



3E CONFERENCE PROCEEDINGS

Book of Abstracts

3E Conference – ECSB Entrepreneurship Education Conference

2016

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 2016*. This book presents the abstracts of the fourth 3E Conference held on 11–13 May 2016 in Leeds, UK. The Conference is hosted by the Centre for Enterprise and Entrepreneurship Studies (CEES) at the University of Leeds and the European Council for Small Business and Entrepreneurship (ECSB) with support from Enterprise Educators UK (EEUK).

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 globalised economy. However, we should not lose sight of its 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. Such responses require us to reflect upon what we teach, how we teach it and ultimately the rationales for our chosen approaches. As educators we also need to engage those outside the academic field, sharing our experiences and creating a dialogue with policy makers at all levels and local, national and international business communities.

Through an innovative and unconventional format, the 3E Conference establishes a new approach for entrepreneurship conferences. 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 and unique focus on Europe. Unlike many conventional academic events, the Conference focuses on problems and questions rather than on ready-made solutions and presentations of research findings.

The theme of 3E 2016 is “*Being Enterprising: Entrepreneurship, Education and Engagement*”. Following the success of conferences in Denmark, Finland and Germany, this year there were two calls, one for research papers and one for practitioner development workshops (PDW); and the conference was extended to three days. The first day, 11th May, is dedicated to 18 practitioner development workshops. The PDW day is organised together with the Enterprise Educators UK. On 12–13 May 39 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 the papers.

Sally Jones
Conference Chair
Centre for Enterprise and Entrepreneurship Studies
University of Leeds

Richard Tunstall
Conference Chair

Robert Blackburn
President of ECSB

Exhibitors at 3E 2016

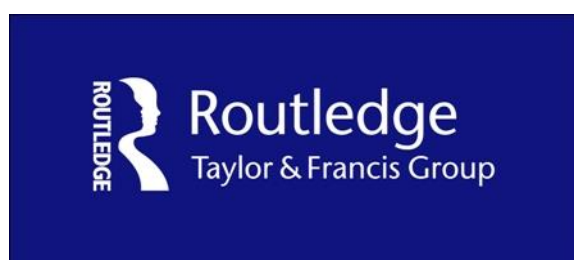


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PRACTITIONER DEVELOPMENT WORKSHOPS

WHY DON'T ALL UNIVERSITIES OFFER VENTURE CREATION PROGRAMMES?

Nigel Adams, University of Buckingham (nigel.adams@buckingham.ac.uk)

Joan Lockyer, Coventry University

Kelly Smith, Huddersfield University

Workshop summary

Three Leaders of UK Undergraduate Venture Creation Programmes (VCPs) will present brief introductions to their programmes which have real-life ventures as their primary learning instrument and are part of the formal curriculum. They will report on the students' results and learning outcomes during the 10 years since the first undergraduate VCP was launched in January 2006.

As very little research has been carried out into VCPs One of the leaders of a VCPs is conducting a longitudinal study of the entrepreneurial attitudes and actions of the VCP students before, during at the end of their undergraduate programme and as graduates in future years.

Questions we care about

- What have been the results of the three UK undergraduate VCPs presented since they started?
- If undergraduate VCPs have the potential to enhance learning and contributed to economic growth, why are there so few known undergraduate VCPs at universities around the world?
- Some enterprise educators have tried to start VCPs but found it difficult to get the approval.
- What other VCP-like models of delivery are emerging?
- Enterprise and entrepreneurship programmes (let alone VCPs) are closing down. Despite the rhetoric of government and the EU, there are fewer programmes being developed to answer the call. Why is that?

Approach

20 minutes - After introducing the history of VCP development in the UK, three experienced leaders of undergraduate VCPs will talk about different aspects of their programmes.

20 minutes - Interactive Q&A/discussion on the points raised.

Results/Implications

- A critical review of the results of three UK undergraduate VCPs. Have they been a success?
- Debate whether the introduction of more VCPs in other universities would be a useful addition to entrepreneurship education and pedagogy.
- Discuss if and how more VCPs can be created in the UK and beyond.

Key words

Venture Creation, Experiential, Practical, Innovative, Transformational

OPERATIONALISING ETHICS IN ENTREPRENEURSHIP EDUCATION: EXPERIENTIAL AND PRACTICE-BASED APPROACHES

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Nik Winchester, The Open University, UK

Workshop summary

Ethics is widely recognised as an important theme in entrepreneurship education, as reflected in subject-specific guidelines, and in the accreditation requirements that are being applied more generally within the fields of business and management. Educators also recognise a growing student interest in ethically-driven entrepreneurship and a more general need to help students prepare for a variety of complex ethical challenges. In addition, more responsible models of entrepreneurial practice are vital in many contexts (e.g. to address environmental threats, including climate change, and to promote economically and socially productive enterprise development, particularly in marginalised communities and post-conflict situations).

However, business ethics education has been criticised for its ineffectiveness, focus on abstract principles, restricted pedagogy and limited engagement with students' norms, practices and ethical beliefs. As such, it lacks a compelling rationale as developmental practice. Ethics curricula are primarily oriented towards CSR, stakeholder relations and ethical decision-making in larger and more established corporations, albeit with notable exceptions. This prompts our core question: how might pedagogical innovation help to bridge the 'ethical practice' gap, with particular reference to entrepreneurship education?

Workshop style

This workshop is designed to surface key issues and share experiences regarding the role of ethics teaching within formal entrepreneurship education programmes. It also provides an opportunity for participants to experiment with a new pedagogic tool, NEO, which can be used to promote experiential learning and critical reflection in this important area. Participants are also encouraged to complete a short pre-session survey: <https://www.surveymonkey.co.uk/r/88DVP9F>

Expected outcomes

This workshop, in conjunction with the pre-session survey, will enable participants to:

- Share experiences with fellow practitioners.
- Engage with research evidence that cuts across the fields of ethical theory, entrepreneurship education and practice.
- Gain new insights by experimenting with a new pedagogic tool, and discussing potential applications in the field of entrepreneurship education.
- Contribute to a new agenda for pedagogic research and practice in this area.

THE FUTURE WORLD OF WORK: BUILDING OUR CAPACITY TO RESPOND

Ann Davidson, The Scottish Institute for Enterprise (a.davidson@sie.ac.uk)
Jonathan Tait, The Scottish Institute for Enterprise

Workshop summary

This workshop addresses the importance of universities and colleges making good decisions in the present about the future provision of enterprise and entrepreneurship education. Educators work with students to help them develop sustainable ideas with longevity, and to develop the capacity and resilience to do this. Arguably, the same approach should be applied to the development and validation of enterprise and entrepreneurship education in tertiary education.

It will cover methodologies and techniques for approaching the future of education in a systematic way by identifying clear signals or building blocks in the present. It will be shown how these can be used to develop 'preferred futures' and an action road map to develop the capability and resilience to achieve these. It will be discussed how this approach may lend itself to a wide range of disciplines not normally associated with enterprise and entrepreneurship, and can enable a wide range of educators to approach the development of their courses in an innovative and entrepreneurial way. For example, they may consider integrating elements of entrepreneurship into their teaching for the first time, as a response to the 'preferred future' they can see and want for their students. Agility as well as adaptability.

There will be a practical look at the potential for impact on the development of a student's employability skills. 'The Future World of Work' case study used in this workshop will enable delegates to envisage the future graduate skills required by organisations to develop their future readiness for employability or entrepreneurship.

Workshop style

An interactive group work session using case studies designed to get delegates putting the tools and techniques into practice and drawing on their own experiences, as well as using any 'signals' that they are starting to identify.

Workshop outcomes

- Understanding the importance of making good decisions about the future in the present and how to develop the right entrepreneurial mindset to do this,
- Take away techniques and methodologies to begin the process of making these decisions and the ability to kick start some powerful conversations about the future of entrepreneurship education with colleagues post conference.
- Takeaway techniques and methodologies to use with students to help them future proof their entrepreneurial ideas and/or develop their future employability skills.

Related research

The rationale and content of this workshop is practitioner led and based around the authors' active research over a period of 5 months. It draws on a series of workshops developed for academic staff and students across a range of Universities. These workshops combined future scenario and design thinking methodologies, and were influenced by the work of The Institute of the Future in California. The authors will share their experiences of running these workshops and the future opportunities, challenges and action roadmaps they generated for those taking part in them.

WHAT'S DISTINCTIVE ABOUT ENTREPRENEURSHIP AND ENTREPRENEURIAL EDUCATION? – THRESHOLD CONCEPTS AND EXPERTISE

Lucy Hatt, Newcastle Business School (lucy.hatt@northumbria.ac.uk)

Workshop summary

With the growing fashion for all things entrepreneurial, we are perhaps in danger of over using the term and rendering the word's meaning to be so all-encompassing as to become nothing but a trendy label. Is it time to get clearer about what we really mean when we educate in entrepreneurship? How can we differentiate entrepreneurship manifest in the HE sector in any subject discipline from entrepreneurship as a subject discipline? Recent work promoting value creation as an educational philosophy grounded in entrepreneurship would suggest that an entrepreneurial approach may be taken to teaching and learning in any subject discipline in an educational context. Where does that leave HE programmes claiming to teach entrepreneurship? What implications does this have for the curricula of such programmes? Using the learning theory of *threshold concepts* and the concept of *expertise* as bridges between the domains of education and entrepreneurship; this workshop aims to explore the distinctiveness of specialist entrepreneurship programmes using a visual research method.

Style

The workshop will be informal, interactive and participant led. Delegates will be invited to complete an “odd one out” or triad comparison exercise as individuals and in small groups.

Expected outcomes

The workshop will invite delegates to explore their own assumptions and interpretations of the term “entrepreneurship education”, and what the most important concepts might be in the journey to becoming an entrepreneurship graduate. Using a novel and original approach, it may serve as a useful introduction to the theory of threshold concepts and triad comparison as a research method. This is likely to be helpful in the design of the curriculum of Entrepreneurship programmes, as distinct from approaches treating entrepreneurship as an underpinning educational philosophy. Participants will leave this workshop with a clearer understanding of the potentially unique differentiating characteristics of specialist entrepreneurship programmes, enabling better curricula design and delivery, as well as the improved marketing of such programmes. This workshop will form the first step in establishing a community of interest around the distinctiveness of specialist entrepreneurship programmes, and threshold concepts in entrepreneurship education. A group summary will be distributed following the workshop, and published on-line in the author's blog.

Related research

Threshold concepts are defined as concepts which open up a new and previously inaccessible way of thinking about something. One of the strengths of the notion of threshold concepts is how effective it is in engaging academics in discipline-specific conversations about teaching, the expectation being that the identification of these threshold concepts will allow more effective curricula design. This workshop constitutes exploratory doctoral research in preparation for a transactional curriculum inquiry study using a staged design, to identify perceptions of the concepts in entrepreneurship education which are transformative for student learning in HE, and how this knowledge might be used to optimise their effectiveness of such programmes.

INTRODUCING 'EMPLOYAGILITY': A CONCEPT FOR IMPACT AT THE EMPLOYABILITY-ENTERPRISE INTERFACE

Karen Knibbs, University of Portsmouth (karen.knibbs@port.ac.uk)

Judith Fletcher-Brown, University of Portsmouth

Karen Middleton, University of Portsmouth

Workshop summary

Getting a job at the end of a course of study is typically used as a key performance indicator of 'employability', yet many argue this is inadequate as it neither tracks development of start-up activity, nor identifies the longer-term benefits of a university education experience for enabling graduates to adapt to changes over their life-long career trajectory. This PDW introduces ECSB delegates to the concept of "EmployaGility" and encourages sharing of experiences of employability related curricular and extra-curricular activities with multiple stakeholders, particularly those which involve entrepreneurial learning. Based on theoretical and empirical evidence, this novel concept challenges whether academic and support staff involved in related learning, teaching and university service teams (e.g. careers and placement offices; incubator, accelerator and start-up hubs) are fulfilling the needs of all higher education stakeholders. The workshop creates a valuable opportunity for participants to reflect on methods aimed at enhancing student employability and enterprise engagement, by focusing on stimulating development of 'AGILE': Adaptable, Gatherer, Identity-Aware, Life-long learner, Enterprising competencies. The aim is for attendees to gain insights into methods for encouraging students to develop an 'AGILE' mind-set, which requires recording their own competency development and reflecting on outcomes of entrepreneurial behaviour choices.

Workshop style

Facilitated peer sharing:

- 1) Introduction to audience and 'EmployaGility' concept
- 2) Reflections from multiple stakeholder perspectives (academic/support service staff, students, employers etc.) of employability and enterprise activities
- 3) Small groups interactively develop ideas for successfully engaging stakeholders in development of "AGILE" mind-set
- 4) Open Q&A, further research ideas forum

Expected outcomes

Attendees will gain:

- Understanding of how the concept of 'EmployaGility' applies to their own practice
- Peer sharing of ideas for how to embed more 'agile' employability & entrepreneurial development in courses/ service provision, through multiple stakeholder engagement activities
- Immediately implementable ideas for their own employability and enterprise practice and institution.

Related research

Fletcher-Brown, Knibbs and Middleton, (2015) conducted an exploratory qualitative study, gathering perspectives and reflections from students, academics and employers of various sizes, which highlighted the over-dependence on skills attainment of many existing employability models (Yorke and Knight, 2006), and the lack of focus on entrepreneurial outcomes of the higher education (HE) experience (Deacon and Harris, 2011). Knibbs' (2015) subsequent research contributed views from university support staff to the discourse and proposed the 'AGILE' framework as a method for improving measurement of HE outcomes at the employability-enterprise interface.

**BUSINESS TRANSFER MEETING PLACE.
HYRRÄT- PROMOTING ENTREPRENEURSHIP IN WELFARE SERVICES**

Sirikka-Liisa Kolehmainen, Helsinki Metropolia University of Applied Sciences
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Workshop summary

Every year approximately 450000 firms are being transferred across Europe affecting 2 million employees. Around 150 000 companies are not being transferred due to system inefficiencies, causing a risk of losing 600 000 jobs in Europe (European Commission 2011). In Finland, over the next ten years, more than 70 000 companies which employ well over 200 000 people, will face ownership transfer. Municipal tax paid by these companies is approximately 1.2 billion and state tax revenue 300 million euros. The universities of applied sciences have a special opportunity to find successors for these companies. (Ahmaniemi et al. 2015, 5.)

This development is also reflected in the welfare sector companies. According to Statistics Finland, in 2012 Finland had 20 345 welfare sector companies, employing about 62 000 people. This was about 6 % of the total number of enterprises. (Statistics Finland 2014.) It is estimated that as a result of aging about 4 500 welfare companies face the change of ownership in the next ten years.

Helsinki Metropolia University of Applied Sciences conducted HYRRÄT – Promoting Entrepreneurship in Welfare Services ESF project between 2/2013 - 3/2015. The project involved the whole of Social Services and Health Care, 18 training programs, about 4,500 students and about 300 teachers (Helsinki Metropolia UAS in 2012 and 2014). A welfare entrepreneurship fair was held in spring 2014 together with actors supporting welfare entrepreneurship (Social and health care entrepreneurs TESO, Finnish physiotherapy and rehabilitation companies FYSI ry, Finnish Association of Physiotherapists FAP). A fair number of entrepreneurs also took part in the ownership transfer meeting place, which is to be presented in the workshop.

Workshop style

The workshop is facilitated, experiential, and focusing on the feelings in business transfer.

Target groups: The students who are interested in the continuation of the business and entrepreneurs considering the business transfer

The purpose is to discuss the fears and sources of power related to ownership change and summarize the relevant issues associated with it. The encounter is full of joy! Forming groups with those who are giving up entrepreneurial activities and those who are continuing the business.

Expected outcomes

Presentation of business transfer, 5 min. The orientation and the formation of groups, 5 min. Five-year birthday party, 10 min. Construction of the news, 10 min. The presentation of news and joint debate 10 min. A total of 40 min.

Interactivity and how will I involve delegates who sign up for that session?

We have a five-year birthday party of the company with sparkling wine. Members of the group meet five years after the business transfer has occurred. The transfer has proved to be very successful and now it is necessary to look back at the transitional stage!

Task: Think about the business transfer period. Tell each other, what was scary at that time and what the sources of strength were. 10 min. Each group has a news reporter. Plan a news report with her (headline!!) debate on key issues. 10 min. Please present the news, a total of 10 min.

Participants should come open minded and with out-of-the-box thinking!

A LINK BETWEEN EDUCATION, RESEARCH AND ENTREPRENEURSHIP

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Henrik Jochumsen, University of Copenhagen

Peter Josef Wick, University of Copenhagen

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Workshop summary

One major challenge in entrepreneurship education in a non-business school university context is the lack of relation to the teacher's own research field. Teaching is typically conducted by teachers whose research activities are connected to another subject area than entrepreneurship.

Consequently, researchers may experience teaching entrepreneurship as a 'timewaster' despite the fact that they like to teach in the field; teaching and research don't match.

It is difficult to get teachers involved wholeheartedly, if it is not appreciated by the University. Although the universities have articulated entrepreneurship as both relevant and useful; the transformation towards a more entrepreneurial education is not supported by incentives, neither at the institutional or individual level – in contrast to research and publication (see e.g. West III, Gatewood & Shaver, 2009).

On this basis we will explore the following questions: How do we achieve a constructive and creative interaction between education, research and entrepreneurship? In what contexts it is possible to integrate the three areas? What specific organizational and didactic modalities can be used to support integration? And what benefits can be achieved through this realization?

Workshop style

The session is organized in four parts:

- "Inspirational talks" challenge illustration
- "Idea generation" round where participants reflect on the inspirational talks
- "Idea sharing" in a rotating segment, where participants move around a series of tables
- "Summing up" the discussion – towards the next steps

Expected outcomes

The goal is to produce a narrative that collects the activities and discussions which can serve as a base for developing a research agenda. Preparing this short statement collectively will be a unifying base for community building and giving a shape to a joint identity around this topic.

Details of any related research

At the University of Copenhagen, we have launched various experiments to meet the abovementioned challenge: How to create a link between education, research and entrepreneurship in relation to entrepreneurship education for non-business school students?

We have conducted a number of courses in entrepreneurship and organized follow-up research to document the experiences. Inspired by the international literature on entrepreneurship education among other Sarasvathy (2001), Read et al. (2011), Gibb, 2002 and Fayolle (2007), we formulated a teaching concept that has been tested and proven, following European Skills/Competences, Qualifications and Occupations (ESCO) framework. We have discussed our experiences on several occasions and implemented the outcomes of the discussion in the further development from one course to the other – a kind of iterative and heuristic process. Thus, we have over a period experimented with creating a sustainable balance between entrepreneurship, teaching and research. But the concept may usefully be enhanced further. This educational concept was presented on an international seminar on education and research within information science in the spring of 2015. It resulted in an article Kristiansson & Jochumsen (2015).

THE SANTANDER SUMMER COMPANY PROGRAMME

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Marion Anderson, University of Glasgow
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There is an increasing emphasis on growing the number of student business start-ups within HEIs. The growth in entrepreneurship and enterprise taught courses contribute to the development of entrepreneurial mindsets, however are less effective in generating action. Enterprise Centres are being developed offering support, infrastructure and activities to have a more direct impact on start-up activity. Schemes such as entrepreneurship boot-camps and business plan competitions often have a minimal impact on stimulating start-up so other initiatives are required.

The University of Glasgow's Santander Summer Company Programme is an innovative initiative (based on the Canadian Summer Company Scheme), offering a 12 week package of financial support and on-demand mentoring for students with business ideas to accelerate the start up process. We are however still 'making it up as we go along'. This workshop provides an opportunity to reflect on early operation of the programme, seek meaningful feedback and engage in discussion as to how the scheme should be developed.

The programme, first launched in 2014-15, was largely unsuccessful due to a change of personnel in the Enterprise Manager post, resulting in limited promotion of the programme. Students selected had business ideas that were some distance from implementation and were less able to take advantage of the opportunity presented. This underlines the criticality of the selection process and raises questions around programme promotion and the potential need for a feeder stage. These issues will become the focus of group discussion within the workshop.

The implementation of the 2015-16 programme was considerably more successful. Four teams of student entrepreneurs were selected, all with an engineering/app-based products/services. Some team members were at the end of their degree courses when selected, this is an important differentiator from the Canadian scheme, which was only eligible to ongoing students. This raises an important question of eligibility. Moreover, the demographic origin of the students who participated is of interest with only one student being from the UK and the rest from mainland Europe.

There is no formal training built into the summer programme currently. However, the teams were given the opportunity to participate in an accelerator programme held on campus elsewhere last year. Positive feedback received means that a formal training component is now being considered. Group discussion in the workshop on what should be covered and how it should be delivered will be value additive to how formal training element of the summer programme will be shaped.

Resourcing formal training this year presents a considerable challenge for the Enterprise Manager. It is possible to tap into Glasgow's entrepreneurial ecosystem – accessing enterprise support provided by other local universities, joint programmes with Glasgow University and the wider range of support providers available in Scotland (e.g. Scottish Enterprise, Scottish Institute for Enterprise). However, this raises the question of how replicable such a scheme is in smaller universities who do not have such easily accessible proximate support.

The University currently lacks sufficient dedicated incubator space, yet the notion of place on campus is important. Prior participants spoke about the importance of place and in close proximity to their mentor the Enterprise Manager, so we will discuss whether it matters if the teams are in close geographical proximity to the Enterprise Manager to be successful and also how much of the success is due to luck? Can this programme deliver additionality? Or would these students have started their businesses anyway?

REVEALING THE ENTREPRENEURIAL POTENTIAL IN ARTS STUDENTS

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Workshop Summary

The focus of this session is around a hypothetical case study told in an engaging story-like fashion and featuring several of the students in the class. It is told by the session leader and is followed by group discussion and analysis of their colleagues' imagined journey which leads them to recognise and identify with the enterprising actions and activities. The session is aimed at those students who do not identify with entrepreneurship.

Workshop style

The workshop introduces and demonstrates a session I have devised for arts students which engages them in the Effectuation process and allows them to 'discover' and embrace their entrepreneurial potential. The audience will experience and interact with the content and learning outcomes that I have delivered in the class room with art and design students

Expected outcomes

Students engage with entrepreneurial concepts and behaviours and begin to feel that they could build this into their professional identity as artists and creative practitioners.

Related research

Enterprise is becoming an important aspect of the student learning experience in Schools of Art and Design. The resulting debates and literature has tended to focus on the ends: what students ought to learn and the skills and mind-sets they should possess. However, there is still little literature on the means for achieving these ends and there is perhaps some need for a focussed discussion around best practice and appropriate tools and methods for delivering enterprise education to arts students. The debate also recognises the problematic tension that the word 'enterprise' engenders and many education practitioners will aim to avoid or disguise the term with synonyms such as 'professionalism' and 'employability skills'. In other words, the arts education community is still not comfortable with the notion of entrepreneurship.

The topic is important for entrepreneurship education to the extent that it addresses both a general issue regarding how to engage students in the topic but also considers the specific needs of art and design students. The paper considers several key challenges one of which is how to introduce the topic of enterprise and entrepreneurship to art and design students who are generally uncomfortable with these topics. This topic has been addressed by a number of authors and publications which have considered some of the elements of my paper but there are key gaps which I will address.

HOW TO TEACH THE LEAN LAUNCHPAD FOR UNDERGRADUATES?

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Huy Duong, University of Danang

Workshop summary and key questions

Differing from the traditional approach of entrepreneurship education, where the curriculum focuses on “writing a business plan”, is a new approach for experiential entrepreneurship education, the Lean LaunchPad (LLP). LLP has been widely adopted in the U.S, especially in leading universities such as UC Berkeley, Stanford, CalTech and Princeton. LLP classes teach graduates how to build their startups by engaging their customer base in the design process, utilising agile development processes and developing a business model canvas. In 2013, Steve Blank, the method’s chief architect, concluded that undergraduates, as well as post-graduates and MBA students, are also able to reap the benefits of the classes offered, suggesting that undergraduates should not be underestimated¹. Therefore, rather than an exclusive focus on graduates and MBA students, especially in the engineering field, it should be discussed where and how we can successfully implement LLP for undergraduates. Furthermore, LLP attracts a number of engineering students that have already established technology-based ideas, beginning to test these ideas and develop customer bases.

This workshop therefore aims to discuss about the appropriateness of the LLP approach in teaching entrepreneurship for undergraduate programs, as well as a wider student body. Discussion may also be extended to other aspects relating to adopting the LLP in teaching entrepreneurship.

Details of related research

Guerra et al. (2014) suggested that Blank’s LLP was adopted in a pilot initiative from the National Science Foundation to propagate, scale and sustain education innovations. Relating to entrepreneurship education, Blank (2013) provided the overview of the “lean start-up” methodology and explained why this approach helps to change the method of teaching entrepreneurship and create a strong impact on the entrepreneurial economy. In Jesar (2015), the author investigated entrepreneurship education and concluded that teaching entrepreneurship should be moved towards the LLP approach. However, he raised some drawbacks of this method, most prominently being that students tended to have a lot of difficulties finding a common idea to work on due to their differences in background and perspectives.

Workshop style

The workshop will hold group discussions followed by a final brief presentation on traditional and LLP approaches. Groups of 4 or 5 participants with varying backgrounds (academic, researcher, students...) will be created. Participants in each group will actively raise questions, share their experiences or provide feedback on questions raised by the PWD leader at the beginning of the workshop. Notably, we will not only discuss the best practices but also to reflect upon why LLP has been so effective so far, the challenges faced when employing LLP, the processes used to arrive at solutions, and how the participants’ experiences were leveraged to enhance their teaching practice.

¹ <http://blogs.berkeley.edu/2013/01/21/dont-underestimate-the-undergraduates/>

THE TWO I LENSES: WHY NOT EVALUATE BOTH THE ART AND THE SCIENCE OF ENTREPRENEURSHIP EDUCATION?

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Kathryn Penaluna, University of Wales Trinity Saint David

Jonathan Scott, Teesside University

John Thompson, University of Huddersfield

Workshop summary and key questions to be investigated

Did you know that:

- Your brain works differently when solving problems creatively?
- That recognition and reward mechanisms may significantly impact on your learners' capacity to develop such brain power?
- That the theories of 'effectuation' and 'design thinking' have much deeper roots than you may have thought – as established practice within the discipline of Design Education?

We invite you to step into our world, where innovation and implementation combine to develop entrepreneurial learners.

The term 'Design Thinking' has recently come into prominence, as has the use of 'Effectuation'. Design education can claim to have significant experience in developing the associated attributes that these theories suggest, where learning for innovation and risk taking is the norm and generic competencies include a requirement to, "anticipate and accommodate change, and work within contexts of ambiguity, uncertainty and unfamiliarity" (QAA, 2008, 8). It therefore follows, that a workshop that helps to define innovation-led learning and evaluation of student performance, delivered in a way that design educators would recognize, could inform entrepreneurial learning strategies, not least, by clarifying assessment practices that typify design-based educational practice.

Activities and outcomes - Session breakdown

Underlying principles will be introduced in the first 10 minutes. Delegates will then be invited to frame their own initial ideas in small groups of 4-6. Following this (aprox 10 minutes) each delegate will be invited to review a learning outcome that they brought with them (See advance requirements) and to propose alternatives that align with the Two I. The last 10 minutes will be devoted to discussion and debate. During the session, in a manner adapted to respond to the delegates' questions, essential knowledge relating to cognitive neurology and brain functionality will be explained and disseminated.

Facilitated via 'Curiosity-based learning', presenters' questions will trigger questions from the delegates, e.g. "How often have you predicted a new innovation or novel approach to business some time ahead of its conception?" Ultimately we ask, "Are appropriate performance metrics in place, and can the 'Two I' lenses of Implementation and Innovation help to construct more meaningfully aligned evaluation?"

What should participants do in advance?

Delegates are asked to bring along examples of Learning Outcomes from curriculum related to enterprise and entrepreneurship education, i.e. aspects of student learning that are assessed. Ideally these should be presented in large format fonts on single sheets of A4 paper, so that others can see them with ease.

Expected participant outcomes and takeaways

Delegate teams will develop personal examples of a matched Two I learning outcome that respond to the distinctions required in the lenses. These will be discussed and re-articulated in a way that makes them curious to know more. Delegates will also be able to make distinction between 'insightful' (creative) thought generation and 'analytical' (traditional / structured) thought processes, and to employ these understandings to design appropriately framed Learning Outcomes. The session will be delivered in a manner normally associated with Design Education, hence the underpinning 'Design Thinking' and 'Curiosity-based' learning styles will further inform their experience.

STUDENT LEAD CO-CURRICULAR SOCIAL ENTERPRISE AND ENTREPRENEURIAL EDUCATION

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Workshop summary

Many academic subjects areas struggle to successfully incorporate opportunities for students to develop skills such as enterprise and entrepreneurship. Despite some good progress in the development of examples of contextual learning in the field there are still questions about how students can experience entrepreneurial learning if there is no dedicated space within the curriculum. One way for academic staff and students to approach this is via the development of co-curricular initiatives that satisfy this need.

Co-curricular or 'educationally purposeful extra-curricular' (Kuh 2008) enterprise activity is increasingly being seen as an important activity from which students develop the sort of entrepreneurial graduate attributes that employers and universities now demand. But it is also being recognised as a pedagogically important experience where students can test, debate, scrutinise and explore contextual curricular knowledge outside the classroom and therefore be an important site of academic learning.

Teesside University Student Food Co-op is a student lead social enterprise that provides healthy, nutritional, cost effective food and ingredients via a weekly on campus pop-up shop to the university community. Originally established via Unltd funding it is now a sustainable student managed non-profit enterprise. Although the Food Co-op is an open democratic organisation and has a campus wide membership the active members are mostly drawn from the BSc Food and Nutrition programme at the University. These students appear to be using the Food Co-op strategically and expediently to achieve a number of goals including; experiencing food enterprise, exploring curricular knowledge outside the classroom, developing high level enterprise skills, building greater social capital with peers and academics, exploring new roles as leaders and entrepreneurs and increasing their graduate employability prospects.

Andy Price (Head of Enterprise Development and Education) will lead a practical Practitioner Development Workshop looking how student involvement in the Food Co-op has impacted on the development of graduate enterprise attributes and knowledge. It will also examine the challenges and barriers to sustainability and be an opportunity for colleagues to explore how student lead co-curricular initiatives could positively impact on their own programmes and students.

**INTEGRATION, ACCELERATION, INNOVATION IN PRACTICE AND IN CURRICULUM.
EMBEDDING ENTREPRENEURIAL THINKING IN THE CURRICULUM AND CO-CURRICULUM - FOR
NON-BUSINESS STUDENTS**

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Claire MacLean, Goldsmiths, University of London

Workshop summary

Goldsmiths has developed an approach to entrepreneurship education that explores the notion and place of Value and Values in developing strong social and civic entrepreneurs, who develop social capital through our programme. The students we work with study arts, humanities and social sciences, we work to move their creative and critical thinking in to entrepreneurship thinking. This workshop will demonstrate some of the key pedagogical techniques we have developed.

In developing a trans disciplinary and collaborative approach to entrepreneurship education at Goldsmiths, we have embedded approaches in to our curriculum to enable students to understand innovation and entrepreneurship critically as well as self-reflectively and to consider how they would implement this learning to form their own entrepreneurial venture.

This is supported by a co curricular network of support. The success of this approach can be demonstrated by the number of successful start-ups, in particular those who have gained finance.

The workshop will demonstrate 2 of the approaches, and in demonstrating the approach to “tacit” knowledge examine the innovation in the teaching methodology and the impact it makes.

Students on Goldsmiths’ programmes are encouraged to articulate their values so entrepreneurial thinking is values lead. We ensure that the students are given opportunities to understand the value that they create and the assets that their experience and education gives them.

The session will introduce participants to techniques that enable students to rapidly prototype thinking from concept/idea to business model. It will show the theory of change process that is required to move from ideation to action.

The process uses constructionist learning, person-centred and social pedagogic approaches. Based in design thinking the pedagogy. It approaches the learning environment as a Live Lab – ensuring that there is no artificial creation of a distinction between a “real” world and the “learning world”.

The approaches have been integrated in to undergraduate teaching, postgraduate teaching and research programmes. Consistently the interventions are evaluated highly by participants. The success rate of the businesses that emerge from this is currently at 80%.

THE OPPORTUNITIES AND CHALLENGES OF COLLABORATIVE CROSS-FACULTY PROGRAMMES IN ENTERPRISE EDUCATION

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Sue R Whittle, University of Leeds
Karen Burland, University of Leeds

Workshop summary

Based on the experiences of starting up a 'with Enterprise' programme in different subject domains (science vs arts) the workshop facilitators will explore and compare the perspectives of HEIs and students, specifically in relation to pedagogical and employability gains in the context of a research-led university. We will further explore the practicalities of embedding such skills into course design, of striking a balance between teaching and allowing students to explore for themselves. The session will provide opportunity for an open and honest reflection about the practical challenges of teaching across different schools and faculties, but also the rich opportunities this affords.

Workshop style

Issues in collaborative cross-faculty enterprise programmes will be introduced and illustrated through two different existing programmes in arts and sciences at the University of Leeds, including pedagogy, institutional issues, student expectations and experiences. A structured interactive discussion will allow delegates to explore opportunities and challenges in their own contexts.

Expected outcomes

Delegates will have the opportunity to consider the practical challenges of developing cross-faculty joint programmes in entrepreneurship and enterprise education. This will include identifying the expectations, challenges and aspirations of students working in different academic disciplines as well as their own institutional opportunities and challenges.

CRITICAL ENTREPRENEURSHIP EDUCATION (CEE)

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Karin Berglund, Stockholm Business School at Stockholm University
Pam Seanor, University of the West of England
Alain Fayolle, EMLYON Business School

Workshop summary

Critical entrepreneurship studies (CES), a dispersed and multidisciplinary field of inquiry, emerged from a general sense of dissatisfaction with how entrepreneurship is usually conceived of within the scholarly community: as a market-based and individualist phenomenon, predicated on a 'special' set of traits, that ignites venture creation, and, consequently, brings economic growth and innovation. Such a focus on entrepreneurship as a desirable economic activity, perceived unquestioningly as positive, however 'obscures important questions' (Tedmanson, Essers, Dey and Verduijn, 2012), questions which the emerging field of critical entrepreneurship studies wishes to bring to the fore and investigate. CES span a whole range of theoretical approaches and disciplinary orientations, from postcolonial views (Essers and Benschop, 2009; Essers and Tedmanson, 2014); non-entitative stances emphasizing the relational and processual nature of entrepreneuring (cf. Nayak and Chia, 2011; Hjorth, 2013; Verduijn, 2015); feminist theoretical perspectives (Ahl, Berglund, Pettersson and Tillmar, 2014; Calas, Smircich and Bourne, 2009); and political-philosophical perspectives addressing the discourse of an enterprising subject (Berglund and Skoglund, 2015; Dey, 2014; du Gay, 2004; Foucault, 2008).

It is timely to interrogate if and how these approaches and insights have entered our classrooms. With students interested in the entrepreneurship phenomenon generally merely expecting the 'standard' (instrumental) approach towards the same, and for us to stipulate the importance of new venture creation for our economy's health and vitality, we - on the contrary - feel the need to stipulate how entrepreneurship is broader than that, that there are multiple 'versions' of it, that the entrepreneurial identity is a layered one, and not without its repercussions. We feel it is required to connect entrepreneurship (more) to society (and not only to the economy). This provides a challenge for the entrepreneurship educator, also in terms of the entrepreneurship ethos, and poses important questions as to how to do this (best).

This workshop is designed to stimulate the sharing of experiences, opening the floor to voicing doubts, hesitations, questions, and to share best practices. Given that we envision the workshop to revolve around attendees' experiences, ideas and questions, we ask attendees to hand in their (one page) answers to all or some of the following questions: How do we, and could we, tackle nuances of dark and bright sides when teaching entrepreneurship? What type of student (citizen?) do we actually aim to raise? Can and should we reach into students' comfort zones? What lessons could we learn from (the field of) Critical Management Education? How could we become more reflexive of our role as (critical) entrepreneurship educators? Mail your one page reflection to: Karen.verduijn@vu.nl and Karin.berglund@sbs.su.se, May 1st latest. A 10 minute introduction will be aimed at opening the floor for discussion, and providing an overview of the kind(s) of questions/issues/best practices attendees have handed in beforehand. We will wrap up by laying out our plans for the further formation of a community around CEE. Expected outcome: awareness of this community-in-progress.

DEVELOP AND DELIVER AN INTEGRATED ENTREPRENEURSHIP PROGRAMME IN A NON-BUSINESS CURRICULUM

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Workshop summary

Non-business students tend to have little or limited prior business knowledge but are expected to apply their domain specific knowledge to recognize business opportunities in the certain field of business (Maryse Brand, Ingrid Wakkee & Marijke van der Veen, 2006). Accordingly, instead of heavy focus on starting up a business like most entrepreneurship programmes in business schools, this workshop is designed with the aim to enable the non-business students to gain practical entrepreneurial experiences through *embedding* entrepreneurship in curricular activities, , focusing its attention on transferring the published researches and existing conceptual models into practice. “Embedding” often poses a challenge – “how” in entrepreneurship education for non-business studies. This challenge will be discussed during the workshop from the perspectives 1) the appropriate contents of embedded programme; 2) the difficulties of evaluation of entrepreneurial skills. By adopting problem-based learning method and the business canvas model, the workshop will walk participants through the pains and excitement in a process of developing and delivering an integrated entrepreneurship programme in a non-business study curriculum (Arts – Languages & Communication). Participants will be invited to join exercises of how to apply the published researches, the European Framework and Action Plan 2020 to entrepreneurship curricular activities. As believers in the value of making entrepreneurship education enjoyable and innovative, we will end with a small brainstorm session on the urgency of transformation from an educator to an intrapreneur in education.

Workshop style

The workshop aims to have interactive discussions to explore in depth issues and to exchange experiences through PBL and case study approaches. The underpinning structure of the workshop is based on the use of the Business Model Canvas.

Expected outcomes

Participants can get inspired and be encouraged to further develop and apply their own entrepreneurial skills and knowledge to designing an integrated entrepreneurship programme. Through excises of employing the business model canvas in programme development, we can stimulate the interest of applying leaning organization theory or existing entrepreneurial model/tool in creating a learning experience as an entrepreneurial process.

Details of related researches

ASTEE project report (2014), *how to assess and evaluate the influence of entrepreneurship education*, offers an ad hoc perspective, from managerial science and psychological studies, which can identify the “how” in regards to develop an influential entrepreneurship programme with the five dimensions: skills, knowledge, mind-set, connectedness to education, and connectedness to future career. Applying Edmondson’s team learning behaviours instruments can reduce the difficulties of monitoring behaviours and performance at both individual and group level. Further, by adopting the researches of organizational learning (Brown, J.S. & Duguid, P., 1991) and learning organization (Senge, 1990), a programme can be designed in a way in which lecturers and students can experiment with “learning as an entrepreneurial process²”. Practitioners’ roles in entrepreneurship education should have regard to intrapreneurship studies and researches (Hisrich, 1990).

² Entrepreneurial learning as an experiential process (Reuber, A.R. & Fischer, E.M, 1994); Learning as an entrepreneurial process (Hjorth, D. & Johannisson, B, 2009)

HOW CAN ASSESSMENT CRITERIA'S QUALIFY AND MEDIATE FEEDBACK LOOPS IN ENTREPRENEURSHIP EDUCATION?

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Workshop summary

At the University of Copenhagen, we conducted an investigation on what kind of assessment criteria experienced lecturers use to assess innovation and entrepreneurial learning objectives and competencies. We looked into the criteria's mutually taxonomy, i.e. how different levels are described and how they interact with feedback mechanisms during teaching.

We find that the special innovation and entrepreneurial skills often remain undefined or implicit and causes uncertainty among the students in order of what is being assessed. The lack of clarity is not only present during the assessments, but also in the way the learning activities are structured and as a result, the feedback students receive, can give or can act on. It seems difficult to develop arguments and practices that go beyond narrowly defined academic learning with assessment forms that differ markedly from the traditional university types. The workshop addresses the following questions: How can the challenge of integrating process, self-reflection and product-development be approached in the assessment? Can alignment and its associated taxonomy, SOLO, be maintained? Which learning objectives should "only" be evaluated and "feedbacked" and why? How can the knowledge of effective teaching and a nuanced understanding of feedback be used in the evaluation of I&E related skills?

Workshop style

A text is provided, clarifying definitions and a theoretical framework for our discussions at the workshop. At the workshop the participants are grouped and work on specific questions. As a product they write down their conclusions. We will also try to establish an international workgroup on the subject.

Expected outcome

Participants will co-create solutions to the questions at hand, by finding different assessment forms and learning-situations, with the research knowledge on effective teaching and feedback in mind, addressing the special innovation and entrepreneurial skills. Hereby trying to match the European Skills/Competences, qualifications and Occupations (ESCO) nomenclature.

Details of any related research

It is well known in the pedagogical literature, that feedback is one of the main drivers in positive student learning outcome (fx Hattie & Timperley, Mory, 2004). But while there is a lot of research about what entrepreneurship competencies are and how they differ from both subject-related matters and in the way it should be taught, there seems to be a lack of merging these findings. Our investigation and an investigation done at all Universities in Denmark do come to the same conclusion:

"During the reading of course descriptions and interviews with teachers, we also see that even the most innovative forms of examination and evaluation situations still aims to measure students' theory and knowledge. Educators point out that it is largely due to lack of evaluation criteria's for the more non-cognitive skills such as action, creativity and dealing with uncertainty, and to distinguish between levels of competence (ffe-ye, 2014, p. 28)."

Already Blooms taxonomy project was actually three folded, including a cognitive, an affective and a psychomotor taxonomy (Kratwohl, 1956), but only the cognitive seems to be widespread. Not that it is hard to describe the affective-domain, but it seems that it is hard to operationalize it an assessment.

GETTING BEYOND 'ENTERPRISE': DEFINING AND COMMUNICATING ENTERPRISE EDUCATION FOR SUCCESSFUL ENGAGEMENT

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Alison Riley, University of Sheffield

Workshop summary

Future graduates will face jobs that do not yet exist, solving problems we have not yet identified, using technologies that have not yet been invented (Jackson 2008). As enterprise and entrepreneurship educators, we recognise that graduates having a strong subject knowledge and technical background will not be enough for them to meet this challenge. They need to be enterprising in the context of their subject discipline. Thus, we must embed enterprise learning into curricula, by working with colleagues who teach in our institutions and empowering them to provide enterprise learning opportunities. But one of the biggest barriers to engagement with colleagues is the word 'enterprise' itself. Preconceptions lead teachers and lecturers to reject enterprise as irrelevant for their students, on the basis that those students are not interested in starting their own businesses. This workshop will explore how we can develop strategies to challenge assumptions, engage academic colleagues, and communicate what enterprise education actually offers for future entrepreneurs, employees and successful, engaged learners. We will also consider how to help students recognise, understand and articulate the skills we help them to develop, and ensure that employers are able to identify those skills in our graduates.

Workshop style

After introducing the challenges we've faced in communicating our offer, we will invite delegates to share and support each other in discussing their own challenges, structured around key themes we provide. Feedback will be captured and disseminated, and collaboration facilitated, through use of a Twitter wall.

Expected outcomes

Delegates will leave with ideas for communicating enterprise in their own institutions, derived from sharing and working through challenges together with colleagues. These will be captured through flipcharts and a Twitter wall, which will enable delegates to also experience an innovative approach to facilitating group discussion.

Related research

The workshop will draw on our experience in developing and delivering our award-winning Enterprise Academy, providing support and professional development for academic and teaching staff across our University. We will also share and draw on EEUK-funded research we have conducted to explore student perceptions of enterprise in the curriculum (2013). We will share our success stories, drawing on the work of Sinek (2009), and also present the approaches we have found unsuccessful, in establishing the challenge to be discussed in the workshop. Beyond this, we will encourage delegates to share their own experiences, and so help to build up some best practice hints and tips that all delegates can take away and try in their own institutions.

RESEARCH PAPERS

ENTREPRENEURIAL SELF-EFFICACY, INTENTIONS AND ACTION AMONG DEVELOPING ENTREPRENEURS

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Morten Ansteensen, Norwegian University of Science and Technology

Objectives

The connection between entrepreneurship education and post-graduation entrepreneurial behaviour is still an under-researched topic. As the number of new entrepreneurial educations is rising, we still know too little about the outcomes from such educations. There has been a growing use of entrepreneurial intentions and self-efficacy as a measure of entrepreneurship educations effect. However, there is little exploration of the connection of intentions and self-efficacy, and actual entrepreneurial behaviour. Our objective is therefore to investigate on entrepreneurial self-efficacy and its connection to intentions and action in an educational setting.

Approach

We investigated students and alumni in a venture creation master's program, where the students during the program creates their own new venture. A response rate over 40 percent of usable surveys was registered from the classes. Previous research has identified entrepreneurial self-efficacy as the most influential factor on entrepreneurial intentions, at least in educational situations. In addition, there is a connection between intentions and action. Without intentions no entrepreneurial behaviour will occur. Through survey responses from the two enrolled classes and four of the previous graduated classes, we explored the students' self-efficacy, intentions and entrepreneurial activity.

Results

When we investigated the difference between the enrolled students and alumni, we discovered that the entrepreneurial self-efficacy was higher among the graduated students compared to the enrolled students, as expected. Furthermore, we found that the enrolled students had higher entrepreneurial intentions than the programs' alumni. Moreover, the graduated students with higher self-efficacy had higher intentions, and those engaged in start-up work had higher self-efficacy. However, students entering into their own business immediately after graduation had higher self-efficacy than those entering into paid employment, but also compared to those who start in other's start-ups.

Implications

The most interesting results that we found was the difference between enrolled and graduated students in regards of self-efficacy and intentions. In a theoretical view, this implies that there are some factors or antecedents affecting intentions differently in certain situations, and that self-efficacy alone might not be a good measure for entrepreneurship education assessment. In a practical view, it appears that intentions can be increased by other measures than self-efficacy. If social norms is a more important factor than previous reckoned, programs should try to build a program around a positive social context, and engaged students through an entrepreneurial community.

Value

This paper highlights and investigates the use of intentions in entrepreneurship education, and connects it to entrepreneurial self-efficacy and behaviour. The unexpected finding that intentions were higher among enrolled students compared to the alumni, while enrolled students had lower self-efficacy, question previous assumptions that self-efficacy is the most important antecedent of intentions.

Keywords

Entrepreneurial intentions; self-efficacy; behaviour; venture creation programs; assessment

THE IMPACT OF INTERNATIONAL SUMMER UNIVERSITY PROGRAMMES ON ENTREPRENEURIAL INTENT

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Suchart Tripopsakul, Bangkok University

Introduction

Novel and commercialisable ideas are the lifeblood of entrepreneurship. Enabling students to think “outside of the box” and use their creativity to develop new business opportunities is an essential part of entrepreneurship education. This paper investigates whether a summer university programme abroad can be used to spark a critical learning incident significant enough to promote entrepreneurial intent. More specifically, the paper explores the concept of culture shock as a mechanism to enhance certain entrepreneurial attitudes, including innovativeness, locus of control, self-esteem, and ultimately entrepreneurial intent.

The three week program designed by Bangkok University is aimed at European students. It takes participants outside their comfort zone and exposes them an unfamiliar setting. They face new challenges, interact with people from different cultures, meet local entrepreneurs, join company visits, and attend lectures on entrepreneurship; all with the goal to unsettle their mind and take review the socially constructed frame they have been brought up in.

To judge the overall effectiveness of the programme, student’s entrepreneurial intent will be measured before and after completing the courses. The Entrepreneurial Attitude Orientation (EAO) questionnaire developed by Robinson et al. (1991) will be used to quantify any changes. Moreover, students are asked to keep detailed journals throughout their stay in Thailand, reflecting on experiences related to culture shock.

The paper puts the effectiveness of international short academic programme to the test. If confirmed, international exposure can be used purposely to spark a critical learning incident that has the ability to enhance entrepreneurial intent in a very short amount of time.

“WHAT'S IN IT FOR US?” –STUDENTS’ PERCEPTIONS OF THE VALUE AND IMPACT OF EXTRACURRICULAR ENTERPRISE ACTIVITIES IN HE

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Sarah Preedy, Plymouth University

Sarah Stevenson, Plymouth University

Questions we care about

Which students participate in extra-curricular enterprise activities? Why do these students choose to participate in extra-curricular enterprise activities? What impact do they perceive it has on their entrepreneurial competencies?

Objectives

To evaluate the literature to understand the role extra-curricular enterprise activities have in enhancing entrepreneurial competencies. To collect empirical data on students perceptions pre and post extra-curricular enterprise activity engagement.

Approach

This study used an online survey method to conduct a pre and post evaluation of extra-curricular enterprise activities running at a post 1992 University in the 2015/16 academic year. Each survey contained both open and closed questions to provide quantitative and qualitative data. A control group of students that did not engage in extracurricular enterprise activities was also surveyed at the beginning of the academic year (2015/16) using a non-engagement survey.

Results

Initial results indicated that students participating in extra-curricular enterprise activities were likely to be female, studying a programme within the Faculty of Business, in the 2nd or 3rd stage of their programme and from a White English, Scottish, Welsh or Irish background, or other white background. Students were participating in extra-curricular enterprise activities for a number of reasons with the most popular being ‘interest’ followed by improvement or enhancement of employability. This followed through into the perceived outcomes of the activities where the majority expected to gain knowledge, however significantly a considerably lower number had expectations related to employability. With reference to competencies, before students participated they identified ‘networking’ followed by ‘creativity’ and ‘self-efficacy’ as competencies they perceived would be improved. However, following engagement, ‘networking’ dropped, and students perceived the competencies they had improved were ‘alertness to opportunities’, ‘opportunity exploitation’ and ‘creativity’. It was suggested the mismatch of perceived competencies from pre to post engagement was students’ lack of recognition regarding competencies and/or students’ confidence in rating their own competencies. On completion of data analysis, it is hoped that this study will prompt further results and discussion leading to further implications for practice amongst the enterprise educator community.

Implications

Enterprise educators must consider how to attract and deliver enterprise education to students from a more diverse range of programmes across the discipline areas provided at their institution. In relation to competencies, enterprise educators may also benefit from identifying competencies within extra-curricular enterprise activities so students are aware of what they are improving through their engagement.

Keywords

Enterprise Education; Extra-curricular; Student; Value; Impact.

MISSING LINKS BETWEEN LEAN STARTUP, DESIGN THINKING, AND EXPERIENTIAL LEARNING APPROACHES IN ENTREPRENEURSHIP EDUCATION

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Questions we care about

- How do different pedagogical teaching approaches in entrepreneurship education construct learning outcome when comparing the underlying pedagogical models?
- Where can unidentified fields and correlations of pedagogical insights between the approaches of lean startup, design thinking, and experiential learning be identified?
- How can new concepts of learning models, taking lean startup, design thinking and experiential learning approaches into account, be developed in entrepreneurship education?

Approach

This 3e conference paper begins as a conceptual paper highlighting the theories and underlying learning models behind three pedagogical approaches within entrepreneurship education, namely lean startup, design thinking and experiential learning. The paper builds this knowledge framework in order to set the design for an empirical investigation of the proposed topics through a later case study.

The research project will develop empirical qualitative data to further elaborate the discussion. Qualitative interviews with five entrepreneurship educators from three educational institutions will shape the platform for condensation of meaning and new knowledge valuable for research in entrepreneurship education. In-depth interviews will provide data to be analyzed in combination with vignette methods that seeks to test the following research question: How do entrepreneurship educators reflect upon the three approaches lean startup, design thinking, and experiential learning, and what facilitators and barriers can be identified to these approaches?

Implications

The project can have an impact into the way entrepreneurship education is developed, performed, and evaluated besides influencing the mindset of entrepreneurial education among educators. Subsequently the study can also have an impact on the motivation among students and educators in terms of working with the approaches in focus by highlighting how this intersection of approaches can contribute to developing enterprise education.

Value/Originality

By comparison of widely used pedagogical approaches within entrepreneurship education, the current project aims to contribute to the understanding of the applied pedagogical approaches within entrepreneurship education. The contribution will be advancing the pedagogical aspect of planning, running, and evaluating entrepreneurship education activities.

Keywords

Entrepreneurial learning, entrepreneurship education, pedagogical approaches.

ACTION-BASED ENTREPRENEURIAL LEARNING WITHIN A COMMUNITY OF PRACTICE

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Questions we care about

The authors aim to answer how community of practice contributes to action-based entrepreneurial learning. This study investigates how faculty delivers and how students practice action-based entrepreneurial learning, to understand how action-based entrepreneurial learning materialize through interaction between students and faculty within a learning environment.

Approach

There exists an agreement among scholars that entrepreneurship can be taught, and that action-based learning is the appropriate method to gain entrepreneurial skills. The concept of action-based learning is not new, but the theoretical discussion of this learning method within entrepreneurship education is. Hence, it has been a challenge to find a common theoretical framework to understand how learning transpires within these types of programs.

Results

The authors found that faculty plays a crucial role in delivering action-based entrepreneurial learning. The faculty should hold necessary competences within entrepreneurship, and their level of motivation is seen as essential to engage students in their learning process. The faculty has to operate as facilitators for learning, which is done through support, feedback and setting requirements. Further, action-based entrepreneurial learning should be analyzed in light of the individual learning cycle, where learning is driven by individual motivation, initiative and competences. The students have to take responsibility for their own learning through proactive behavior, and their entrepreneurial motivation could be highly connected to their learning goals. Based on the argument that learning cannot be isolated from its context, action-based entrepreneurial learning should be analyzed on both an individual and an institutional level. This underlines the importance of linking how faculty delivers learning with how students practice it. The development of a community of practice is seen as a dynamic process, where learning occurs through co-learning between the actors in the organization.

Implications

The findings have particular implications for educational institutions, who delivers action-based entrepreneurial learning. By overlooking the role of faculty as facilitators of individual learning, the institution could hardly understand the effectiveness of the students learning and deliver a program content in accordance with the learning objectives.

Value/Originality

Learning has principally been viewed as an individual phenomenon. Linking learning to individual entrepreneurs without taking into account the context in which learning takes place has its limitations. The authors have identified a research gap in how learning occurs on an institutional level. The literature discusses how learning takes place within a social context, but lacks a deeper understanding of the involvement of students and faculty and how they interact within a learning environment.

Keywords

Entrepreneurship, Entrepreneurship Education, Entrepreneurial Learning, Action-Based Learning, Community of Practice, Learning Environment

ENTREPRENEURIAL LEARNING AMONG ART STUDENTS: FROM NECESSITY ENTREPRENEURSHIP TO OPPORTUNITY ENTREPRENEURSHIP

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Questions we care about

We are interested in art students' perception of entrepreneurship and what shapes the students' motivation to become entrepreneurs and/or behave in an entrepreneurial manner. The purpose of the study is to explore how increasing art students' entrepreneurial knowledge can help them in their career planning and how educators can support students in the career identity construction.

Approach

We explore the topic from both an individual and context perspective, the context in this case being the pedagogical environment, and the individual perspective being the motivations and goals of students seeking to create a professional career in the arts. We begin by exploring different aspects of entrepreneurial motivation. We then investigate the perception of art and its impact on professional identity construction, followed by pedagogical approaches in entrepreneurship education. Empirical data for the study has been collected through a case study at Novia University of Applied Sciences and YA! Vocational College of Ostrobothnia (YA), both located at Campus Allegro in Pietarsaari, Finland.

Results

Both educators and students have an extrinsic and instrumental motivation for entrepreneurship: both students and educators perceive entrepreneurship as an instrument to secure future work. What divides the two groups is that educators appear to have more of a push motivation, whereas students have a mix of push and pull motivations. Regarding professional identity, some of the educators appear to have a somewhat differentiated identity perception. The identity focus is on being an artist and it is therefore difficult to integrate an entrepreneurial identity in that context. The students, on the other hand, show no signs of identity conflicts.

Implications

Practical implications can be found in how to best support students' professional identity construction. Entrepreneurial education program should emphasize integrated professional identities and avoid the emergence of differentiated identity. Educators, as role models, have a great impact on students' professional identity construction and entrepreneurial attitudes. Therefore, it is important that educators recognize the nature of their own professional identity and reflect on what they transmit to students.

Value/Originality

The study provides valuable, practical insights on career identity construction among art students and how teachers' perception of art indirectly can influence students' entrepreneurial motivation.

Keywords

Entrepreneurship, art education, entrepreneurship education, career identity, motivation

WHO IS GIVING FEEDBACK TO WHOM IN ENTREPRENEURSHIP EDUCATION?

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The question we care about

When entrepreneurship is taught through the process of practicing entrepreneurship and based on experiential learning, a need arises for different forms of assessment, evaluation, and feedback procedures than those applied to traditional forms of higher education (HE). Traditionally, teachers are primarily concerned about what students learn. However, when students learn experientially “through” entrepreneurship, educators must care just as much about how students learn. This shift has widespread consequences for how, when, and what we evaluate and provide feedback on, with regard to both the teaching and the learning that takes place in these types of modules. We therefore ask: Who is giving feedback to whom in entrepreneurship education? A two-by-two feedback model is developed that describes the purpose and outcome of feedback from 1) student-to-teacher; 2) student-to-student; 3) teacher-to-student and 4) teacher-to-teacher.

Approach

We approach the question we ask twofold. Theoretically, we find that feedback and assessment in entrepreneurship education has received only limited attention from the research community. We find no contributions with a focus on process-based (“through”) entrepreneurship modules, even though “through” entrepreneurship approaches are on the rise and appear to pose unique assessment challenges). Empirically, we map the feedback challenges the authors have faced as educators of a master’s level entrepreneurship “through” module, which they taught and developed over an eight-year period.

Results

Our analysis develops an initial and simple two-by-two model for mapping feedback. Further, our empirical findings challenge this model and suggest an elaborated version of the model. This process provides an overview of feedback forms, suggesting:

1. that in process-based entrepreneurship modules, continuous feedback is necessary because the entrepreneurial outcome and learning is gained through the process adjustments prompted by the feedback during the module;
2. that a rather complex system of feedback mechanisms is at play that involves both feedback among educators and students and between educators and students;
3. that the complexity is further increased when it is acknowledged that the subject of the feedback may concern the learning, the teaching, the process, the object of the process (the entrepreneurial project), or combination thereof.

Implications

This research contribution is empirically based on a process-based entrepreneurship module. The results are immediately relevant for a number of entrepreneurship modules; but the results may apply not only to entrepreneurship modules but also to a wider range of HE process-based module.

Value/Originality

The two-by-two-feedback model is valuable because it in practice 1) gives educators of process-based modules a structured feedback system that 2) makes it visible for educators as well students for what purpose feedback is given and 3) gives a educators and students a way to better understand their role in a given feedback situation.

Keywords

Entrepreneurial learning, feedback, assessment, experiential learning, reflection, learning ‘through’

HOW TO ACCELERATE LEARNING IN ENTREPRENEURSHIP EDUCATION THROUGH EXPLICIT FEEDBACK STRATEGIES?

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The question we care about

Most stakeholders in entrepreneurship education agree that it should lead to learning that is applicable in the real world. For this learning to take place entrepreneurship courses with a “through” entrepreneurship approach seems to be one of the better choices. This approach to entrepreneurship education calls for integrating experiential learning which again states the need for continual feedback. As an experienced entrepreneurship educator I have experienced that it is not easy to secure effective feedback in practice, even in a relatively ideal educational setting. Partly based on an empirical study of an actual entrepreneurship course with an approach to entrepreneurship as a method (as described by Sarasvathy & Venkataraman 2011), I would like to explore: *How to accelerate learning in entrepreneurship education through explicit feedback strategies?*

Approach

This paper initially explores the conceptual relationship between: entrepreneurship as a method, “through” entrepreneurship education, experiential learning and feedback. Further Hattie & Timperley (2007)’s feedback model is related to entrepreneurship education. In the empirical part of the paper, an elective entrepreneurship course is researched with regards to the applied feedback scheme. The empirical study used qualitative methods, and the main data was generated by a focus group with students. Lastly the feedback model is applied and discussed as a potential framework for evaluating the effectiveness of applied feedback methods in entrepreneurship education.

Results

Concerning the applied feedback methods in the actual course the need for more explicit criteria and guidelines is the main finding. This can potentially lower the need for very comprehensive written feedback messages from the educator. Whereas the value of peer feedback can be increased so that it adequately fulfil more purposes than motivation and feedback on the idea, primarily understanding of theoretical concepts related to the students’ entrepreneurial process. Also it is important to note that frequency of feedback is important. Some parts of the presented feedback model were very useful to develop an understanding of the effectiveness of the applied feedback scheme, but it also had some short-comings with regards to non-cognitive aspects of the learning process.

Discussion/implications

Clearer criteria and guidelines seem able to increase the effectiveness of peer feedback and lower the need for time consuming written feedback from the educator. In order to systematically explore and develop feedback strategies in “through” entrepreneurship courses the model by Hattie & Timperley (2007) was tested out and found useful, but not sufficient. The definition of some of the elements needs to be broadened and/or supplemented with new elements. These elements should take into account affective learning, social learning and learning from experience in uncertain situations.

Value/originality

Some recommendations with regards to effective and explicit feedback strategies are provided primarily relevant for “through” entrepreneurship courses. The potential of a much highlighted feedback model by Hattie & Timperley (2007) is explored in order to explore and develop feedback strategies in entrepreneurship education.

Keywords

through entrepreneurship education; criteria-based; feedback strategies

EXAMINING BEST PRACTICE FOR A POSTGRADUATE MODULE ON FOOD ENTREPRENEURSHIP

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Questions we care about

As a lecturer in entrepreneurship education, the challenge of embedding an entrepreneurship mindset in my students is of great interest to me. The literature bears testimony to the fact that the delivery of entrepreneurship education needs to be improved. A traditional lecturing approach is inadequate and there is a call for more creative teaching and a more experiential learning approach. In the words of Plutarch “Minds are not vessels to be filled, but fires to be ignited”

Approach

The author decided to evaluate an existing Masters module on food entrepreneurship in the light of best practice. The approach involved a review of some best practice in the literature and both EU and national policy documents. The syllabus, teaching methods and assessments on the Masters module in food entrepreneurship were examined. A questionnaire comprising of both closed and open ended questions were administered to a class who had completed the module.

Results

The results of the evaluation highlighted positive features of the food entrepreneurship module e.g. specific feedback in relation to how the module helped embed an entrepreneurial mindset. Overall students benefited from the module and were of the view that they had the knowledge to start a business. The students found the “real life experience” from the guest lecture with a food entrepreneur very beneficial.

Implications

The paper has synthesised some knowledge of best practice according to entrepreneurship policy documents and some academic literature. In light of entrepreneurial educational policy and literature findings various recommendations are made in order to make the classroom more entrepreneurial involving more innovative teaching methods such as more use of problem solving exercises, use of theatre and partnerships with existing businesses.

Originality

Overall the paper serves to inform practice. The paper evaluated existing practice i.e. an entrepreneurship module and made specific recommendations to include more experiential learning coupled with suggestions for more innovative teaching methods.

Keywords

entrepreneurship education classroom best practice postgraduate

THE PROMISE OF PROCESS. LEARNING THROUGH ENTERPRISE IN HIGHER EDUCATION

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Questions we care about

In this qualitative field study, I direct an analytical lens on the practices of student-learners and how they actually pursue opportunities to learn, when participating in a process-driven entrepreneurship module. I ask how student participation is negotiated and practiced in class and I ask about the consequences of this participation for students' experiences of becoming entrepreneurial learners. Through this focus on student participation, I discuss how entrepreneurial process in an education context produces images of a specific learner figure who can take advantage of the opportunities to learn represented by entrepreneurship.

Approach

This paper reports from a process-driven entrepreneurship module embedded in a postgraduate programme at a Danish university. The empirical material derives from observations in various learning settings and in-depth interviews with teachers and students. I employ situated learning theory and the concept of legitimate peripheral participation as an analytic perspective on entrepreneurship education in practice.

Results

Findings suggest that students and educators in class were involved in a constant meta-communication about "how" to learn. I found that students pursued access to learning opportunities through a constant dynamic of participation, which involved three participatory stances: trust, authenticity, and autonomy. However, these participatory stances were contradictory in nature and produced contradictory practices, which nurtured student uncertainty. The analysis indicates a contradictory process of becoming a legitimate entrepreneurial learner; a hybrid identity between student and entrepreneur, which in practice is more uncertain and ambiguous than portrayed in the literature.

Implications

This study contributes to enterprise education research by introducing a discussion about access to entrepreneurial learning and how this access is organized. The paper calls for reflexivity with regards to how enterprise education theory produces learner figures, which are difficult to practice.

Value/originality

With this study, I answer calls for a critical research on entrepreneurship education which urges reflection upon acknowledged practices and positions in the field. Moreover, the paper suggests that process sensitive methods such as ethnography are valuable for research in entrepreneurship education and the lived experiences of entrepreneurship learners and educators.

Keywords

Learning through enterprise, entrepreneurial process, higher education, participation, situated learning.

HOW TO EDUCATE ENTREPRENEURIAL JOURNALISTS?

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Questions we care about

How can we educate entrepreneurial journalists?

Approach

In journalism, we observe a concrete prosecution of general trends: the total amount of jobs is decreasing, traditional business-models suffer, forms of work are changing and journalist associations alert that new competencies including entrepreneurial are requested but not taught. Reflecting this situation, in recent years, entrepreneurial journalism was getting more ground in the debate on journalism research and journalism education research. There is a strong need of having not only self-employed but entrepreneurial journalists that request common assumptions of the business and come up with new ideas to disrupt the weak system. Starting to think about entrepreneurship education for journalism students from this perspective comes up with specific challenges.

Results

Our result is a first conceptual framework on entrepreneurship education to journalism students. We built our framework on two core elements. First, we refer to, discuss and question the results of an empirical study that we conducted in cooperation with the German Journalists Association with young journalists (N=236) in Germany in 2015. Core results of the study were that (a) course content related to entrepreneurship is underrepresented in journalism education (b) young journalists value this fact extremely negative and (c) suggest incorporating elements of entrepreneurship education in study curricula. Second, we refer to the progressive taxonomy of entrepreneurship as everyday practice (Blenker et al., 2011) and suggest a conceptual framework on entrepreneurship education for journalism students.

Implications

The idea to teach entrepreneurship to journalism students is new and challenging for two reasons (a) specific context of work (ethic, social function) and (b) antientrepreneurial culture in journalism in general. Our work might support other teachers to develop programs specifically for the needs of journalists.

Value/Originality

Thus far the discourses on journalism education research and entrepreneurship education research are rather disconnected. We contribute to this gap by suggesting a first framework that respects both, the specific situation of journalism and journalism education as well as status quo of entrepreneurship education research.

Keywords

Entrepreneurial Journalism, Entrepreneurship Education, Taxonomy, Everyday Practice

ACTION-BASED ENTREPRENEURSHIP EDUCATION AS A VEHICLE FOR BROAD ENTREPRENEURIAL LEARNING

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Questions we care about

A key feature of action-based entrepreneurship education is that the students develop high-tech ventures as part of their studies. This means that the learning takes place *through* entrepreneurship. In the present paper, we explore how the “selected” students in an action-based entrepreneurship education program can act as vehicle for entrepreneurial learning for the broad population of students. The initiative both incubates student-driven startups and also leads to a dramatic increase in the students’ entrepreneurial knowledge and experience.

Approach

The authors performed a single-case case study on the initiative, mainly by studying sub-cases of coach—student team dyads within the initiative. Both sides of the five dyads of coaches and startup team founders has been interviewed in-depth following an explorative approach.

Results

The results show that the action-based entrepreneurship education is not only a resource intensive elitist study program. Contrastively, it is a core part of a student-based entrepreneurial community that enables interactions and activities where student-to-student entrepreneurial learning takes place and we identified several different types of examples of student-to-student learning in the investigation. Moreover, we found that the participation in the initiative as mentor also benefitted the entrepreneurial learning of the students in the actionbased education program since it enabled them to reflect on their own experiences and provided them with more practical examples of venture creation than their own venture creation journey(s).

Implications

The results show that both learning and incubator functions are catalyzed by the relevant interactions between actors in and around the initiative. Consequently, we suggest that managers of such initiatives should focus on increasing the frequency of interactions especially between startup teams. At the ecosystem level, the results implicate that with such an initiative opens up the knowledge and resources from an action-based entrepreneurship education program to the broader population of students.

Value/Originality

To our knowledge, this is the first paper that both describes such an initiative and also connects the initiative to the action-based entrepreneurship program where the knowledge was developed and the students that are the basis of the initiative were educated. The description of the initiative also has a value in itself since knowledge sharing between universities may enable good examples and experiences of such initiatives to spread. We also contribute to a systemic approach to entrepreneurial learning and provides a more holistic picture of the entrepreneurial learning resulting from action-based entrepreneurship education.

Keywords

learning; entrepreneurship; coaching, student; ecosystem; education; knowledge

AWAKENING ACTORS IN NON-BUSINESS CONTEXTS TO RECOGNIZE THEIR 'ENTREPRENEURIAL SELVES'

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Questions we care about

Entrepreneurship is seen as one opportunity to earn a living and increase societal well-being. Previous studies have focused on entrepreneurship and individuals' processes of becoming entrepreneurial, but they have mainly been carried out in business-related contexts. This paper seeks to uncover if there might be a somewhat unseen entrepreneurial resource among employees and non-business students and teachers. A big challenge is in encouraging people acting in non-business contexts to figure out their 'entrepreneurial selves', as at least latent nascent entrepreneurs. The study asks: *When and in what way should individuals be supported to awaken themselves to notice their possible latent nascent entrepreneurship?*

Approach

This case is based on the constructive approach. The context may be either a non-business educational institute or a workplace without straight connections to or dealings with business. In educational contexts, the participating actors are the students and/or teachers in the educational institution. An expert guides the negotiation according to previous findings in this research field. The purpose is to give space to some new interpretations about the often-defined concept of 'entrepreneurial activities' by encouraging the participants to join in reflective dialogues. If the participants are very young students, their teacher should be responsible for the development process, and the expert will work to support the teacher. Because entrepreneurship has to be defined in each context where it occurs, the results of the presented process will always be different from those previously found, which refers to the constructive research approach. One of the biggest challenges for the supporter is in keeping the 'entrepreneurial frame' simultaneously both wide and tight enough.

Results

Based on the four projects carried out in various non-business contexts between 2007 and 2015, it seems to be possible to mimic entrepreneurial activities regardless of the subject and/or context. Guiding experts are needed, and reflection is the main tool for recognizing actors' entrepreneurial activities. Still, a big question remains: does only mimicking entrepreneurs' activities in non-entrepreneurial contexts really lead to the actors becoming entrepreneurs in the future?

Implications

The results of this study may be used to design entrepreneurship education programmes in non-business educational contexts. Additionally, the findings may also be exploited in the development processes of different organisations' workplaces. In that case, entrepreneurship appears as a form of organisational intrapreneurship.

Value/originality

One of the presuppositions is that the study participants have not engaged in any kind of business studies before, but may somewhat be interested in entrepreneurship as a phenomenon. To support the process of uncovering participants' entrepreneurial selves, is essential to be focused on each participant's individual development project in his or her community. An integral requirement is that the participants are able to reflect on their own activities, and the supporting expert must guide this process. The novelty of this case lies in supporting individuals to find out their 'entrepreneurial selves' as latent nascent entrepreneurs in their daily practices in non-business contexts.

Key Words

'entrepreneurial selves', non-business contexts, latent nascent entrepreneurs, expert support

DESIGN THINKING-BASED ENTREPRENEURSHIP EDUCATION

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Questions we care about

In recent years, more and more people have started to look to the field of design for inspiring new ways of dealing with innovation challenges. Based on the still growing popularity of Design Thinking in the management field and early success stories of its application in entrepreneurship education, the question we care about is: *What can we learn from Design Thinking to enrich entrepreneurship education?*

Approach

This paper critically summarizes parts of the Design Thinking literature. Many of the ongoing discussions in Design Thinking show parallels to the current debate of how to best teach entrepreneurship in higher education. Therefore, this paper established conceptual links between these two fields and provides strategies for how to incorporate Design Thinking principles into an entrepreneurship course.

Results

The following nine key concepts from Design Thinking were identified to add value to the discussion about entrepreneurship education: Wicked problems, formalized Design Thinking process models, divergent and convergent thinking, iterations, T-shape, multidisciplinary teams, creative confidence, informed intuition as well as studio learning.

Implications

Design Thinking is a very accessible way of facilitating multidisciplinary learning. It provides entrepreneurship educators with a number of important concepts, tools and methods that may be directly integrated into existing courses. The presented conceptual links between Design Thinking and entrepreneurship education provide new pathways for how to enrich current entrepreneurship education practices.

Value/Originality

This paper aggregates the recent literature on Design Thinking and transfers key principles to the domain of entrepreneurship education.

Keywords

Design Thinking, entrepreneurship education, pedagogy, curriculum design

FROM LIBERAL PROGRESSIVE EDUCATION TO NEO-LIBERAL ENTERPRISING SELF'S – A POLICY PERSPECTIVE

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Questions we care about

Are we really liberating the future generation of learners through individualizing education?

Approach

My analytical approach for this paper rests within the search for nuancing the unspoken voice of how the neoliberal movement have, or have not, impacted upon our shift from an education based on democracy and exchange towards competitiveness and entrepreneurialism. The focus rests upon how policies within the European Union has described and formed an agenda for incorporating entrepreneurship throughout the educational system in the member states. In this I try to problematize through the use of governmentality, enterprising self and neo-liberalism by tracing the discussion from a historical perspective from the early 20th century and up until today. I use past and contemporary writings on progressive education and the enterprising approach, which are used to problematize policy interventions within education in the European Union.

Results

From a policy perspective it makes sense to lift entrepreneurship above other scholarly domains, as there is a given gain in making the coming generations more productive and entrepreneurial for boosting economic activity. But, from an educational perspective it could be questioned whether an ideological and policy oriented thought ever have been good for developing versatility in a society. The explicit steering that is taking place in both higher and lower education by policy when promoting entrepreneurship could be viewed as a form of power abuse, which delimits freedom implicitly by creating a utopian vision of how all citizens should be calibrated (Flyvbjerg, 2001). I am not arguing in this paper that enterprising, entrepreneurship and entrepreneurialism as phenomenon is something bad; for sure it is a vital part of societal development that will and always has been a part of humanity, but imposing it, through policies, as it is done today does not position entrepreneurship as a free choice in education.

Implications

We (as homo oeconomicus) are destined through the governing of today's normalization process of seeing entrepreneurialism as the only way out, and by that we create and re-create the mentalities in the coming generation, which become seen as "truth-regimes" of how to live life. But, through bringing up these quarrels to the surface and actually questioning policies visions of what, how, and why to learn entrepreneurship/enterprising, we might plant the seeds for future generations and teasing out potential frames and boundaries of what we actually can claim when teaching entrepreneurship/enterprising to future contributing citizens.

Value/Originality

In this paper I take a critical stance against neoliberal policy suggestions and try to tease out problematic aspects when leaning too much on policy when trying to position entrepreneurship/enterprising as a scholarly and educational domain.

Key words

Governmentality; enterprising; entrepreneurialism; neoliberalism; progressive education, EU policy perspective

LEARNING FROM AND THROUGH EACH OTHER: A STUDY OF PEER LEARNING IN EXPERIENTIAL ENTREPRENEURSHIP EDUCATION

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Questions we care about

How do peer learning stimulate and actively reinforce the development of entrepreneurial knowledge through its collaborative and communicative elements? And, why are generic skills important to acknowledge when adopting an experience-based pedagogy in entrepreneurship education?

Approach

In this study the aim is to understand how student entrepreneurs share and develop entrepreneurial knowledge through peer learning. Peer learning is a teaching and learning strategy where students learn with and from each other, without direct teacher intervention (Boud, Cohen, & Sampson, 1999, pp. 413-414). These peer study groups are following the learning process on the program, where each study group session is related to the learning activities and discussions at the different modules of the program. The staff facilitates them, but the discussions are driven by the students to develop their knowledge through collaborative and communicative discussions.

Results

Through the process of analyzing the three different settings the study provides insights on how peer learning could be used as a pedagogical method for developing generic skills useful in an entrepreneurial setting. Through adopting different levels of freedom in the different settings, the study sheds a light on how different settings create fruitful debates, discussions, and collaborations among the students, which together provides an arena for developing self-awareness as a learner, equality toward peers, and creating a learning activity built on student responsibility since they take charge of their learning by co-creation.

Implications

In this study, peer learning is acknowledged for its process of changing individuals abilities and skills in regards to communicative and collaborative learning, which at the same time generates deeper understandings of the individual learning process and creates self-insights by providing multiple views on perspectives discussed and learnt in the general program structure. As of this, using peer learning as a method for creating collaborative learning environments is important for fostering a community among the students to share insights and ideas without the individual pressures of performativity.

Value/Originality

The study brings new insights into how entrepreneurship education could generate a more social dimension for creating learning arenas where co-creation of knowledge acts as a compliment to further develop self-insights in the students individual learning processes. As of this, the peer-learning activity that the students engage in is acting as a support and control mechanism for developing deeper understanding of the activities and contents that has been performed and discussed in the general program structure.

Key words

Collaborative learning, communicative learning, experiential entrepreneurship education, peer learning, researcher reflexivity, thematic analysis

CHALLENGES OF ENTREPRENEURSHIP EDUCATION IN HIGHER MUSIC EDUCATION: SOLUTION AHEAD?

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Questions we care about

This paper presents the challenges that are experienced when implementing Entrepreneurship Education within Higher Music Education. The objective is to conceptualise the possibility of a new approach, or to ask a new set of questions, that is envisioned to offer a solution towards overcoming these challenges.

Approach

Three main challenges are introduced at the onset, before delving more deeply into why these challenges exist and how others have tried to overcome them. While attempts to remedy the situation can be acknowledged, it is relatively unknown how effective these attempts are at reducing or combating the challenges. To overcome this issue, it is necessary to evaluate any strategies put in place in order to assess their effectiveness and impact. Literature concerning the evaluation of entrepreneurship education is critically consulted in an effort to identify an appropriate evaluation method to adopt.

Results

Based on the knowledge gained from the literature, a new approach to evaluation is proposed. The suggestion is that more qualitative methods of inquiry are needed to unravel the individual and social complexities that affect a student's willingness to engage in entrepreneurship.

Implications

By understanding *which* individual and social factors influence students and *how*, it is anticipated that this may lead to the development of (1) better tools to evaluate the effectiveness of entrepreneurship education practices; and (2) more effective educational methods.

Value/Originality

The novelty that this paper presents lies in its attempt to delve into unexplored territory i.e. that of determining the underlying individual and social mechanisms that influence a student's willingness to engage in entrepreneurship. It differs from previous research evaluating the impact of entrepreneurship education mainly due to its emphasis on the use of qualitative methods in furthering the investigative possibilities of this field.

Keywords

entrepreneurship education, arts entrepreneurship, evaluation, qualitative

IS ONLINE LEARNING SUITABLE FOR ENTREPRENEURSHIP EDUCATION? LESSONS LEARNT AND NON-ANSWERED QUESTIONS IN THE UK

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Aim. This conceptual paper explores the tensions and synergies between class-room based and online entrepreneurship education (EE) and how the strengths and good practices of both may be drawn on to develop effective and accessible online learning. In doing so we highlight some tensions and debates around developing EE for online learning and draw on our own experience to discuss the implications for educators and students.

Previous work. Although there has been a growth in EE across the world and an increasing policy focus on developing EE across all disciplines in all university settings (EU, 2012) there are no clear cut guidelines for the effective teaching of EE. However, several different pedagogical approaches are suggested as supporting learning objectives within EE and these broadly emphasise collaborative learning, social learning and experiential learning (Bechard and Gregoire, 2005; Gibb, 2005; Pittaway and Cope, 2007; Pittaway et al, 2011; Rae, 2004). Of course, there are also different approaches to teaching and pedagogy depending upon the focus of EE – i.e whether the teaching is about, for or through entrepreneurship (Levie, 1999; Laukkanen, 2000; Heinonen and Hytti, 2010; Neck and Greene, 2011).

Added to this context is the increasing development of online platforms for education and the delivery of online courses (Boling et al., 2012). Indeed, the most recent development in this area is the emergence of the Massive Open Online Course (MOOC), and this paper explores the viability of using such online platforms to deliver EE. However, there are debates about whether students can gain similar experiences and learning outcomes from learning online as they do through learning in the classroom (Zhang et al., 2004, Mulenbun and Berge, 2005; Moller et al., 2008).

The questions we care about

To explore these developing issues and debates this conceptual paper asks:

- What learning theories are emphasised in classroom-based EE?
- What learning theories are emphasised in online learning environments?
- What tensions or synergies does this suggest for educators wishing to develop their traditional class-room based EE courses for online learning platforms?

Why is this important? Universities are investing in MOOCs and online learning more generally to showcase their classroom based teaching but also to appeal to a student cohort that wants to study more flexibly and at a distance. To design EE online courses which draw on effective learning theories, as suggested by classroom based teaching, we need to engage with the potential tensions and challenges associated with this shift from classroom-based learning to online learning.

Value/Originality

Multidisciplinary approaches draws together two distinct strands of literature. In doing so it contributes to pedagogical theory of both online and classroom-based EE. It also has a practical contribution to make – for those enterprise educators who wish to translate or repurpose their classroom-based teaching resources and approaches into online resources and courses. Additionally, it paves the way for other experiential based disciplines to consider a move from classroom to online courses, where students are expected to develop a skills base alongside their academic knowledge.

MEASURING THE EDUCATION OF ENTREPRENEURIAL SOFT SKILLS

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In today's world the development of 21st century skills; often mentioned as entrepreneurial skills, are seen as important. Entrepreneurship is also seen as the important factor to economic growth. The soft skills of entrepreneurship however are most difficult to develop and not often part of entrepreneurship programs (Fayolle, 2013; Worsham, 2012). Business schools and schools teaching entrepreneurship recognize the importance of these soft skills and are working these into the curriculum. But also other schools, in healthcare, arts and other disciplines are working on entrepreneurship into the curriculum. However this is often developed with a traditional pedagogical approach. Other schools however do not educate entrepreneurship at all, probably because they do not know how to do this (Jones, Matlay, & Maritz, 2012). To get more clarity about the incorporation of the soft skills in the entrepreneurship education developed a model to measure how these soft skills are being educated.

The model I used is designed to measure what is meant by coaching and mentoring of start-ups. Educating the soft skills of entrepreneurship has a lot in common with coaching and mentoring of entrepreneurs. Coaching or mentoring is seen by researchers as an educational relationship. That is why this model also can be used to measure the soft skills of entrepreneurship education. The model has two dimensions. First the role dimension which diverts from business focus to personal focus. And the other, the agenda dimension which goes from directive support to non-directive support. A survey which uses the conjoint method, is been conducted among students and educators (teachers/tutors and mentors/coaches) of an entrepreneurship college, about the support they receive or give.

The main results show that students see clearly that coaching supports personal development and they like a more non-directive or free approach of their coach. There is no clear correlation between the goal of the support (skills development or personal development) and the satisfaction of the students. This could imply that both are valued. Thereby the coaches are not always aware of their support. Some seem to have a different idea of their coaching as their students experience.

With this research there is a model presented to value the soft skills that are being educated. As been stated that education of soft skills are not likely to be developed by traditional pedagogical approaches (Jones et al., 2012) it also takes an non-traditional approach to measure how the soft skills are being educated. The model can also help teachers to improve the education of soft skills by clarifying the differences in how teachers think they educate and the experienced way of education by the students, which has a clear correlation with the satisfaction of the students.

Keywords

Entrepreneurship, education, soft skills

PRIOR KNOWLEDGE – A BARRIER TO ENTREPRENEURIAL LEARNING?

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Questions we care about

This research explores whether students' prior knowledge may influence their approach to entrepreneurial learning in situated practice. We shed light on students' participation in a long-term international internship in high tech start-ups. We build on various research streams on real-life entrepreneurial learning, situated learning and entrepreneurship education to explore *how* students with different knowledge background approach the entrepreneurial learning process. The extant literatures lead us to explore through qualitative inquiry the following research questions: How do students with different prior knowledge approach entrepreneurial learning? Moreover, how do students develop their entrepreneurial role through social participating in a high tech context? May technical specialized knowledge represent an advantage here?

Approach

We conducted qualitative research employing the focus group method to investigate students' learning experiences. We compared two student groups that differed in prior knowledge background (engineering versus non-engineering education at the bachelor-level).

Results

The research revealed intriguing results. Through our analysis, we discovered that both student groups on overall enhanced their entrepreneurial learning competence in a situated learning situation. However, it was evident that students' prior knowledge in the form of technological knowledge or lack of such had different implications on how they acquired this competence. We found that prior specialized technical knowledge could in fact represent a learning barrier on some transformational process dimensions as well as on entrepreneurial learning outcomes.

Implications

The research has several implications for "real life" entrepreneurial learning arenas in education. First, it opens up our eyes to the complexity in entrepreneurial learning processes and that prior knowledge represents an essential precondition for learning entrepreneurially. The study should therefore inspire for future and more rigorous empirical examinations in different contexts. Second, educators should carefully consider how such barriers might be overcome through various support mechanisms that can secure the intended learning outcomes.

Value/Originality

Our research aims to address important topics called for in the field of entrepreneurship education research and practice that moves beyond ontological and philosophical discussions about pedagogical approaches. This particular study investigates in depth students' situated entrepreneurial learning process in a real-life setting and discuss important consequences of situated learning in the field.

Keywords

Entrepreneurial learning, situated learning, prior knowledge, learning barrier

A 'VALUE' AND 'ECONOMICS' GROUNDED ANALYSIS OF SIX VALUE CREATION BASED ENTREPRENEURIAL EDUCATION INITIATIVES

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“From no source do so many errors, and so much difference of opinion (...) proceed, as from the vague ideas which are attached to the word value.”- Ricardo (1819)

Questions we care about

Entrepreneurial education has so far primarily leaned on a view of entrepreneurship as the creation of new organizations. This has resulted in a wide variety of courses and programs focused on business plan writing and new venture creation. A relatively new and promising trend is however to ground entrepreneurial education in a quite different view of entrepreneurship; that of viewing it as new value creation, where students learn through creating value for others. Research is however scarce so far.

Approach

To explore this trend, two guiding frameworks are developed that could deepen our understanding of the terms *value* and *economics* in relation to value creation based entrepreneurial education. A *value* framework is developed consisting of five different kinds of value, and an *economics* framework is developed consisting of three different kinds of economics. These frameworks are used to analyze six empirical cases from primary, secondary and higher education, where students from Sweden and Turkey have been studied through an emotional events based mixed methodology as they learned through creating value for others.

Results

The analysis has illustrated that value creation based entrepreneurial education could be analyzed more comprehensively through a deeper understanding of the two terms *value* and *economics*. A number of commonalities and differences have been uncovered in terms of which kinds of value were created by the students and which kinds of economics the cases lean on in terms of goals, mechanisms and logic.

Implications

A number of implications have been articulated, such as a practically relevant difference in cost-benefit ratio between value creation and venture creation, a recommendation to focus on use value rather than exchange value in entrepreneurial education and the importance of enjoyment value in entrepreneurial education based on student value creation.

Value / originality

This could be the first multiple case study focused on value creation as educational practice. It is also rare in its spanning and empirically contrasting across all levels of education. Scholarly research on value creation based entrepreneurial education is in a nascent stage, and this article contributes with new analytic tools and theory grounded analysis of similarities and differences across six different empirical cases.

Keywords

Entrepreneurship, Education, Learning, Value, Economics

THE UNIVERSITY IS DEAD; LONG LIVE THE UNIVERSITY: ARE UNIVERSITIES THE PRINCIPLE SOURCE OF SOCIAL CAPITAL FOR STUDENT AND GRADUATE ENTREPRENEURS?

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Questions we care about

This paper explores the role of social capital acquired by students during student and graduate entrepreneurial journeys at university. The objective is to understand how universities can facilitate social capital acquisition in the context of entrepreneurial learning. The study builds on a collaboration between three European universities: Chalmers University of Technology (Sweden), University of Leeds (United Kingdom), and Universidad de Malaga (Spain).

We ask:

1. What is the relationship between social capital and entrepreneurial learning? What is the added value as perceived by student and graduate entrepreneurs?
2. How can educators use the development of social capital to enhance entrepreneurial learning, particularly across formal, non-formal and informal entrepreneurial learning activities?
3. What are implications for the future of universities as centres of knowledge, creativity and learning?

Approach

The study is underpinned by relevant literature regarding entrepreneurial learning (Man, 2007; Rae and Carswell, 2001) and education (Higgins and Elliott, 2011; Pittaway et al., 2011). It also addresses the impact of social capital on the development of entrepreneurs (Anderson et al., 2007; Foxtton and Jones, 2011; Sarasvathy and Dew, 2005), and the research regarding the entrepreneurial university (Audretsch et al., 2014; Fayolle and Redford, 2014).

The study utilises a qualitative methodological approach, drawing on what is termed the critical incident technique. To start, student/graduate entrepreneurs were asked to map their entrepreneurial journey based on a timeline, specifying stakeholders whom they associated to critical events. This visual aid was then used throughout the interview, in which respondents provided a verbal history about their timeline and the critical relationships which had influenced their own entrepreneurial behaviour.

We selected 24 respondents based on three criteria: (1) they had to be a university final year student or in their first year of graduation (both undergraduate and postgraduate students from various subjects were selected); (2) they had to have been engaged in some entrepreneurial activity; (3) the sample was split 50:50 between individuals having completed some formal entrepreneurship education (credit-bearing courses) and individuals without any formal entrepreneurship education. Gender and country variables were also considered. This selection criterion resulted in the formation of two groups of respondents at each institution: (a) Five 4 respondents who completed some formal entrepreneurship education (gender mix); and (b) Five 4 respondents who had not completed any formal entrepreneurship education (gender mix).

Data was analysed using narrative analysis of the individual learning, and social network analysis of the socialised learning (to address network and social capital developments). Building on social learning theory (Bandura, 1977), socialised learning is understood to include observation and emulation of role models -role-sets (Carsrud and Johnson, 1989)- as part of an individual's identity and legitimacy development.

Results

Preliminary analyses of the data inform us that mentors known in informal and non-formal education events and incubators are the main source to ask for help when respondents feel they need to. Maybe because the interview is retroactive, respondents were aware of this need before it was too late; in fact, respondents were the ones who deliberately contact these people to ask them for help in their various entrepreneurial activities.

Implications

This paper contributes to knowledge and understanding by exposing a previously understudied value of social networking in entrepreneurship education at universities. At an institutional-level, it legitimizes university inclusion of social networking activities into formal and non-formal entrepreneurship education, and the encouragement of informal entrepreneurial learning. Moreover, at an individual-level, it motivates educators to embed these activities within the curriculum in order to facilitate entrepreneurial learning. Nonetheless, to more fully understand the student/graduate entrepreneurial journey, more research is needed. Future work should not only consider entrepreneurial activities as critical incidents, but also the relevance of other interactions in the entrepreneur's life, leading to a greater understanding of their economic, social and cultural impact.

Value / Originality

Social networking goes beyond simply building a contact list; it is part of the social capital necessary for the entrepreneurial journey. This study exposes a previously missing value of social networking in entrepreneurial education programmes. It encourages educators to embed social networking activities into the curriculum to facilitate entrepreneurial learning. The study highlights the importance of social capital acquired at university, as part of the student/graduate entrepreneurial journeys. This revitalises the role of the university as a key enabler of economic, social and cultural impact through student/graduate entrepreneurs. Thus, the university is dead (as was traditionally understood); long live the (entrepreneurial) university.

MATCHING TIME (T) TO LEARNING – A UNIFYING “2T FRAMEWORK” FOR ACTION-BASED ENTREPRENEURIAL EDUCATION

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Questions we care about

There is still little consensus around how to set up and evaluate entrepreneurial education. This paper builds the argument that, for action-based entrepreneurial education, there are some main design features as well as types of learning outcomes that are relatively independent of length of education (T) as well as of participant background. The purpose, thus, is to propose and empirically illustrate a unifying “2T Framework” for action-based entrepreneurial education. Therefore, the questions we care about are:

1. How relevant are Value-creation, Iteration and Team-work in different educational formats?
2. What kind of Outcome- and Process-learning can be expected given different time formats?
3. What is the importance of control variables, such as background diversity, in action-based entrepreneurial education?

Approach

We approached this through insider action-research, building from more than a decade experience from setting up, executing and evaluating these type of educations. The framework is illustrated through four empirical examples with T being minute, day, month and year. Four educational experiences at the foundation proposing the framework, are not used for anything more than empirical illustrations, hopefully helping to legitimize and stabilize proposed concepts, but not to verify their general relevance. The analysis focuses on the relevance of the design features of the framework (Value-creation, Iteration and Team-work), what kind of Outcome- and Process-learning can be accomplished given different timeframes, and on the importance of control variables such background diversity of participants. Our ambition is that the framework can be increasingly used by researchers, allowing for verification and improvement over time.

Results

The educational examples all relied upon the three proposed design features. Outcome-learning and Process-learning display both similarities and differences. A main similarity is the multi-opportunity for Outcome-learning stemming from the iterative design of the educations, emphasizing not only final Outcome-learning but multiple intermittent Outcome- and Process-learning. A main difference is the impact related to Time: longer term design delivers novel and team-specific Outcome-learning, whereas shorter term have Outcome-learning which is shared and determined by teachers’ choices. Control variables, such as background diversity of participants have not been detected as having any large effect.

Implications

The proposed “2T Framework” holds promise to function as a generally applicable framework in setting up and evaluating action-based entrepreneurial education, relatively independent upon time-frames of the education. The design-features of Value-creation, Iteration and Team-work are derived from entrepreneurship theory and appear relevant across different empirical examples.

Value/Originality

While none of these design features are common in more traditional education, they have the potential of being definitional features of action-based entrepreneurial education, regardless of the time-frame of such an education.

Keywords

entrepreneurship education, process-learning, outcome-learning, time

AN EXPLORATION OF PASSION: THE EFFECT OF ENTREPRENEURSHIP EDUCATION

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Questions we care about

Can entrepreneurial passion be enhanced in the entrepreneurship classroom? What does it stem from? What affects it and what in turn does it affect? What is the effect of teamwork?

In entrepreneurship education there have been many calls for more in-depth academic inquiry into the pedagogy, curriculum and delivery method of entrepreneurship education as well as the more holistic effect on the student (Fayolle, 2013; Naia et al., 2014). This study explores a construct which providing valuable insight in general entrepreneurship literature; entrepreneurial passion. Entrepreneurial passion is typified by intense positive feelings such as excitement and enthusiasm for entrepreneurial tasks. It has been linked to creative behaviour, persistence and entrepreneurial resilience in the past (Cardon et al., 2009; Vallerand et al., 2007, 2003). While some studies of passion using students have been undertaken of late, there is a paucity of knowledge in the specific area of entrepreneurship education (Le Poutre et al., 2010). This study examines a cohort of undergraduate entrepreneurship students in terms of their entrepreneurial passion using a pre-test, post-test research methodology. A number of factors are explored relating to the student themselves, the course delivery, and to teamwork. In an entrepreneurship course or module one of the most popular reported pedagogical practices employed is the use of the teamwork (Hytti and O’Gorman, 2004). Yet there have been few studies which specifically look at the impact of the team itself on the student or the output in this context. From a student sample of 354 students, findings suggested a significant drop in entrepreneurial passion in the scores from time 1 to time 2, which is discussed in more depth in the paper. Further findings support the use of creativity training in the development of student level entrepreneurial passion. This research study tentatively finds that the behaviour of the team has an effect on an individual’s passion levels, possibly through social comparison and emotional mimicry as suggested by Cardon. Lastly, it was observed that having a previous entrepreneurial company or venture had a positive and significant contribution. From the basis of these findings, we would highlight the importance of entrepreneurship education and new venture creation in second level where possible. This research study contributes to current entrepreneurship education literature by examining entrepreneurial passion in this context and by repositioning focus on the use of teamwork in this context.

GROUP COHESION, EFFICACY AND ROLE CLARITY IN ENTREPRENEURSHIP EDUCATION

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Objectives

This paper addresses both practical pedagogical approaches to the effective use of group work with higher education students and also highlights an approach to encouraging students to more fully engage with and understand issues of entrepreneurship as a group activity. In order to engage students, through experiential learning, in the reality of entrepreneurial endeavours, group work has grown in popularity as a teaching tool.

Approach

This study examines the role of obstacles and group efficacy in moderating the relationship between cohesion and performance. Cohesion was operationalised as group, task and social cohesion measured by the Group Environment Questionnaire (GEQ) (Carron, Widmeyer and Brawley, 1985). Group efficacy was measured using Guzzo et al.'s (1993) eight-item scale. Role clarity was measured using the four-item survey developed by Lyons (1971). The obstacles were measured in three dimensions, namely process, relational and task obstacles. 81 University entrepreneurship students were involved in the study. The findings reveal a rather complex picture of the impact of cohesion on performance.

Results

As theorized, group cohesion has a positive impact on performance. However, the presence of obstacles such as process and relational obstacles and group efficacy moderates the relationship between those two factors. The overall finding confirms that the variables of group efficacy and relational conflict have the strongest impact. Implications for pedagogical practice and future research are discussed in this study.

Implications

It is through working in groups that students can develop cooperative learning skills and experience the practice of entrepreneurial teams. The interplay between group cohesion, obstacles and efficacy as factors that may determine a group's performance remains under-researched and this study directly addresses these issues.

Value

This study provides a strong contribution to the development of intervention mechanisms in supporting group work activities in the context of higher education within the entrepreneurship and enterprise disciplines.

Keywords

Groupwork; Entrepreneurship Education; Group Dynamics; Pedagogical Approaches

ENTERPRISE EDUCATION & CREATIVE ARTS STUDENTS: A NEW PERSPECTIVE

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Questions we care about

The sub theme that this paper will address is Entrepreneurship education for non-business students. Traditionally, creative arts students adopt an ideological position that places their identity and practice in opposition to notions of business and commerce. A table of oppositions helps to illustrate this tension:

Art	enterprise	
Authentic	manufactured (fake)	
Passion	money	
Creative	innovation	
T shirts	suits	Fig 1

These conceptual positions are implicitly and often explicitly embedded in art and design degrees. It follows that many arts students will have negative views regarding enterprise and entrepreneurship and will not be receptive learners when it comes to enterprise in the classroom.

Approach

However, the relationship between the creative identity and entrepreneurship is complex. The irony is that the creative mind-set demonstrates a close fit with entrepreneurship and this paper will outline several positions which help develop this case. However, I would like to extend the discussion to outline a more comprehensive fit by examining the creative mind-set within the context of 'Effectuation': Saras Sarasvathy's account of entrepreneurial practice which I will argue very closely parallels the creative mind-set.

Results

The result of this discussion will be a more robust framework for understanding the complex relationship between the creative identity and entrepreneurship education. It will enable a more strategic and inclusive approach to enterprise education for creative students which helps them embrace rather than resist an entrepreneurial identity.

Implications

Firstly, if creative arts students are natural entrepreneurs by mind-set, then perhaps we can harness that potential. But we need to find effective ways to bring creativity into, rather than stand opposed to, entrepreneurship and in order to do this students ought to be engaged and willing participants. This leads on to the second implication and why we ought to pursue this challenge: because it will allow creative arts students to recognise they have a wider range of skills and employment options beyond traditional arts routes.

Value/Originality

This topic of enterprise education for creative students has had a good deal of discussion. A key position is that it must be relevant for the student. This position implicitly recognises the complex and problematic relationship that creative students have with entrepreneurship. As a result a good deal of enterprise education is focussed on the functions of entrepreneurship but without necessarily talking about the subject of entrepreneurship itself. I would argue that this is a missed opportunity for students to explore an entrepreneurial identity and widen their personal and professional horizons.

Keywords

Creative; Arts; Effectuation; Education; Identity

DECODING ENTREPRENEURSHIP EDUCATION ECOSYSTEMS (EEE): BREAKING THE MYTH OF THE INDIVIDUAL ENTREPRENEURIAL LEARNING PROCESS

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Questions we care about

Our study aims at understanding the composition and functioning of learning communities in entrepreneurship that we call Entrepreneurship Education Ecosystems (EEE). We would like to know:

1. Who are the main actors of an EEE?
2. Why do they act in this milieu?
3. What is the nature of relationships maintained with other actors of the ecosystem and for which reason?
4. How do their relations contribute to the creation of the EEE?
5. What are principal determining factors of the EEE we observe?

Approach

Phase 1) Conceptual framework (2013): We developed a conceptual framework to analyse EEE based on an exploratory study of innovative EEE in the Netherlands. The framework consists of five dimensions : The learning framework of an education ; the networks and connections encouraged by the education ; the entrepreneurial culture produced by the system ; its pedagogical solutions ; its learning spaces and materials ; and the motivation of its actors to engage in the system (Toutain et al, 2014; Mueller et al, 2014).

Phase 2) Validation with practitioners (2014): We validated the conceptual framework together with practitioners and scientific experts of the OECD project « entrepreneurship 360 » (primary& secondary education and vocational training), (Toutain & Mueller 2015).

Phase 3) Application and field study (2015): Out of 20 best practice cases from the OECD project, we chose 9 schools across 3 countries (Finland, Germany, Spain) whose EEE we investigated in 2015. We used a case study methodology (Yin, 1994) and collected 54 interviews with various actors of each ecosystem, filmed and photographed the surrounding. We used 2 tools for data collection, which we designed – a proximity map and an EEE-canvas, an adaptation of the business model canvas.

Results & implications & value

We observe that the pursued objectives of the educations are not always clear, but evolve around a common principle: opening up the school by engaging new members of civil society in the educative process. This opening questions the schools' boundaries and requires them to renegotiate its exclusive responsibility for education. Teachers of innovative EE programmes demonstrate signs of *dissidence* with traditional procedures. They initiate entrepreneurial *learning communities* to create synergies and to develop a form of *collective intelligence*. We observe that there are several forms of collective intelligence with different objectives inside the same EEE: The development of pedagogical innovations; the collaboration with internal and external members of the ecosystem; the search for new connections with society to increase employability of learners.

Keywords

Entrepreneurship education, ecosystems, collective intelligence, case study

THE CO-CREATION OF A LEARNING COMMUNITY – INSIGHTS FROM A LEADERSHIP PROGRAMME

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Questions we care about

We explore the co-creation of a learning community in the context of a leadership programme for business leaders. Responding to the criticism that business support interventions are often top-down, product-oriented and not designed to meet the needs of firms, and that educators should facilitate entrepreneurial learning through more innovative methods, our study focuses on learning interventions that contribute to the construction of a learning community. Assuming that learning is about the co-construction of and experiencing spaces for dialogue, reflection, action and community building *the question we care about is: How a learning community is co-created as a space which participants feel belonging to and where participants want to stay and not only visit?*

Approach

The literature on entrepreneurial learning and co-creation constitutes the framework for the study. Recent research has emphasized the collective nature of learning and the development of entrepreneurship in social interactions with others (Cope & Down, 2010; Pittaway & Cope, 2007; Rae, 2004). In recent entrepreneurial learning literature the concept of space has been presented as a way for a group of individuals to engage with a learning programme (Hjorth, 2013; Levinsohn, 2015; Smith, 2011). Assuming that learners are likely to co-create learning experiences if the benefits are linked to mutual interests we combine the insights from entrepreneurial learning and co-creation (Prahalad & Ramaswamy, 2004; Vargo & Lusch, 2004). Co-creation is viewed as a creative collaborative process between an organization and its customers (Perks, Gruber & Edvardsson, 2012; Lusch, Vargo & Tanniru, 2010).

The data for the empirical study were collected from a 2-year leadership programme for the top management of five of companies from different fields of industry consisting of facilitated thematic workshops ('learning camp'). We observed and video-recorded the workshops. The participants were interviewed before, in between and after the learning camps. The findings of the data were analysed by both authors. It is based on the interpretative and abductive reasoning of how participants engaged with the learning programme and experienced learning spaces.

Results

The pedagogy of the programme was to rely less on taught content and more on creating opportunities to engage in the interaction with peers and programme organizers. The findings of our work-in-process study indicate that collective reflection through a dialogue enhanced trust between participants, a prerequisite for experiencing a learning space. Community building was mainly ensured through physical settings. Space for action was value but it was in a minor role.

Implications

The paper is of value to educators in utilizing the co-creation approach in the design of leadership programmes. The study also demonstrates the engagement between the HEIs and regional business community.

Value/Originality

Combine entrepreneurial learning theory and co-creation theory enhances our understanding of collective learning.

Keywords

Entrepreneurial learning, co-creation, learning community

ARRANGED OR DISPERSED PUZZLE CUTS IN UNIVERSITY-WIDE ENTREPRENEURSHIP EDUCATION PUZZLE

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Questions we care about

The purpose of this study is to explore the current practice and contingent gaps in designing university-wide entrepreneurship education, based on previously established models. The EU Entrepreneurship 2020 Action Plan (EC, 2013) presents university governance and faculty with a task to ensure that the key competence "entrepreneurship" is embedded into curricula across higher education before the end of 2015. What has been done to achieve this goal? How entrepreneurship programmes are made available to students from all academic disciplines? Who is responsible for developing entrepreneurship education for non-business students? To answer these questions, we have chosen universities in Latvia as the context for this study, focusing on two domains: 1) what are the essential components of currently applied university-wide entrepreneurship education models and 2) how are these components arranged in providing university-wide entrepreneurship education?

Approach

Reviewing the concepts presented by Brush (2014) "internal entrepreneurship education ecosystem", Streeter et al. (2004) "university-wide" entrepreneurship programmes", and Pittaway and Cope (2006) "university and programme contexts", we define university-wide entrepreneurship education as a set of curricular and co-curricular activities aimed at building student propensity toward entrepreneurship. In this vein, we make an attempt to explore the programme context and the interface between the university context and the programme context. A research strategy chosen for this study employed a mixed-methods approach consisting of qualitative and quantitative components applied in a sequential exploratory pattern. Initially the study was designed as qualitative research using focus group methodology. After the collection and analysis of qualitative data from seven focus groups, we identified information gaps, and the research design therefore, was complimented by a quantitative student survey that also strengthened the overall validity of the study.

Results

Research results reveal substantial changes observed over the last ten years resulting in more university-wide entrepreneurship offerings. The currently applied essential components of university-wide entrepreneurship education employ the Curriculum, the Faculty and the Location by showing signs of moving away from the business department towards a business incubator or a career centre. As to the arrangement of essential components, preference is given to the magnet model with the centre acting as a coordinator or a facilitator with a potential of becoming a hub. Deficiencies in the interface between the university context and programme context account for a jigsaw puzzle with a few puzzle cuts arranged and many puzzle still dispersed and unidentified. And resources within one centre – a magnet to provide entrepreneurship education across the campus.

Implications

The research findings indicate that the paradigm shift in entrepreneurship education takes time and resources that are not necessarily monetary. Developing a strategic university framework for entrepreneurship education and mapping all entrepreneurship educational offerings across the campus increases the understanding of university-wide entrepreneurship education among internal and external stakeholders and helps in identifying contingent gaps.

Value/Originality

This study makes an attempt to combine the programme models with the department/school typology resulting in a new conceptual framework that is guiding this research.

Keywords: entrepreneurship education, university-wide, non-business students, programme context, magnet model, radiant model.

AT THE EDGE: PERIPHERALITY AND CENTRALITY IN ENTREPRENEURIAL LEARNING AND DEVELOPMENT

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Questions we care about

This paper explores the role of locus (place), peripherality and centrality in entrepreneurial learning and development, and addresses: In what ways might peripherality be relevant to entrepreneurial learning? What are the implications for communities, learners and educators? More detailed questions are suggested in the paper.

Approach

Discourses of entrepreneurship development in relation to policy, economics, geography and culture favour the concept of centrality. Attention, resources, activities and people tend to become attracted, concentrated and agglomerated around 'centres'. This paper considers an entrepreneurial response to the unconscious relegation of peripheral areas and people away from 'the centre'.

Results

Peripherality is an enduring topic of interest in regional and geographic studies, economic development, and culture in which there are bodies of literature addressed in the paper. Peripherality tends to be viewed as being located close to outer boundaries, inaccessible, loosely connected, marginal, less important, even dispensable. Entrepreneurial people may prefer, and often operate, peripherally. The contribution of Lave and Wenger (1991) is formative in its conceptualisation of peripherality in social learning.

Implications

The paper is developed from the perspective of the entrepreneurial educator-facilitator in districts of political, economic, geographic and cultural periphery. It offers perspectives and paradoxes which are significant in the experience of peripheral entrepreneurship and can be compared with those drawn from theoretical literature. It includes an experiential case study of entrepreneurial education in the context of a peripheral community. A framework for entrepreneurial learning in peripheral conditions is proposed for comparison with further cases.

Value/Originality

Peripherality may be geographical or defined socially, culturally, economically, ethnically or intellectually. Although the topic of rural entrepreneurship is well developed, and the role of entrepreneurship as an economic enabler in peripheral communities is increasingly understood, the contributions of human capital development and education to this are much less studied. It is proposed that peripherality can be a virtue in entrepreneurship, by offering insights, innovations and opportunities which are not available at the perceived centre; and that entrepreneurial activity can have disproportionate effects in stimulating change, innovation and regeneration at the periphery.

Keywords

Peripherality, Entrepreneurial learning, Education, Community Economic Development

AN ENTREPRENEURIAL APPROACH TO ASSESSMENT OF INTERNSHIPS

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Aim of study

The aim of this exploratory study is to investigate whether an entrepreneurial approach to assessment of internships could minimize the theory-practice gap in combination with enhancement of the student's professional identity.

Questions we care about

- How can internships contribute to minimizing the theory-practice gap when an entrepreneurial approach is embedded?
- How can an entrepreneurial approach to assessment of internships be designed?
- Can an entrepreneurial approach to internships enhance student's conception of professional identity?

Approach

A qualitative research design was the basis for investigation of the topics in focus. Two consecutive groups of students (2015 & 2016) participated in an internship module lasting 10 weeks at a university of applied science in Denmark. The pilot study was designed as a case study and analyzed data material consists of focus groups, observation notes, and qualitative interviews with internship hosts and documentation from the exam situation.

Results

The preliminary results from the case-study are based on data from 2015 and provide evidence that students from the course collectively develop a comprehensive and thorough understanding of the theory-practice gap. By exposing the students to experiences and discussions about the challenges of working in the professional field they report a better understanding of both expectations from the employer and also a grounded feeling of professional identity.

Implications

The current pilot project serves as a full and context-rich case study that can inform other entrepreneurship educators on assessment practices of internships using an entrepreneurial approach.

Value/Originality

The study propose an integrated and processual model using summative and formative elements of assessment practices in internships in universities of applied sciences. The proposed model is based the conceptual framework of entrepreneurial learning and hence contributes to the literature within assessment of entrepreneurial learning and thus providing new insight into this particular action-based approach: Internships.

Keywords

Assessment, entrepreneurship, learning, assessment practice, entrepreneurship education

SUPPORTING THE ENTREPRENEURSHIP EDUCATOR IN A DIGITALLY ENHANCED LEARNING ENVIRONMENT

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Questions we care about

This paper explores a variety of online educational tools to add value to entrepreneurship education and the support needs of entrepreneurship educators in embracing technology for entrepreneurial learning.

Prior literature has identified numerous opportunities to improve student learning and student experience by embracing the use of modern technologies. Significant advancements in recent years in the capabilities of information technology in accommodating multimedia contents have encouraged applications of IT in numerous activities such as self-learning and also blended with traditional instructor led teaching (Sahasrabudhe & Kanungo, 2014) Online educational tools have the potential to facilitate entrepreneurial learning for students and for trainers. These tools need to focus on experiential learning, collaborative work and reflective thinking.

The European Commission (2010) acknowledged that there was a key set of competencies that were to be developed as part of Entrepreneurship Education and that could be developed through facilitated learning. For this to be effectively implemented, teacher competencies need to be developed and sustained. Means by which this could be achieved were highlighted as, first, raising awareness of the definition and purpose of Entrepreneurship Education; secondly, the promotion of teacher training to support cross-curricula teaching of enterprise; and thirdly, the proliferation of organisational and material (teaching aids) to support teachers implementing Entrepreneurship Education in the classroom.

Approach

A survey was conducted of entrepreneurship educators across a number of higher education institutions as well as semi-structured interviews with subject matter experts in entrepreneurship education, on line and technology based learning and teaching and learning unit personnel.

Results

The majority of the educators surveyed had not delivered modules using on-line learning or a blended learning approach. However, despite the current lack of participation in such activities, the survey showed that there is a high level of enthusiasm among staff for engagement in these activities with the majority saying that they would like to use this approach more in their teaching.

When asked about barriers to this approach to teaching the educators felt that there would need to be strong understanding of the benefits to the students to ensure they are fully committed and motivated. Other factors relating to their students was knowledge of the technology and receiving rewards for engaging with the technology and content in a self-directed, self-motivated approach.

The main barriers for the educator was knowledge of the various tools and finding the time to create the content needed. When asked how much online learning students wanted in their course, the majority of respondents answered 'some', which would suggest a blended learning approach as a potential fit. A further finding is that the educators in this study are underwhelmed by the amount of support they feel they are getting at their HEI and overwhelmed by the expectations placed on them to develop in their use of online tools for education.

Implications/Value

A set of recommendations based on the findings in this research is put forward around curriculum design, delivery and assessment considerations, training and support needs for educators and support staff and overcoming barriers and challenges of a digitally enhanced approach to entrepreneurship education.

Keywords

Entrepreneurship Education, Online educational tools, professional training, innovative teaching

INTRODUCTION OF ENTERPRISE AND ENTREPRENEURIAL SKILLS IN MEDICAL EDUCATION

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Questions we care about

The Leeds University Medical Undergraduate Degree Course has a strong enterprise theme that is cross-cutting across the curriculum, delivered mainly through two longitudinal strands, IDEALS (Innovation, Development, Enterprise, Leadership and Safety) and RESS (Research, Evaluation and Special Studies). Here we have presented the RESS Special Studies Project (RESS-SSP) that brings 2nd and 3rd year students together in a unique opportunity to study areas outside of 'mainstream medicine'. In this course we have introduced enterprise education to enable students to develop enterprise and entrepreneurial skills and attributes in early years of their medical education. The specific questions in this proposal we asked if the enterprise education introduced in early years of medical course enhances students learning experience, quality and standard.

Approach

The main method of evaluation of this module is through student feedback questionnaires.

Results

Student evaluation shows over 90% were satisfied with the quality and standard of the course while 89% reported that the content of the projects intellectually stimulating. More than 75% students reported that they are able to describe the concept of enterprise in this module. Many commented that they are given the opportunity to think 'outside the box', engage with the wider community and experience of the 'real world' they will be working in after graduation. The evaluation also demonstrates excellent engagement and great results, with some students nominated for an international Business Award for their project.

Implications

The RESS- SSP course reported here offers exciting possibilities for medical students to develop enterprise and entrepreneurial skills including problem solving, critical reflection and communication of new knowledge to wider audience. Medical graduates need these skills and attributes to enable them to be successful in a constantly changing global economic environment. Students further develop key skills including information gathering and evaluation as self-directed learners.

Value/Originality

The Leeds Medical School has recognised and implemented the need for the development of enterprise skills in medical education in the early years of medical course. The enterprise education introduced in RESS-SSP course in Year 2 and 3 reported here continues with an ambitious opportunity for self-design and entrepreneurial work in the 4th and 5th years of medical education. This enables students to understand and explore enterprise education, displaying a useful range of skills and attributes, which assist the learning process throughout their career.

Keywords

Enterprise, Entrepreneurial Skills, Medical Education

ENTREPRENEURIAL SKILLS IN PRACTICE

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Questions we care about

This paper seeks to contribute to the discussion of the value of teaching entrepreneurial skills, also outside of the traditional business school setting. Are there ways of approaching practice and practical elements in higher education that leverage entrepreneurial methods and skills, which can have a positive influence on the quality of the learning?

Approach

The paper takes a closer look at literature focusing on how teaching entrepreneurial skills affect the level of learning outcome. Through the approach to essential theory of entrepreneurship along with an empirical example, the paper discusses how entrepreneurial skills can be useful tools in practical learning.

Results

Research implies that students more likely will become more confident and capable of starting up as entrepreneurs with a solid background from practice combined with learning entrepreneurial skills. Practical learning involving entrepreneurial skills make a positive impact on the quality of learning, and students satisfaction with their studies. Result from "Studiebarometeret" concerning architect students shows a higher satisfaction according to project learning compare to case methods. It also shows a more united positive opinion about project work as a method.

Implications

The results leaves me with a conclusion regarding my research question that teaching entrepreneurial skills through different action based methods to some extent contribute in positives way regarding the quality of learning outcome. Literature and earlier research shows that teaching methods that encourage students to reflect and be practical contribute higher to students ability to work as entrepreneurs when their finish their studies. I see some correlations between for example that project work is more likely to increase students learning outcome than case studies. My empirical example also shows that student are more satisfied with, and learn more from project work. This might also have an impact and could explain NTNU`s work with establishing new courses in order to get more satisfied and entrepreneurial students along with fulfilling the requirements of quality standards and higher learning outcome.

Value/Originality

The paper raises interesting question regarding the impact teaching entrepreneurial skills and methods in practical learning have for the quality of students learning outcome. The aim is to contribute to a better understanding and insight in how combining pedagogical methods with teaching entrepreneurial skills affect the quality of the education and learning outcome. In order to meet a rapid changing future who will benefit from having an entrepreneurial population is it valuable to make an effort studying what practice combined with learning entrepreneurial skills does with the quality of the learning outcome.

Keywords

Entrepreneurial skills, practice, higher education, quality, learning outcome

A HOLISTIC DESIGN PERSPECTIVE ON ENTREPRENEURSHIP

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Questions we care about

Entrepreneurship has revealed a new way of considering learning in educational institutions; but it presents a challenge to most schools. Entrepreneurial learning is asking the teachers to allow pupils to see new possibilities, to take initiatives and to be self-directed. However, this is difficult for teachers, since they are used to being in control of the teaching and fixated on conventional curricula, teaching methods, use of knowledge, teaching style, teacher-student relations, culture, habitat and assessments (Nielsen & Storvang, 2015). The main question in this paper is: *how can we understand the challenge that entrepreneurial learning poses to the teacher's role and learning culture in schools? In entrepreneurship education we tend to focus on subjects as the students, the students' motivation, self-directed learning etc., but maybe we need to look critically at the bigger picture.*

Approach

Our paper is based on a design-based research study conducted in three 4th grade classes in a Danish primary school and additional entrepreneurship courses. In this study we developed a prototype of a learning program that i) focus's on the pupil's individual learning values in 'visual value-workshops', and ii) allows for differentiation and self-directness through visual learning goals. Our conclusion is based on analyses of the pupils understanding of learning in the 'visual valueworkshops' and interview with the teachers, and it is supported by observations of the learning program.

Results

Our analyses of the 'visual value-workshops' show that pupils do not reflect about their own learning. Being presented for choices among different assignments, they start reflecting deeper. The teachers are very much in control and steering the students and the teachers overall motivation and purpose has moved from "when I can see the students growth" to "the grades, they are our bottom line", which represent and overall purpose in 'meeting the overall demands for me as an employee'. Being asked to take a new role following the interest of the pupils and to understand their resources and preferences, they are challenged.

Our overall conclusion is that in our way of solving problems we tend to look at details like students' motivation, creativity at school or courses in entrepreneurship etc. instead of looking at and understanding the bigger picture. This is what Peter Senge called 'detail complexity' versus 'dynamic complexity' (Senge, 1990, 69).

Implications

Within learning theory and learning culture several researchers and practitioners are focusing on a paradigmatic conflict in the school in relation to the transition between the industrial society in the 20th century and the global knowledge society in the 21st century (Robinson, 2010, 2011, Greene 1978, 1995, Thomas & Brown, 2011, Siemens, 2006).

Value/Originality

With our expanded analyses we suggest a more holistic and systemic understanding of change in the perspective of learning, with a special focus on design thinking, self-directedness, and creativity. We suggest a more holistic design perspective (Cross, 2007, Lawson & Dorst, 2009) and design processes aimed at both objective and subjective problems and possibilities, including designing for value clarification and transformative learning that lead to changes in behavior and identity (Illeris, 2013, Mezirow, 1991, Sørensen, 2011, 2013). We moreover suggest adding Goleman & Senge's (2014) concept about Triple Focus, including an inner, other and outer focus.

CONTEMPORARY ENTREPRENEURSHIP EDUCATION, HAMPERING CHALLENGES AND GOLDEN OPPORTUNITIES.

- Can we take it from a Danish perspective to an international directive?

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Questions we care about

Despite first rank conditions for setting up a company in relation to low bureaucracy and heavy governmental support initiatives Danish entrepreneurship educators at higher educational institutes are still facing challenges in relation to succeeding with their learning designs. Why is that? Are the same challenges experienced internationally and what can be done to overcome them?

Approach

Based on a focus group workshop, where 20 Danish entrepreneurship educators, from universities of applied science and business academies, were asked to identify challenges relating to entrepreneurship education, imagine other stakeholders perspectives on entrepreneurship education, dream of an ideal future and identify possible opportunities, the following paper depicts status quo of contemporary Danish entrepreneurship education from the perspective of the involved educators, plus in addition seeks to identify opportunities and next best steps in relation to entrepreneurship education.

Results

During the workshop 60 challenges were described, 53 negative perspectives from students, colleagues and educational management were set forth, but only 15 dreams were shared and 8 opportunities identified.

The result will be grouped in themes and presented in further detail in the paper with the purpose of starting a discussion, during the conference session, of whether the challenges are specific to the Danish educational system or can be categorized as international. Furthermore perspectives on opportunities and possible solutions are welcomed.

Implications

Based on the sheer numbers of challenges and negative perspectives relative to dreams and opportunities, one could, inspired by Jay Z, be tempted to state:

"I got 113 problems, maybe the entrepreneurship educators are one?"

Realizing this may be provocative, but it seems like a paradox that educators who are supposed to teach students how to spot opportunities in challenges and act upon them themselves are unable to do so.

Value/Originality

Based on the depicted status quo of entrepreneurship education at bachelor degree level at universities of applied science, this conference contribution is an invitation to all entrepreneurship educators to get involved in discovering the challenges of contemporary entrepreneurship education at higher educational institutes, enabling us to identify the opportunities and potential solutions that can take entrepreneurship education to the next level. Maybe it is time we take our own medicine?

Keywords

Entrepreneurship education, Barriers and opportunities, the educator role

IMPLEMENTING ENTREPRENEURIAL LEARNING IN SWEDISH SCHOOLS THROUGH PARTICIPATORY ACTION RESEARCH

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Questions we care about

In this study we are interested to explore how entrepreneurial learning (EL) can be implemented in a primary school setting in Sweden. EL is part of the Swedish school system curricula where it is about developing entrepreneurial competences such as initiative, responsibility, creativity and ability to collaborate – competences that lay the foundation for an active life and life-long learning. By applying a participatory action research approach where researchers and teachers at the schools work together to design, try out and evaluate lessons and projects aimed to develop EL we were anticipating a successful implementation of EL.

Approach

As already indicated, this study uses a participative action research (PAR) approach, implying that we brought in teachers (and to some extent students) as participators in the research project already from the start. While the overall research question (How can EL support problem solving in mathematics and vice versa?) was stated by the researchers, the work to operationalize this in each school setting is done with the teachers. Eight schools, comprising students from preschool to grade 6 participate. The overall research guidelines are same for all schools, but the local approach differs based on local contextual factors.

Results

Working with a PAR approach is challenging and time consuming, but we see now positive results in terms of engaged teachers and researchers that have been able to work extensively with EL during a relatively long time. As a model for more successful implementation of EL, there are some positive results. The intense interaction between teachers and researchers provide for an in-depth knowledge of EL in different contexts and situations that help the participating teachers to integrate EL in their teaching. Also the colleagues to the participating teachers get keys to successful implementation through vicarious learning. The main draw-back is that the approach is rather time consuming.

Implications

Using PAR as a means to both get good research data and successful implementation of EL has been working fairly well. PAR seems to be a good approach when providing change (i.e. implementing something new) is central. The close interaction provides many learning opportunities for researchers and teachers which enhances implementation.

Value/Originality

To our knowledge, this is the first attempt to study entrepreneurial learning with a participatory action research approach in a primary school setting.

Keywords

Entrepreneurial learning, Implementation, Primary School, Participatory action research

TEAMING UP: THE ROLE OF TEAM FORMATION AND TEAM LEARNING IN ENTREPRENEURSHIP EDUCATION

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Questions we care about

When students have to work on challenging tasks, as it is often the case in entrepreneurship classrooms that leverage experiential learning, team success becomes central to the students learning. Yet, the formation of teams is often left up to the students or pre-arranged at random. Therefore we investigate the importance of team formation in the entrepreneurial classroom and ask: (i) What are the underlying factors that influence outcomes of teamwork in student groups? (ii) How does team formation influence student perception of learning?, and (iii) Do different team formation strategies produce different teamwork and learning outcomes?

Approach

We employed a multiple case study design comprising of 38 student teams to uncover potential links between team formation and student perception of learning. This research draws on data from three different entrepreneurship process ('through') modules at a single institution. The three modules all combine similar theoretical background knowledge (e.g. effectuation, opportunities and business models) with hands-on tools (e.g. design process) to stimulate active participation, but are characterized by three distinctive types of team formation: random teacher pre-assigned, student selection, and teacher directed diversity. In each of these modules, ethnographic methods (interviews and observations) were employed. Additionally, we had access to students learning logs, formative and summative assessments, and final exams. A rigorous coding and inductive analysis process was undertaken. Pattern and relationship coding were used to reveal underlying factors, which helped to unveil important similarities and differences between student in different teams' project progress and perception of learning.

Results

When students are randomly assigned, they are (i) surprised by people, who are different from them; (ii) challenged by having to find a common language; (iii) learn that heterogeneity potentially produces individual identity growth. However, despite these advantages, random team formation strategy leads to less well functioning entrepreneurial student teams as most teams lack personal chemistry which makes them anchor their work too much in a pre-defined project. In contrast, we find that students that can form their own teams aim for less diverse teams than what is achieved by random assignment. However, the homophily the students are seeking with regards to 'personal chemistry' seems to be favourable for entrepreneurial student teams because it enables them to have team relationships as the anchor for their work. In this way the team becomes an important enabler to endure the pressure and volatility of an entrepreneurial process and progress relatively fast.

Implications

It is important for teachers to recognize that student team assignment is not the same as student team formation and that team formation requires time. Furthermore, while student selfselection team formation strategy is favorable for 'through' modules, random assignment is a suitable choice for 'for' and rather causal-designed entrepreneurship modules.

Value/Originality

To the best of our knowledge, this is the first paper addressing the issue of team formation and student learning which is of immense practical value for entrepreneurship educators. It is important for educators to understand that the formation of teams has implications for students' perceived learning and progress in an entrepreneurial process and thus team formation needs to be considered when designing and running the module.

Keywords: Teams, Team formation, Learning, Entrepreneurship Education, Multiple case study

IMPORTANT FACTORS IN INNOVATION AND ENTREPRENEURSHIP COURSE FOR NON-BUSINESS STUDENTS

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Questions we care about

What are the important factors in an innovation subject to make the non-business students more innovative and behave as entrepreneurs? Which of these factors are ideal to have included into learning platform, what exist on the market, what can we benchmark / learn from them into our own learning tool?

Approach

This paper aims at identifying current needs for interdisciplinary entrepreneurship education at the universities and investigates the unique institutional context. Needs assessment and benchmarking have been both desk-based research, including the use of online services and information, and on-the-spot research to gather the input and the point of view of the end-users. We have analyzed and reflected on the factors at Bergen University College (BUC) and Eotvos Lorand University (ELTE) within innovation and entrepreneurship courses, to be able to define learning objectives and strategies by understanding present situation, stakeholders' interest and identifying other institutional factors, problems and barriers. To provide a systematic approach, professors, students, administrative staff concerned has been involved. Their opinion and ideas have been gathered on the topic. Facts, figures and indicators have been collected.

Results

The main results from this project will be a web-based learning tool, by which the students can experience peer-learning in business situations and can develop a general set of competences applicable in working life. Moreover, start-up interdisciplinary working-groups for business and non-business students will be established to emerge new business ideas. This process will be mentored and guided by business practitioners, while close collaboration between higher education institutions and SMEs/industry participants will be established. Also, this study has reflected on the different needs of the participating universities and their stakeholders, and has ensured an effective entrepreneurial curriculum based on real experiences, which can hence be a strong integral part of their education.

Implications

This is a 17-month project executed by the consortium of ELTE, BUC and the BusinessWorks Ltd. (funded by the EEA/Norway Grant, Scholarship Programme.) Distances, culture and universities at different stages has made implications and research limitations. In Norway, a national strategy enhancing entrepreneurial education with special emphasis on higher education has already been established. In Hungary, national programs promote the creation of start-ups, and strengthening the role of education in supporting this process is very important.

Value/ Originality

Our paper brings several contributions to the domain of entrepreneurial education and courses. The main value is to find what the most effective teaching methods are and to develop an interactive learning tool, which provides students from various disciplines with a web-based business simulation, in order to motivate them to work together on real business cases.

Keywords

Learning Platform, Entrepreneurial Competencies, Web Based Business Simulation

HORIZON 2020 AND RESEARCH COLLABORATION SESSION

Facilitators: Breda Kenny and Tim Vorley

With entrepreneurship increasingly on the radar of the European Commission, there is opportunity for researchers, educators and practitioners to participate in EU funded projects. This interactive and networking session is an opportunity to meet potential partners interested to develop project proposals under programmes such as Horizon 2020, Erasmus Plus and other relevant EU initiatives.

The 2016 session will include a presentation from Professor Tim Vorley (University of Sheffield) about Startify7, a current H2020 project focused of training and development for future digital entrepreneurs. Tim will also reflect on his previous experience of EU projects from 'initial idea to final review', highlighting some of the challenges, opportunities and pitfalls encountered in the process of proposal building to delivery.



Facilitated by Dr Breda Kenny, member of the board of directors of ECSB with responsibility for research collaboration and industry engagement, there will also be an opportunity to interact and discuss forthcoming calls, collaborative ideas, and potential projects among participants. From the session the aim is to support individuals potentially interested in developing consortia to respond to current and future calls in areas of shared interest.