originality

Currently no evidence exists on the inclusion of entrepreneurship education in ITE in Ireland. For the case institution this research supports the development of entrepreneurship education initiatives. At a policy level, this research is relevant and timely given the second phase review of ITE in Ireland due to commence in 2018.

Key Words: Entrepreneurship Education, Initial Teacher Education, Case Study

SHOULD WE WIDEN THE SPECTRUM OF TARGETS AND MEANS OF ENTREPRENEURSHIP EDUCATION?

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The questions we care about

This paper explores the targets and ways of entrepreneurship education in the Finnish UAS context.

1. What kind of EE does Finnish UAS offer for their students?
2. How UAS students identify multiple forms of being or becoming entrepreneurship?
3. How can we respond to the multiple targets and expectations that are set for EE in UAS?

Approach

Entrepreneurship education research continues to focus on students' abilities to start new ventures. This can lead to lost opportunities when other forms of entrepreneurship such as family business, franchising and social entrepreneurship do not get needed attention in students' studies. Lautenschläger and Haase (2011) state that entrepreneurship education is temporary fashion and higher education institutions should focus more on the development of students' creativity, opportunity recognition and problem solving abilities rather than teaching them knowledge about business creation. In this study, we agree with Lautenschläger and Haase that the development of students' entrepreneurial abilities in higher education is essential but we like to point out that new business creation is not the only way to approach entrepreneurship and there are multiple other ways which have not gained as much attention in higher education.

We argue that as entrepreneurship manifests itself multiple ways we should also widen the spectrum of the targets and means of entrepreneurship education. There is a need for different kinds of entrepreneurs and businesses and not only fast growing start-ups that many higher education institutes seem to prefer in their entrepreneurship programmes. The needs of the students are heterogeneous and multifaceted: For instance some students may continue their family business, some others are more interested to buy an existing business and develop it, and some want to become more like life-style entrepreneurs that base their business on their hobby and only can get a minimum income from their business - and entrepreneurship education should support the processes of them all.

Results

We not only propose that students need to become more aware of different forms of entrepreneurship (e.g. family business, self-employment, cooperative entrepreneurship, social entrepreneurship) but also different ways to start a business (business transfer, acquisition, succession franchising). These different ways of starting a business are often more successful due to a working business model and established customer base. By widening students entrepreneurial choice options the universities can play a role in solving the acute problems that many SMEs face in business transfers.

Key Words: Entrepreneurship education, targets, competencies, higher education, University of applied sciences

WHAT EMPLOYERS WANT?: A CROSS COUNTRY STUDY OF GRADUATE EMPLOYABILITY SKILLS IN CROATIA AND IRELAND

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Questions we care about

This paper explores the learning outcomes of entrepreneurship education at Higher education institutions in Croatia and Ireland from an employability perspective. Specifically, this research will focus on three primary objectives:

1. To determine the relationship between entrepreneurship education at Higher education institutions and graduate employability.
2. To identify the nature and importance of general and entrepreneurial skills sought by employers.
3. To investigate how HE contributes to developing these skills, from the perspective of employers, senior students and educators.

Approach

Two surveys conducted previously in Europe were taken as reference for the design of the survey used in this research: the European Commission's Eurobarometar 2010 titled "Employers' perception of graduate employability" and the UK Commission's Employer Skills Survey 2013: UK results (Winterbotham et al., 2014). The research yielded 80 responses from Croatian employers, 230 surveys from senior students in a Croatian University and 30 educators. In Ireland, 29 employers, 161 senior higher level students and 39 educators responded to the questionnaire.

Results

The findings shows that employers, students and educators have different perceptions about the skills and attributes that enhance graduate employability. Students have a very different view of the world of employability than employers and educators. Employers value problem solving skills, willingness to learn, as well as enthusiasm and motivation as the most important employability skills. Entrepreneurial skills such as problem solving, working under pressure, desire for achievement, independence, positive attitude towards change, thinking outside the box and innovativeness, opportunity recognition, taking initiative and making judgments on the basis of limited information factor low in importance among all respondent groups in general. Thinking outside the box and taking initiative were common in all respondent groups as the least contributing entrepreneurial skills made by HEI's, closely followed by opportunity recognition and making judgements on the basis of limited information.

Implications/Value

The findings will provide valuable insights for educators, graduates and employer and will inform decisions in relation to the education, employability and recruitment of future graduates. The findings of the study can also be used to assist entrepreneurial universities, and career advisors in both countries. The research is not exempt from certain limitations as it was limited to students at one HEI in Croatia, and one in Ireland. It is suggested that further studies be conducted to determine whether differences in attitudes exist in regard to other HEI and countries.

Key Words: Employability, Entrepreneurship Education, Entrepreneurial Skills

OBTRUSIVE ORIGINS OF ENTREPRENEURIAL INTENTIONS: DARK TRIAD AND RESILIENCE IN TEAMS PREDICTING INTENTIONS

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Questions we care about

The literature on entrepreneurship has mainly focused on positive and functional aspects of entrepreneurial personality, attitudes and outcomes. However, many new firms fail within a relatively short period of time pointing at the importance of resilience, or the ability to recover from setbacks and challenges. Only recently, researchers discussed the role of negative characteristics, e.g. dark triad traits like Machiavellianism, psychopathy and narcissism, that might motivate people to become an entrepreneur at first instance but might become dysfunctional in the long term. We extend this research in two ways. First, most ventures are founded by teams and not by individuals. Therefore, it is important to look at team level dynamics affecting intentions to start a business venture. Second, these team dynamics might be affected by positive as well as by negative characteristics. Therefore, we assess how dark triad traits, proactive personality and resilience affect intentions to start a business.

Approach

Thus, we look at team level processes affecting intentions to become an entrepreneur. Specifically, we propose that the combination of dark triad traits, proactive personality and resilience in teams would predict entrepreneurial intentions. In contrast to prior research, we take the dimensional nature of Machiavellianism into account proposing that these dimension are differentially related to intentions. Finally, we examine interactions between positive and negative personality characteristics.

Results

In a study among student teams ($N = 134$ teams, $n = 470$ persons) working together during an entrepreneurship course, we found support for this idea. Results indicated that the amorality and desire for status dimensions of Machiavellianism were positively related to entrepreneurial intentions. Moreover, a curvilinear relation for desire of control indicated that increasing desire of control was positively related to intentions up to a certain point where a higher desire for control negatively related to entrepreneurial intentions. Psychopathy was negatively related to intentions, while team level narcissism and proactive personality were unrelated. The significant two-way interaction of proactivity and resiliency showed that entrepreneurial intentions were lowest at low levels of resiliency, while proactive personality was high rather than low. Moreover, high team level desire for control combined with high resiliency was related to entrepreneurial intentions. In contrast, a high team level desire for control combined with low resiliency was related to lower entrepreneurial intentions.

Implications

Entrepreneurship education not only addresses people who have positive characteristics associated with a successful entrepreneurial career but also people who share dark triad traits and/or show resilient behaviour. So dark triad traits and resilience, activated in team settings by group projects, predict entrepreneurial intentions. Given the extensive use of team projects in business schools in entrepreneurship education, the implications of these findings are discussed.

Value/originality

By covering both 'dark sides' and positive sides of entrepreneurship, our study enriches pedagogical theories and learning philosophies in entrepreneurship education. A neutral evidence-based approach is needed to study two under-researched and somewhat controversial phenomena in the field of entrepreneurship education: dark triad personality and resilience, activated by team work, and their impact on entrepreneurial intentions.

Key Words: dark triad (narcissism, psychopathy, Machiavellianism), team resilience entrepreneurial intentions, proactive personality, teams

GRYFFINDOR, HUFFLEPUFF, RAVENCLAW OR SLYTHERIN: YOUR CONTEXT INFLUENCES YOUR FUTURE. - HOW TO ADDRESS CONTEXT IN ENTREPRENEURSHIP EDUCATION?

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Questions we care about

Context matters! Barab and Plucker (2002) raise the question: Smart People or Smart Contexts? In continuation hereof, entrepreneurship educators may ask, what is most important: entrepreneurial people or entrepreneurial contexts? This further inspires the question: is learning achieved because the individual is interested in or predisposed to learning, or because the learning context is “rich” in offering support during the learning process and providing superior learning opportunities? Gartner (1995) notes that observers tend to underestimate the influence of context and overestimate the influence of individual factors in relation to entrepreneurial behaviour. Welter (2011) adds that the context of entrepreneurship can either limit or amplify the opportunities and challenges for an entrepreneur. Further, Baumol (1990) emphasizes that the context in terms of *where* and *when* has a large influence on entrepreneurship, but the *where* and *when* can be examined on many levels and also includes the additional questions of *who* and *how*. These concerns are however, rarely evident in relation to context in the entrepreneurship educational literature.

Therefore, we care about the following questions:

- 1: *What constitutes context in entrepreneurship education?*
- 2: *How do we as educators make sense of context?*
- 3: *How can we as educational designers actively use contextual elements to promote entrepreneurial action?*

Approach

This paper explores the different concepts of context described in the entrepreneurship literature through a review addressing if and how these concepts are invoked in entrepreneurship education. The purpose is to (a) to identify potential knowledge gaps between the entrepreneurial experience, as addressed in general entrepreneurship literature, (b) derive a conceptual model of context for entrepreneurship education and (c) to assist educators in promoting entrepreneurial action through experiential learning to inspire and prepare students for entrepreneurial practice.

Findings

The preliminary findings show that context is recognized as an important factor in relation to entrepreneurship research (Welter, 2011), research in entrepreneurship education (Blenker et al., 2014, Pittaway and Cope, 2007, Rideout and Gray, 2013) and implicit or explicit in relation to the practice of entrepreneurship education (Mwasalwiba, 2010, Nabi et al., 2016, Sirelkhatim and Gangi, 2015). However, little has been transferred into research of how educators and educational designers can actively work *with* their context.

Implications

With this study, we are introducing context as a design parameter for entrepreneurship educators. Nonetheless, there are still a number of unanswered questions in relation educational design and the influence and importance of context in relation to entrepreneurship education. We are developing a model to support entrepreneurship educators in using their context consciously and actively in the design and deployment of their education to achieve a better learning environment for their students.

Key Words: Entrepreneurship education, Context, Educational Design.

BRIDGING THE GAP BETWEEN ACADEMIA AND INDUSTRY: THE ROLE OF TECHNOLOGY GATEWAYS IN ENTREPRENEURIAL EDUCATION

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Abstract

Given the significant challenges that have emerged in teaching and learning of 21st century skills, we discuss the positioning and the value of industry-oriented research and innovation entities embedded in academic organisations as catalysts for entrepreneurial education. More specifically, we examine the role of Technology Gateways in Ireland, which work directly with many different types of SMEs across the country. We focus upon one, the TEC Gateway at the Nimbus Centre in Cork IT, describing its innovation project activities and its work with students through, for example, internship programmes, which leverages strong engagements with business, industries, and communities. We then assess the potential of successes in this area to be broadened in scope and scale, using collaborative, community-focused learning philosophies to enhance existing practices and strengthen the identities of active stakeholders.

HOW TO TEACH ABOUT ENTREPRENEURIAL FAILURE? OBJECTIVES, ASSUMPTIONS, AND EVIDENCE

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Abstract

Entrepreneurship education (EE) has typically paid attention to successfully design and create new venture. Therefore, the educational program (mostly) transmits “the sense of success” (Oser & Volery, 2012). In recent times, however, there have been voices accommodating entrepreneurial exit, especially failure, as an integral part of entrepreneurial process and career (Aldrich, 2015; Bolinger & Brown, 2014).

This paper focuses on entrepreneurial failure as a significant yet missing element of EE. The chosen topic of EE is motivated by the negative attitude toward failure (fear and stigma), which hinders the creation of new ventures in EU economies (European Commission, 2013). As early as in 2005, the EU has called for education programmes, which would help to counteract the negative attitude toward failure. Surprisingly, EE still overlooks this issue. Only few studies have addressed entrepreneurial failure so far (Oser & Volery, 2012; Shepherd, 2004). In educating about business failure, Shepherd (2004) outlines several pedagogical approaches such as lectures, case studies, “reflections on grief”, simulations, inviting guest speakers. We aim to extend the aforementioned approaches by designing and implementing a research-based learning format. The course design aims to engage Master-level students in the topic of entrepreneurial failure by conducting a qualitative study, in particular, by interviewing ex-entrepreneurs. In order to stimulate a better attitude toward failure among would-be entrepreneurs, we have chosen the “learning by failing” perspective.

Through the course, students were expected to: get to know the concepts of entrepreneurial exit and learning and observe how ex-entrepreneurs are transforming their experience of exiting a founded company in their post-exit life; understand the role of entrepreneurial learning in general and learning from failure in particular; be aware of how to anticipate failure and cope with this; and be able to conduct field research.

Having discussed selected topics and doing the tutorials for conducting qualitative research, students were able to locate six entrepreneurs who have failed and did interviews with them. Each interview lasted in average one hour and was transcribed on 20-30 pages of word documents. Transcriptions were then coded to produce themes on entrepreneurial failure, coping with entrepreneurial failure, and learning from failure. The course ended with a discussion and reflection session.

With the research-based approach to learning, we offer a new course design to bring entrepreneurial failure to classrooms and to stimulate a positive attitude towards failure among would-be entrepreneurs. Our endeavour addresses the limited attention to entrepreneurial exit, specifically failure, in EE. Moreover, the course deals with the topic of entrepreneurial failure in the specific context, i.e. Austria, and educates students to conduct research in the field of entrepreneurship.

Key Words: entrepreneurship education; entrepreneurial exit; failure; research-based training; qualitative study; entrepreneurial learning

BLENDING EE AND EL THROUGH REAL-LIFE BUSINESS CASES AND PBL

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Abstract

Entrepreneurship education (EE) has been criticized for being disconnected from real-life entrepreneurial conduct (Edelman et al., 2008). The current investigation engage in research streams that seek to remedy this discrepancy. The objective of this research is to build deeper understandings on how to facilitating deeper learnings by engaging students in real life entrepreneurship challenges. As educators, we try to shape an environment for learning that fits with the students' preferred learning style, the students' career aspiration, as well as the societies need for skilled workforces. All this with the individual students learning process in mind. Textbook-based classroom lessons and textbook-based case readings is pedagogical tools often utilized in order to facilitate student learning in entrepreneurship education. General didactical tools as textbooks for use in entrepreneurship courses often offer reading-cases intended for classroom discussions even if entrepreneurship subjects in itself invites to self-engaging trialing action. This study reports from an effort to bring the students closer to the entrepreneurial fire.

This study connects theoretical frameworks on how learning and reflection builds personal theory, as well as how entrepreneurial learning relates to entrepreneurship education. It also discuss preconditions for learning and how to facilitate learning, as well as on how to utilize problem based learning didactics for to achieve higher-level learnings.

We need to teach our students to think as entrepreneurs, not just perform entrepreneurship related tasks. Studying how to teach critical reflection and facilitating metacognitive abilities would link entrepreneurship education and entrepreneurial learning. If we as EE educators were able to foster the students' metacognitive abilities, we would lift our students to another level. We would then teach our students to learn from their own real-life entrepreneurial experiences. Through reflective practice (Schön, 1983), they would grow self-directed entrepreneurial learning capabilities. The practical implication of such efforts would then be that our graduates would acquire the ability to adjust to changing environments, while the theoretical implications would integrate entrepreneurship education and entrepreneurial learning and allow improved cross-fertilizing of these research fields.

In this research, we are interested in how to engage students in real life business cases. In doing so, we report from the frontline. We bring our students out in the field; visiting real entrepreneurs who tell their tale, and make our students engage in the entrepreneurs real business challenges. The results related to students learning are promising. This research details a script for engaging students in real local entrepreneurship business cases fitted their educational background that relates to the world they are to enter as graduates.