



3E CONFERENCE PROCEEDINGS

Book of Abstracts

3E Conference – ECSB Entrepreneurship Education Conference

2019

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 2019*. This book presents the abstracts of the seventh 3E Conference held on 8–10th May 2019 in Gothenburg, Sweden. The Conference is hosted by the Chalmers University of Technology, Luleå University of Technology and the European Council for Small Business and Entrepreneurship (ECSB).

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

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

The theme of 3E 2019 is “*Entrepreneurial Bridging – between learning, value-creation, and...*”. Following the 3E format there were two calls also this year, one for research papers and one for practitioner development workshops (PDW). The first day, 8th May, is dedicated to 22 practitioner development workshops. On 9–10th May 43 research papers are presented. We wish to thank the reviewers and session chairs for their valuable work.

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

Kaarin Kivimäki, Luleå University of Technology
Mats Lundqvist, Chalmers University of Technology
Mats Westerberg, Luleå University of Technology
Karen Williams Middleton, Chalmers University of Technology
Conference Chairs

Silke Tegtmeier
President of ECSB

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PRACTITIONER DEVELOPMENT WORKSHOPS

THE CHALLENGES RUNNING AN EXPERIENTIAL MASTERS PROGRAMME IN ENTREPRENEURSHIP CONSULTANCY

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Juliette Smeed, University of Buckingham

Kristian Mackie, University of Buckingham

Workshop Summary

In 2017 and 2018 a new MSc in Entrepreneurial Consultancy and Practice was run at a university in UK with the objective of developing graduates who would become Business Consultants to growth SMEs or following their studies and working with entrepreneurs they would start to develop their own businesses or work for growing SMEs.

Known challenges arise when universities teach experiential and pedagogically innovative programmes that differ from traditional degrees. Additional challenges arise at postgraduate level. This workshop will present our experience running an experiential MSc in Entrepreneurial Consultancy for the first two cohorts of students. The PDW will present the way in which, working with academic colleagues, students, graduates and the external examiner, the programme's design, structure and delivery was reviewed and improved. The PDW will present and discuss the six problems with the programme that were found:

1. Lack of balance between 'Entrepreneurship' and 'Consultancy'.
2. Clear theoretical (academic research-based) frameworks were not embedded.
3. The combination of applied consultancy projects and group-based summative assessments.
4. The tension between the practical work-place activity and academic study.
5. Difficulties of teaching and assessing a programme with many variable and external inputs.

We will also deeply involve participants who have faced similar challenges when running other experiential entrepreneurship education programmes.

Workshop Style

10 minutes – The leader of the experiential master's programme will present the challenges faced.

10 minutes – The audience will be requested to react to the PDW and discuss their experiences.

20 minutes – Interactive Q&A/discussion on the points raised and methods suggested to overcome the problems.

Expected Outcomes

We aim to achieve the following outcomes

1. A response to the question, "Do you think this type of Post-graduate education, assessed by innovative methods should be developed in more universities?"
2. Verify if other enterprise educators think that other universities should consider offering similar master's programmes.

Related Research

Little, if any, research has been published about this type of experiential master's programme.

LEARNING FROM AN ENTREPRENEUR THROUGH A REFLECTIVE JOURNEY

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Jeanne Martens, Amsterdam University of Applied Sciences

Workshop Summary

A group of students worked together with us in a project about failure and recovery. In this workshop, the participants will experience a reflective journey following in the footsteps of our students. We have two objectives: on the one hand, to show the benefits of the involvement of students in the collection of qualitative data for a large-scale research initiative. And on the other hand, to identify the challenges when replicating this methodology in different educational contexts.

The successful side of entrepreneurship is commonly highlighted in the Dutch society and mirrored in the Dutch educational system, leaving the topic of failure and recovery overlooked. In our workshop we address this topic using a combination of research and educational modules. Talking about failure and recovery is not an easy task for entrepreneurs, so we invited them to share their stories anonymously with our students. Entrepreneurs who shared their problems and mistakes made their lessons available for educational purposes.

Advance preparation

As a preparation for this workshop, we ask participants to gather in advance a (anonymous) mini-story of failure from a colleague, a friend or someone else (one page description is enough – see workshop summary for guidelines). Participants will use that material throughout the workshop and share parts of it with other participants.

Workshop Style

The workshop begins with a short explanation of our research project “Fenix” and the role of students in it. We name it Fenix Project as a symbol of the bird who was reborn from its own ashes. We use entrepreneurial stories to identify the lessons derived from the events of entrepreneurial failure and recovery. Through this project we aim to build stronger and resilient entrepreneurial ventures, which develop alternative plans for difficult times.

After this, the participants will be engaged in three stages of a reflective journey. We begin with the process of creating awareness of the topic of failure and recovery. In this first stage, we ask participants to share pieces of their mini-story with others and answer questions in a personal handbook that we provide. In the second stage, participants compare their experiences to find a suitable respondent with those of our students; we share tips and problems that our students went through. The third stage is where the reflection takes place, we propose a post-it notes brainstorming activity to gather the ideas from all participants. The workshop continues with a presentation of the most important learning processes we have seen so far in our project. To conclude, we open the discussion to identify the challenges for a potential replication of our methodology in other educational contexts.

Expected outcomes

We expect that the workshop will trigger interest for the topic of failure and recovery and also for the methodology to collect such stories. After the workshop, we will condense the input of the participants and send them via email.

ENTREPRENEURSHIP EDUCATION – MISUNDERSTANDING THE GOALS?

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Leena Eskola, University of Oulu

Marja-Liisa Kaakko, Centria University of Applied Sciences

Workshop Summary

Entrepreneurship education has been traditionally understood as teaching and learning entrepreneurial skills and competencies, focus on how to become an entrepreneur. Unfortunately the hype of start-ups in recent years has strengthened this viewpoint, too. Typically, the teachers working with topics that are not closely related to entrepreneurship, might think that entrepreneurship education has nothing to do with their daily responses. They just concentrate on teaching their own subject and assume that entrepreneurship education is only for studies directed towards establishing and running own business. That is the reason of very typical misunderstanding of the goals of entrepreneurship education. It is not (still) widely understood that entrepreneurship education is much more than goal to be an entrepreneur.

This is causing problems in educational organizations that are seeking towards entrepreneurial school with entrepreneurial culture. In many schools, only few teachers act in an entrepreneurial way and the question in this workshop is How to spread entrepreneurial way of teaching and learning through the organization and avoid this typical misunderstanding?

Workshop Style

We wait participants to join this interactive workshop with existing practises and methods collected from their own organisations. Short introduction followed by group discussion and innovating session. Sharing the ideas and outcomes. After the workshop we would like to contact participants with deeper analysis of entrepreneurial teaching methods.

Expected outcomes

Participants understand deeper and wider the idea of entrepreneurship education. We wait for innovative approaches to be utilized and tested in practise by the participants when enhancing entrepreneurial teaching methods and entrepreneurial pedagogical choices among their colleagues. Goal is that we could together put a stop to this misunderstanding entrepreneurship education.

Details of any related research

Interest in research of entrepreneurship education has been rising simultaneously with common interest of entrepreneurship as a driving force of the economy through whole Europe. Much research focuses on students' entrepreneurial intention, skills and knowledge creation, new venture creation, attitudes, entrepreneurial performance.... (Nabi et al. 2017).

Teacher's role in entrepreneurship education needs to be strengthen (e.g Seikkula-Leino et.al. 2010). As more teachers will be involved in entrepreneurship education (also those teachers who think that this has nothing to do with my subject), it is important to highlight right and adequate knowledge in order to change the attitude.

DEVELOPING INTERCULTURAL COMPETENCES FOR ENTREPRENEURSHIP AMONG STUDENTS THROUGH VIRTUAL EXCHANGE

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Summary

Finding an effective way to teach entrepreneurship in a classroom requires providing broader opportunities for experiential learning (Kuratko, 2005). To do so, “professors must become more competent in the use of academic technology and ... include new and innovative approaches” (Solomon, Duffy, & Tarabishy, 2002). Furthermore, as the vast geographic distances between countries and cultures are diminishing (Croese, 2011), universities should prepare students to function in an interconnected world (Abrahamse et al., 2015; Fayolle & Klandt, 2006). International exchange presents a challenge to many students due to high cost, difficulty of transferring credits, and a reluctance to leave friends and families (Abrahamse et al., 2015). Thus, international virtual classrooms (IVC) are becoming an increasingly popular, accessible and cost- and time-effective alternative (Taras et al., 2013; Zwerg-Villegas & Martínez-Díaz, 2016). The IVC pedagogical and organizational approaches are, however, still in their development. In this PDW, we address such approaches for teaching entrepreneurship through an IVC, based on a project across ten universities located in six Latin American and European countries with more than thirty staff members and hundred students participating in three parallel IVCs leveraging different methodologies to teach entrepreneurship through design thinking, global opportunity recognition, innovation ecosystem and networks content.

Style

The PDW starts with a brief introduction based on our experience with the IVC. It continues with a group discussion, focusing on the issues to consider, tools to use and process of organizing and teaching an IVC on entrepreneurship. It concludes with the discussion of key outcomes and next steps.

Outcomes

This PDW brings three-fold benefits: 1) better understanding of tools and organization process; 2) reflection adaptation of the specific topics, such as design thinking, opportunity recognition and network skills to IVC format; and 3) avenues to move forward in improving entrepreneurship pedagogies and including innovative modules in existing mainstream courses.

Related research

This research builds on such literature as learning spaces (Kolb & Kolb, 2005), balancing the diversity of learners in teams (Kirkman, Cordery, Mathieu, Rosen, & Kukenberger, 2013), and creating variety of teaching approaches (Lengnick-Hall & Sanders, 1997) for better educational performance. The questions we raise are: How can we best balance local and international aspects while teaching entrepreneurship? How team composition of students in a multicultural and international context might be organized to improve the learning environment? How active methodologies (e.g. design thinking) can help in this? Is international interdisciplinary team composition an asset or a challenge for recognizing global entrepreneurial opportunities? How do we effectively teach entrepreneurial networking skills using virtual environment?

WE NEED TO TALK ABOUT... [ENTREPRENEURSHIP EDUCATION AND PUBLIC POLICY]

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Catherine Brentnall, Sheffield Hallam University
Martin Lackéus, Chalmers University of Technology

Workshop Summary

The area of Entrepreneurship and Enterprise Education is politically popular and growing. Not only in terms of number of courses and extracurricular activities - but also in terms of new approaches and buzzwords continuously entering the field. It often happens that educators jump in to 'doing' the new - without questioning, without critique and without examining how it fits with their purpose, values or experiences. In this workshop we wish to open up critical dialogue on these matters, and ultimately we aim to build an institution within the institution of 3e, where every year participants are encouraged to question, critique and re-examine. Through our own professional dialogue (Drew et al, 2016), we identified an area of concern which concerned us. There are often discrepancies between the ambitions and goals for entrepreneurship education explicitly or implicitly formulated by policymakers (e.g. economic growth through creation of new firms) and the ambitions and ideals held by the enterprise educators (e.g. activist learning and enterprising behaviour). Exploring, questioning and re-examining this area will be the focus of this session.

Workshop Style

Participants will take part in a dialogue about entrepreneurship education and public policy through the fishbowl technique (Kane, 1995). They will have a postcard with the rules of engagement on one side and space to write a question to a policy maker/influencer on the other, thus continuing the critical conversation following the workshop.

Expected Outcomes

Entrepreneurship education is characterised as lacking criticality (Fayolle, 2013; Fayolle, 2016), and this workshop, and future workshops, aim to build critical capacity. Participants will be encouraged to question, rather than rush to solutions and will leave enriched as a result of thinking rather than doing.

Details of any related research

This PDW (and the idea of aiming to build an 'institution within an institution'), is related to research which argues that a focus on action and outcomes reduces educator agency and leaves little time and space to 'critically interrogate' policy and practice (Priestley, 2013). Education is an inherently political, ethical and moral endeavour (Biesta, 2007), yet typically these sorts of sociological concerns are washed out of much Entrepreneurship Education research (Bechard & Gregoire, 2005). Entrepreneurship educators often have their practice handed to them, by policy makers, colleagues, institutions or through ritualised activities seen in TV shows or promoted in education. Educator development should open up a space for practitioners to review big ideas, policy demands, curriculum approaches, and see how these compare with their lived experience and personal values (Drew et al, 2016). 'We need to talk about...' opens up such a space, where educators will be facilitated to question, critique and re-examine.

TOWARDS AN ENTREPRENEURIAL UNIVERSITY. CHALLENGES AND DIRECTIONS FOR NONTECHNICAL UNIVERSITIES.

Niels Bosma, Utrecht University (n.s.bosma@uu.nl)
Jelle Kok, Utrecht University

Summary

Universities are increasingly challenged to develop entrepreneurial programs and curricula in order to capitalize on synergies between academic knowledge, business and other organizations for an open, collaborative and prosperous society (see e.g. Sam & Van der Sijde, 2014, Guerrero et al. 2016). As with large organizations trying to implement innovative strategies, for large research-intensive universities – and certainly those without a distinct tradition in business or engineering - the challenges faced are significant. Institutional logics tend to be rigid and lock-ins are looming. How to align (academic) individual incentive structures with university-wide level goals on developing entrepreneurial awareness, skills and activity among students and employees? How to ensure continuous support from university leadership in the aim to create an entrepreneurial university? How to showcase the relevance of entrepreneurial behavior in teaching for faculties that have rather negative connotations to the word entrepreneurship? How to create a cross-faculty sense & spirit of ownership when it comes to entrepreneurship education? These are questions we will discuss during the workshop, with the aim to cater to the particular needs of the participants who can relate to this theme.

Workshop style

The pre-brief will introduce the case of Utrecht University identifying the need for developing entrepreneurial attitudes and skills among students and staff and harvest related questions from the participants that have been collected in advance. We will interact with participants in breakout groups to share experiences and opinions and design plans for follow-up.

Expected outcomes

We expect to leave the workshop with a clearer insight into successes, challenges and potential solutions when it comes to fostering university-wide entrepreneurship at traditional universities. We hope this to be the start of a community of mutual learning and possibly a joint publication.

Details of any related research

There is an emerging literature on successful strategies for developing and fostering entrepreneurial universities. However it seems that there is a specific need for research that addresses success factors and strategies for traditional universities that do not have business schools or engineering programs (cf. Clark 1998, Gibb 2002, Eesley and Miller 2018). In the pre-distributed case we adopt the building blocks structure introduced by Morris et al. (2014) and focus on building blocks, strategies and instruments/tools that can be adopted.

ENTERPRISE & ENTREPRENEURSHIP EDUCATION EVALUATION – A REALIST APPROACH

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Catherine Brentnall, University of Huddersfield

Workshop summary

The importance of Enterprise and Entrepreneurship Education (EntEd) continues to receive enthusiastic support in policy and guidance, and yet effectively assessing its impact remains elusive. Researchers are told to be more scientific and conduct ‘gold standard’ randomised controlled trials, which are used in health and medical trials. There is a major assumption implicit in that advice - that EntEd is a treatment, which can be given to students who have similar symptoms, to generate consistent effects. But as we know, no two students are alike, neither are the programmes and courses they participate in, nor the people who deliver them. With this understanding, perhaps it is time to challenge how appropriate it is to test the effectiveness of a multitude of EntEd ‘pills’, on a wide variety of ‘patients’, with a simple and single parameter test of ‘did the prescription work?’

This workshop introduces Realist Evaluation, an approach developed in health science to better reflect the realities of evaluating complex interventions involving people. The workshop will give examples of a recent ‘translation’ of this approach into EntEd, and support delegates to undertake the first step in this methodological approach: surfacing theories about ‘why’ a programme works (or not).

Workshop style

Practical in nature, the presenters will set the scene by:

- Introducing current issues in EntEd evaluation
- Introducing Realist Evaluation

Examples of how this has been used in a university and in doctoral study will be shared. Participants will engage in a learning activity, to practice developing initial programme theories.

Expected outcomes

Participants will benefit from the following outcomes:

- Identify the limitations of ‘gold standard’ evaluation approaches
- Consider a rigorous, theoretically driven alternative to these approaches
- Practice initial steps of the Realist approach (surfacing programme theories)
- Critique assumptions in these theories and explore which need challenging most.

Details of related research

“Does entrepreneurship education really work?” is a question which has not been satisfactorily answered (Rideout & Gray, 2013), and which, it is argued, contributes to the limited legitimacy of the field (Fayolle, 2013; Kjos Longva & Foss, 2018). The call is to ‘Go for Gold’ and conduct more Randomised Controlled Trials (Rideout & Gray, 2013), and strong experimental design which can generate robust and generalizable results (Kjos Longva & Foss, 2018). However, Rideout & Gray (2013), also conclude that the real question is not does EntEd ‘work’, but rather: *“What type of EntEd, delivered by whom, within which type of university, is most effective for which types of student, with this kind of goal, and under these sets of circumstances?”* This is a question of *complex causation* (Pawson, 2006). And whilst Randomised Controlled Trials might highlight patterns in outcomes and potential variables, they are not able to answer *why* such changes happen.

As a result of such contradictions we have become interested in alternative methodological strategies, including Realist Evaluation (Pawson & Tilley, 1997; Wong et al, 2013; Greenhalgh et al, 2015); an approach developed in health sciences to better reflect the realities of evaluating complex interventions involving people.

FAMILY BUSINESS CANVAS© (FBC): A CULTURAL PROBE FOR ENTREPRENEURIAL FAMILY BUSINESSES

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Anette Lundebye, Regents University

Rebecca Fakoussa, Northampton University

Workshop summary

There has been an increasing awareness that emerging toolkits of intervention and development which acknowledge shifting challenges in our understanding of family businesses are required (Holt, 2018). Such challenges include the need for an emotional view of the firm (D’Allura, 2017), inside-out and inductive perspectives of family business development practice (Lansberg & Gersick, 2015), participatory preferences by family businesses for managing multigenerational learning and development (Konopaski, 2015), the reality of bifurcated experiences in human-resource practice in family businesses (Jennings et al. 2018) and the need to develop teaching practice resources beyond the traditional case-study method and related learning resources prevalent in many business schools (deMassis, 2015). Within this context we consider the following pertinent questions in the workshop: How do we better deliver experiential, development programs for family owned businesses, executive students or participants at the level of communities-in-practice rather at the level of individual enrollers? What new methods of intervention are available to teachers and consultants of family business practice? What lessons might be learned from new approaches to, and new domains, of family business interventions and teaching? How can the idea of cultural probes and the specific ‘primitive probe’: the family business canvas, offer the opportunity to design learning family businesses at the level of the family versus the level of the individual (the focus of the vast majority of family business education provision) ((Sorenson and Milbrandt, 2015)

Workshop style

We shall be offering a facilitated dialogue and participatory workshop in which we hope to share our current thinking and rationale, conduct a roving idea-storm to help develop both the content of the Family Business Canvas and canvas insights as to the limits and possibilities for the cultural probes approach to family business education.

Expected outcomes

Briefly, we and the participants will be involved in producing the following process and outcomes: 1) working together toward common understanding, 2) listening to understand and find meaning, 3) revealing assumptions for reevaluation, 4) admitting that others’ thinking can improve one’s own, 5) Searching for strengths and value in others’ positions, 6) discovering new opinions, not seeking closure.

Related research

Our Family Business Canvas is one part of our (Gonsalves and Zamora, 2017) cultural probes (CP) toolkit and a response to these challenges. Cultural probes (Gaver, 1999) are a collection of ‘playful’ tools (or “items”), typically consisting of diaries, maps, postcards, etc. The CP is a participatory method typically used for information gathering or as a creativity technique. We emphasize the importance of a new method for both teaching and coaching as more family businesses have become aware of the importance of generative, playful, dialogue as a skill set that surpasses traditional methods to help people to learn different skills and to transform those problems into opportunities to grow. The family business canvas that we present here draws on traditions of serious play (Rieber, 2001) to conceptualise and operationalise family businesses as paradox (Statler et al., 2011) (Schuman et al., 2010). In particular the canvas belongs to a portfolio of objects developed for the training of entrepreneurial executives using play (Gonsalves and Zamora, 2017) that is derived from activity theory (Vygotsky, 1967) and expansive learning theories (Engeström, 1999) in which “Objects became cultural entities and the object-orientedness of action became the key to understanding human psyche.”

ENTREPRENEURIAL EDUCATOR'S "POLYPHONIC" CLASSROOM

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Workshop summary

This PDW offers the opportunity to explore dialogism as a pedagogical practice. The PDW responds to calls from the 3E conference about the nature of entrepreneurship education and the prospects for pedagogical development. Dialogism has the potential to offer a way of exploring how, through our embodied teaching activity; we can relate to our experiences and make sense of them as we learn through enactment. Embracing a self-critical reflexive position, the PDW will explore the practice of dialogism as a form of pedagogical inquiry. The PDW will suggest that instead of being complete, the meaning of entrepreneurship theories and tools, for the students should be left "unfinalised", so that they can find their own meaning through their learning experience. By sharing and reflecting upon my own experiences of using self-critical reflexivity, storytelling and art-based methods I seek to question the role of the "educator" as a singular source of knowledge. By changing the power dynamics in the educator/student relationship shifting responsibility for learning and how we develop purposeful ways of "educating". Such a pedagogical method would help to bridge the current gap between theory and practice, giving relevance and impact to what can be achieved in the classroom.

Workshop style

The focus PDW is on developing the capacity of the participants to consider the potential of differing pedagogical scholarship to create new directions. The PDW will be highly interactive and will be based on small group dialogical exchange facilitated by a key discussant provocateur.

Expected outcomes

The workshop will use the practice of self-critical reflexive dialogue to practically enhance understanding of how we can facilitate more collaborative and purposeful ways of "self" as a researcher/scholar for our own professional development. The workshops focus on developing the capacity of the participants to imagine and analyse the potential of their scholarship for the future by identifying opportunities to create and achieve new directions.

Details of any related research

Dialogic pedagogical practice is a teaching method which is in stark contrast to monologic teaching approaches. EE pedagogical practices are characterised by a monologic perspective in which the ideas and voice of the educator are the first and last ones uttered in the classrooms, teaching material and sessions are designed to ensure students learn how to speak and think like an entrepreneur, time presses upon the educator to ensure all the learning outcomes are covered. In contrast to this dialogic education pedagogies focus towards the educator as a facilitator who shares their authority with the students, just as Dostoevsky's shares his authorship with the characters in his novels through a 'dialogical principle'. The shared voices of exploratory talk and judgement become more pronounced, the centrality of sharing voice is just that - the sharing of ideas, thoughts; discussing differing opinions not right or wrong. The role of the educator is to facilitate the process, they are not a judge or referee, but rather guide. A dialogic environment is rather like a carnival according to Bakhtin, there are no universal powers, providing the space to discuss and create opportunities for co-constructive learning. The aim in the discussing differing opinions is just that, the use of multiple voices discussing differing opinions, not winning or losing but rather offering expression and reach a negotiated consensus. The role of the educator is to facilitate the process, the educator is not a referee or judge, they are simply a guide. A dialogic classroom is like a carnival, drawing from Bakhtin, there are no universal (omnipresent) powers. In this PDW we seek to illustrate the different components of Bakhtin's dialogism concept as a starting point for a more reflexive theoretical framework for pedagogical processes.

Key words: entrepreneurship education; paradigms; pedagogy; dialogic; monologic; polyphony; everyday practice

ENTREPRENEURIAL RESPONSIBILITY: A DILEMMA FOR ENTREPRENEURIAL EDUCATION?

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Ulla Hytti, University of Turku, Finland

Caroline Wigren-Kristoferson, Lund University

Workshop summary

Departing from the Triple Font theory (Mele, 2012) and the global attention towards sustainability, we infer that future potential entrepreneurs will be forced to take a more active stance regarding how they act in a responsible manner than has currently been the case (see e.g., Bryant, 2009).

But the question remains how we as educators proactively engage students in understanding this dilemma of being in the grey zone; pushing the boundaries, and at the same time acting responsible and sustainable? Despite the current promotion of a more sustainable and social perspective in entrepreneurship there is little discussion on how to actually engage in more responsible entrepreneurial behavior when educating potential entrepreneurial agents. Therefore, the workshop focuses on going beyond the surface of putting different lenses on top of the phenomenon of entrepreneurship and rather engage in the deep-seated moral underpinnings that guide subsequent behavior of entrepreneurial individuals in society.

To address this, we have three short scenarios that could be stereotypical for higher education and entrepreneurship teaching. The three learning activities are pitching, use of guest lecturers, and the adoption of the Business Model Canvas.

Workshop style

Socratic seminar style focused on discussing learning activities used in entrepreneurship education through the help of the Triple Font theory of moral decision-making (Mele, 2012).

Expected outcomes

To develop new insights on how to bring in entrepreneurial responsibility as a concept into entrepreneurship education, both as a mean for developing learning activities but also as a contemporary concept for educators to have in mind when working with experiential pedagogical learning activities in the classroom and beyond. Entrepreneurial responsibility is to be seen as a form of debriefing and gatekeeper for responsible entrepreneurial behavior. A method/tool for informing and actively discussing about the importance of moral judgments is provided and also the underlying holistic ethical frame from Mele (2012).

Details of any related research

The main scope discussing entrepreneurial responsibility is to be found within the area of social entrepreneurship (e.g., Dey & Staeyert, 2016) but the origins could be traced to the writing of McClelland (1961) in the *Achieving Society*, where he addresses the importance of individual responsibility when engaging in entrepreneurial activities. A further stream of research is related to normative ethics, especially related to contemporary neoliberal steering and accompanied by a utilitarian perspective where focus is on the consequences rather than obligation of how to act responsible (Sen, 2009). An example of utilitarianism would be the consequence-based acts by Facebook in the Cambridge Analytica scandal.

AN EXPERIMENTAL APPROACH IN CONTINUING EDUCATION

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 Birgitte Helbæk Marcussen, VIA University College
 Agnete Gudnason, VIA University College

Workshop summary

As educators of vocational teachers, we have experienced that in order for education to lead to changes in the teaching practice of our students, we must create a framework and support the students to experiment. We have developed a didactic design in order to equip our students with a mindset and competencies that enables and empower them to modify and improve their teaching practice and initiate and drive educational value-generating activities in their organisation. We base our didactic design on the underlying hypothesis; an experimental and hypothesis-based didactic approach in teaching will enable the students to create changes in their own teaching practice based on the relation between theory, methods and the students' experience from their own teaching. Our teaching requires the students to construct a hypothesis, and create and conduct experiments, based on pedagogical, didactic and entrepreneurial education theory, combined with personal experience.

In the light of the above, the key questions which we will discuss in the workshop, are:

- What are the benefits of working with hypotheses and experiments in teaching practice?
- What value is created when students construct hypotheses and create and conduct experiments?
- What qualifications do this design and approach require from the teacher and from the students?

Workshop style

We present and briefly elaborate our idea of working with hypotheses and experiments. The participants share their prepared hypotheses and experiments, which entails a facilitated discussion in relation to the key questions.

Expected outcomes

The outcome is an example of a didactic design that provides a framework for the student's entrepreneurial learning journey and aims to bridge educational theory and entrepreneurship theory. This is a didactic design that fosters learning spaces in which the students improve and develop their own teaching practice and create value in their organisations through a curious, investigative and experimental approach.

Details of any related research

We base our work on experiences from the project Vocational Entrepreneurship [Fagligt Entreprenørskab] (Sørensen et. al., 2017) that aimed to increase entrepreneurship education in the vocational secondary education by enhancing the teachers' entrepreneurial skills and mindset. Our role in the project was designing, organising and conducting teacher training. In the project and in our didactic design we are inspired by teaching through entrepreneurship (Hannon, 2005) allowing the students to experience an entrepreneurial process by doing it themselves. By participating in teacher-scaffolded entrepreneurial processes, the students will gain knowledge and experience about entrepreneurship and entrepreneurial competencies and the methods and tools used will inspire them in their own teaching. The didactic approach in which hypothesis and experiments are important elements is derived from design thinking as a cognitive style preoccupied with the question "what if" (Kimbell, 2011). In the further development of our design, Charles S. Peirce and his understanding of abduction as the only way of getting new ideas, making new discoveries and learning new perceptions inspire us. We see experimental abductive learning processes as possibilities for the students to reflect upon what they know and to learn something new through the abductive guessing (the hypothesis), inductive testing (the experiment) and the deductive establishment of a new knowledge (evaluating the experiment) (Peirce, CP, 1931-1958).

NON-BUSINESS STUDENTS GOT ENTREPRENEURIAL TALENT

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Workshop summary

The focus of this workshop is a newly started Talent Programme in innovation and entrepreneurship for non-business students hosted by the Student incubator. The Talent Programme is for a selected group of students, to give them a special possibility to explore and develop their entrepreneurial potential. The scope is both educational as well as developing business ideas. The Talent Programme is mainly extracurricular activities, but it could also include co-curricular activities. A complete course for the Talent Programme was not outlined from the beginning, because different ideas and approaches must be developed and tested in collaboration with the students. The aim is to explore different approaches to stimulate the talents, and the students are co-creators of the programme. The students are stimulated by working with their own business ideas and participation in workshops. We aimed to meet the students monthly, and the students must stay in the programme for at least a year. The final semester of their studies and Bachelor thesis and exam can be included in the programme. The structure of the programme is flexible, ad hoc and rather loose so far. Currently 10 students from four different health educations are in the programme.

Workshop style

Through an interactive process, the audience will be involved in group discussions of specified questions we care about or other aspects of a talent programme. The groups must visualize their answers on large paperboards and in plenum present the most important outcomes from the discussion in the groups.

Expected outcomes

A delegate will gain insight in the aim of the Talent Programme as well as our ideas and plans so far for the Talent Programme. A delegate may find inspiration to start a Talent Programme or new ideas to an already existing programme.

Details of any related research

We are inspired by several aspect of innovative and entrepreneurial teaching covered in the books "Entreprenørskabsundervisning - process, refleksion og handling" by Lene T Bager, Per Blenker, Pia Rasmussen and Claus Thrane, and "Entreprenørskabsundervisning" by Anne Kirketerp and Linda Greve. The content in these books rely on Danish research as well as international research by e.g. Saravathy SD, Neck HM, Schön DA, Bandura A and Lave J and Wenger E. A preliminary literature search revealed some publications on talent courses for business students, but no studies on talent courses for non-business students.

SHE DID IT - I COULD DO IT TOO

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Summary

The title is a quote from a student on the social educational programme who participated in The Push Programme (PEP). During the programme, the student suddenly sees themselves as someone who can help to create and launch new initiatives within the social field. It is valuable because the identity the students bring to the programme tends to be limited to the vision of working in existing practices in the future – not to being able to help create and realise new products, processes or services, which create new and better value in the social field.

This is a real problem. Students need to have the opportunity to experiment with new professional identities within entrepreneurship. As it is today, this field is often innovated by entrepreneurs who do not have a professional background. And it is rather difficult to create innovation in the social field nowadays in general.

Workshop style

The workshop is a co-creating and “hands-on” process based on presenting the Push Entrepreneur Programme, sharing and discussing practical experiences and new ideas between the participants. There will be a particular focus on the student’s identity and self-understanding.

Expected outcomes

It is expected to leave the workshop with a personal hand out of the Push Entrepreneurship Model which contains new didactical insights and possibilities which can be useful to develop own practice according to identity-work. Special attention will be paid to those students on the social educational programmes, but also to other students – because this is equally as relevant to many other educational fields.

Details of related research

The program is inspired of Tanggaard who point out, that innovation is builded on a professional contemplation and knowledge to the domain traditions. Spinosa, Flores & Dreyfus who connect entrepreneurship to a human modus of sensitivity. Lave & Wenger who point out, that learning is situated. Other sources of inspiration is Stanford University with their design thinking, Saras Sarasvathy point of effectuation.

Takeaways for teaching practice

The Push Entrepreneurship program and model is based on challenges connected to the social studies. But the Push Entrepreneurship program represent a didactical format, which can be adapted to many different educational contexts. It is expected to leave the workshop with a personal hand out of the Push Entrepreneurship Model which contains new didactical insights and possibilities which can be useful to develop own practice according to the identity-work of the students

GIVING VOICE TO THE INVISIBLE WORKFORCE: REFLECTIONS ON THE DELIVERY OF A SMALL FIRM EMPLOYEE NETWORK CAPABILITY DEVELOPMENT PROGRAMME

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Summary

This workshop reflects on a small firm employee network capability development (ENCD) programme, delivered using a blended teaching and learning (T&L) approach. Research confirms that the majority of small firm employees would benefit significantly from skill development and yet their uptake of education opportunities is low. Some of the barriers to entry and retention among this cohort include; fear of the higher education environment, lack of awareness, and availability of focused learning programmes. Based on these insights, we sought to develop a programme that was accessible and immediately applicable in the workplace, as these have previously been found to be the triggers of small firm learner engagement. Thus, this blended learning programme adopted Kolb and Kolb's (2005) experiential learning approach to help guide and embed learning in practice.

Aimed at front-line small firm workers who wished to develop their career prospects by expanding their network of contacts and engaging with their local higher education provider, this free-of-charge short programme was co-developed and delivered by cross-disciplinary faculty and support teams in two Higher Education Institutes (HEIs) as part of the Irish Technological University initiative. The programme purpose was four fold; enhance small firm employee network capabilities, identify their preferred modes of learning, engage them in active learning and reflective practice, and enhance cross-HEI collaboration. Participants were afforded a chance to meet other small firm employees, interact with faculty of Business, Lifelong Learning & Education and e-Learning, research centre directors, enterprise platform managers and outreach coordinators, along with other regional business stakeholders in both class-based and virtual learning environments, offering an opportunity to experience higher education, many for the first time, while expanding their business networks.

27 HOURS A DAY: A DUAL CAREER COURSE

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Workshop summary

In our Student Incubator, we offer entrepreneurship activities for students following educational programmes within health, teaching, pedagogy and social work.

Our typical students are not educating themselves for a future as full-time entrepreneurs. They dream of careers as skilled educators, physiotherapists and nurses. And alongside that dream, some of our students would like to carve out a career as part-time entrepreneurs and create projects of different value.

We are interested in supporting the students in balancing both career paths. Therefore, we have taken inspiration from elite sport talent development in Denmark. Inspired by Team Denmark's framework for performance optimisation through dual-career courses, we have developed the course: 27 Hours a Day. The course offers the participating students the knowledge and tools for achieving the best possible everyday-life balance and avoiding burn out. In the workshop, we will work with the following question: how do we motivate students to be more productive and achieve more without burning out? That is, how can we help the students to best balance the hours of the day available to them?

Workshop style

The workshop facilitators will introduce specific elements of the entrepreneurship process and tools from the 27 Hours a Day course, held at VIA University College Campus Holstebro and Campus Viborg, Denmark. It will be a hands-on process, during which participants will share their knowledge and experience of the topic.

Expected outcomes

Feedback and discussion regarding:

- How do we motivate students to be more productive and achieve more without burning out?
- Should/must an incubation environment involve itself in the individual entrepreneur's way of life?
- What are your experiences of students who either do not perform in both of their dual careers and/or are burned out? And how do you handle it?

Details of any related research

Students, who are involved in both their studies and the Student Incubator, are engaged in two different career paths simultaneously. Dual careers are described in research on creating activities for talented elite athletes as part of their education (EU, 2012), (Team Denmark, n.d.).

The student being able to identify themselves with two careers demands that the student can imagine both possible paths (Thrane and Bak in: Greve & Kirketerp, 2011), (Schumpeter, 1934). Similarly, in the fields of sport and psychology, the importance of supporting the students' sports ambitions as part of their life strategy is made clear (EU, 2012). Living out a dual career with both possible paths involves a certain degree of perseverance and self-control (Seligman, 2011).

In terms of performance optimisation, our starting point is in Team Denmark's restitution model (Team Denmark, 2014). These activities were an inspiration to us while we were developing the course.

Moreover, the teaching on the course is further inspired by elements of Kirketerp's SKUB method (Kirketerp, 2012).

IMPACT ENTREPRENEURSHIP COMPETENCE – REFLECTIVE ACTION TOWARDS SUSTAINABILITY?

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Lena Holmberg, IMCG

Summary

In order to fulfil the 17 UN Sustainable Development Goals (SDGs), innovation and entrepreneurship is key. We need an enormous increase in the number of successful entrepreneurs and intrapreneurs taking on the task of both addressing the SDGs and at the same time creating economically sustainable businesses. Already young people are becoming more interested in contributing to sustainable development, stating demands to future employees that they are not prepared to work for or with companies that do not take this seriously.



How can we as entrepreneurship educators play a role in this development? What has already been done? Which are the success factors? How can we learn from each other? How can we stay or become relevant to students with a focus on both making money and saving the world?

1. Participants will fill in a questionnaire concerning how they include and combine aspects of the topics mentioned above.
2. The resulting data will be used as a foundation for the introduction of the workshop (10 minutes).
3. Next, smaller groups are created based upon the participants' interest through a mini Open Space (25 minutes).
4. Finish with a check in with the groups, where the groups state 1-2 highlights (5 minutes).
5. Documentation from the workshop will be distributed to the participants after the workshop, including the results from the questionnaire.

Expected outcomes

- Increased interest in and knowledge of "Impact Entrepreneurship Competence"
- Inventory of how different entrepreneurship programs work with its components
- Contacts between educators with similar interests

Required preparations

Workshop participants are asked to fill in a questionnaire several days before the conference, in order to create the background material that will be discussed. If you plan to attend this workshop, please send an email to mats.lundqvist@chalmers.se in order to receive the link the questionnaire.

TRANSFORMING FOUNDATIONAL CONCEPTS INTO APPLIED ENTREPRENEURIAL KNOWLEDGE

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Sandra Malach, University of Calgary

Workshop summary and related research

This workshop focuses on ‘teaching it’ – the vocational concepts of entrepreneurship education (including marketing, finance and law) versus ‘teaching about it’ which is theoretical and focuses on the concept of being an entrepreneur (i.e. opportunity identification and entrepreneurial characteristics) (Hindle, 2007). We will discuss, demonstrate and experience how to “transform inert knowledge into active knowledge and assist the learner in accomplishing their entrepreneurial objectives” (Leach, 2007). The first step in transformational learning is to benchmark the students’ current knowledge levels and then determine how that knowledge can be transformed for use in an entrepreneurial context. This assumes a hierarchy of learned concepts and a way to measure progress as a foundation for designing a graduated curriculum. The Bloom’s 1956 *Taxonomy of Educational Objectives* was revised in 2001 from being a standard method of assessing learning to become a widely-adopted curriculum planning tool (Anderson, 2001) and is utilized in this workshop.

We propose Bloom’s Taxonomy as the model for measuring the growth and mastery of learned concepts (see also, (Leach, 2007)) and the widely accepted belief that entrepreneurial experiential education is the most effective. As the creation of a new venture signifies the highest level of learning, solid entrepreneurship education facilitates the students’ progression through Bloom’s levels of learning from *remembering* and understanding concepts through to the higher levels of *application, analysis, evaluation* and ultimately to the *creation* of a new venture. The method requires thoughtful curriculum design. Students must first remember and understand knowledge before they are able to creatively apply it in an entrepreneurial context. The pedagogical challenge for entrepreneurship educators is how to use foundational business courses to build on students’ foundational levels of understanding, moving through the levels of learning to best facilitate the creation of a new business venture. In this workshop we will have an interactive discussion on how to address the following educational challenges:

1. How to best benchmark our students’ level of knowledge of fundamental business concepts?
2. How do we design entrepreneurial lessons and experiences that will transform the students learning to a level where business principles can be creatively applied to launch a new venture?

Workshop style

The presenters will demonstrate how to move foundational business concept through Bloom’s taxonomy in the entrepreneurship context. Next, the attendees will form subject area groups and utilize their course outlines to generate experiential education exercises to transform foundational knowledge into valuable, applied entrepreneurship knowledge.

Expected outcomes

After this workshop entrepreneurship instructors will have a greater appreciation of how foundational knowledge can be transformed into valuable knowledge for entrepreneurs using experiential education. Entrepreneurship instructors will realize the importance of increasing their understanding of the core business curriculum.

GROW YOUR BUSINESS

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Peter Errboe Jensen, VIA University College

Workshops summery

The focus of this workshop is a new concept, where the entrepreneur is facilitated to develop hers or his business through a social process. The business model Grow a Business (GaB) structures the guidance and facilitation. Grow a Business is built on Business Model Canvass combined with social and environmental perspectives.

The theoretical background for the facilitation is a mix of supervision, action learning and the role of the facilitator. The fuel for learning in this concept is to find action for developing the start up in a social process with the entrepreneur, the facilitator and the reflective team. The reflective team can consist of teachers, students and external with a special knowledge.

Workshops style

Delegates will be involved in an interactive approach as a role play. The presenters will play the role as the entrepreneur with a business and the facilitator. Some of the delegates will be the reflecting team and others will be the observers. The last part of the workshop will focus on an evaluation and discussion of the approach.

Expected outcomes

A delegate must expect to participate actively in the workshop approach to experience the process and effect of the guidance approach. Participation in evaluation and discussion is also expected.

Details of any related research

Action learning and supervision inspire the concept, but it has not been possible to find any other research combining action learning with facilitation. Theoretically inspiration comes from Bernard og Goodyears *Fundamentals of Clinical Supervision* (2019) as well as from Reg W. Revans's *ABC of Action Learning. Empowering Managers to Act and to Learn from Action* (2011). Dilworth and Boshyk focus at reflective learning and group dynamics in *The Action Learning Handbook. Powerful Techniques for Education, Professional Development & Training* (2004) and *Action Learning and its Applications* (2010) gives broader perspectives of action learning in different settings. *Aktionslæringens DNA* by Benedicte Madsen gives concret instructions on how to organize the facilitation. The book *Begribe og gøre* inspires to use facilitation in a social process.

THE USE OF NARRATIVES IN ENTREPRENEURSHIP EDUCATION: CROWDFUNDING CAMPAIGNS AS A LEARNING VEHICLE

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Summary

Entrepreneurship education today faces various challenges. Among others the buzzwords digitalization, design thinking, and the shift from 'how to write a business plan' to an integrated understanding of entrepreneurial and intrapreneurial practice. The authors propose an innovative teaching approach that is centered around a structured analysis of campaigns on crowdfunding platforms. Student learning includes cognitive/ rational analysis as well as emotional/trust engagement, in particular with the invest/not invest question as the tangible outcome. The concept has been applied in academic teaching for six semesters with more than 150 business and non-business students.

Questions we care about

1. Is entrepreneurship education limited to 'how to write a business plan'?
2. How crowdfunding platforms like Kickstarter can be used to introduce crowdfunding as another way to fund a project?
3. How to enrich learning by integrating current innovative funding campaigns into entrepreneurship education?
4. How can we use Kickstarter to generate new ideas and creativity by analyzing current campaigns, i.e. about current and future trends?
5. Are narratives an appropriate learning vehicle for applied entrepreneurship education, i.e. scoping, and/or divergent thinking?
6. Is it possible to replace student ideas as pre-requisite for applied learning by crowdfunding campaign videos to provide common ground and support the learning endeavor?

Workshop style and in-class activities

The workshop will be highly interactive to engage and draw out contributions from the audience. Initially we will introduce our teaching concept used in class as well as the student perspective, i.e. the learning journey, followed by a use case. Participants are encouraged to actively take on both roles.

Expected outcomes

The ultimate question: Would you invest, and why? (Sub-)Outcome: Understand that the narrative (communication) is potentially more important than the business plan.

Details of any related research

In their research on strategy as a learning objective Holstein et al., 2018 confirmed the importance of narratives in higher education. In our approach we transfer the use of narratives to entrepreneurial education, using innovation and crowdfunding as central theme. Crowdfunding campaign videos on digital platforms like Kickstarter are, in our view, the "ideal vehicles" for lectures to create and set up common ground of entrepreneurship course concepts (Morgan & Dennehy, 2004, O'Bannon et al., 2011). Allowing students to see how course concepts apply in a certain context helps to foster critical thinking skills (Smith, 2009, Magee et al., 2007) building on the notion that there is not a single correct answer. Hence the use of videos encourages students to think deeply about the most appropriate way to address the problem at hand (Teckchandani & Obstfeld, 2017). Topics such as the innovation landscape map (Pisano 2015), elevator pitch, business models, and communication can be discussed using material from the campaign video as the knowledge source.

WRITING A CASE STUDY AS PART OF A STUDENT INTERNSHIP

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Summary

It is my experience that students enjoy case studies for these bring the real world into the classroom. Many cases however are either about large corporate companies, SMEs or startups the students cannot relate to because they are unfamiliar to these industries or countries. What if we could bring the real world closer to the student by having them develop their own case study? And what if we could use these cases to introduce other students to the entrepreneurial world they might become part of?

In this workshop we expect to share how writing a case study benefits students' professional knowledge, co-create a case study format, and discuss the skills we need as educators.

Questions we care about

- How can a student effectively write a case study about their internship that might also be used as a teaching case for other students?
- How can a student incorporate entrepreneurial theory in a comprehensive way when writing a teaching case?
- What skills do educators need to help the student develop and refine the case study?
- How and to what extent do other universities currently use student-written cases in an entrepreneurship or business curriculum?
- Who would be interested in sharing student-written case studies to learn more about cross-border/cross-cultural differences between entrepreneurs?

Workshop style

Using post-it stickers and posters, participants co-create the basic elements of a student-written teaching case and structure the input into a framework. On the poster we then outline both the student's tasks and the educator's roles. The results will be distributed among the participants after the workshop.

Expected outcomes

We leave with a format to use when writing an internship case study. We share the skills needed to help students develop internship case studies. We have a list of colleagues who would like to work with us (and our/their students) on creating knowledge about entrepreneurship in practice.

Details of any related research

Case study writing is used as a method to develop theory-based professional knowledge (Vega, 2010; Bailey et al., 2005). It has been used in business, public affairs, law and educational courses. It requires students to "fully enlist their mind and talents", teaches to "re-frame problems in ways that moved beyond lay wisdom and common sense, drawing an appropriate theory and research in order to develop more fully articulated, complex understandings of their classroom experiences" and "empowers, building self-confidence and team skills" (Bailey et al., pp.55; Hammerness et al., pp.240; Hunter & Hatton, pp.242; Ickis & Omazic, pp.258).

However, the student written cases described in most of the literature are part of a course and also a team assignment. They were not part of an – individual – internship. That is why it is interesting to see if individual student-written cases also provide these benefits and students develop theory-based professional knowledge during their internship.

SUSTAINABLE ENTREPRENEURSHIP EDUCATION - SDGS AS INSPIRATION FOR ENTREPRENEURSHIP EDUCATION

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Workshop summary

Entrepreneurship is considered as one of the mechanisms to solve some of the world's greatest challenges by offering the potential for novel ways of production processes and products and services and recently a wealth of articles has been published on this matter (Theodoraki, Messeghem, & Rice 2017). However major gaps in our understanding of whether and how entrepreneurship can play a role in the promotions of a sustainable society still exist. Furthermore, it is clear that despite increasing attention for sustainability issues in education it seems that, in general, entrepreneurship education remains.

Our workshop's aim is to provide participants with a novel perspective on entrepreneurship education and to kick-start participants into supporting their students in making impact with creative solutions & sustainable innovations.

Concrete take-away's will include

- Inspiration in the form of examples from across Europe (and beyond)
- An overview of current tools and templates used in entrepreneurship education
- Depending on the outcomes of the session and enthusiasm expressed by participants we might set up a platform (basecamp?) where educators interested in this topic can exchange relevant teaching materials

In this workshop we will address how the U.N. Sustainable Development Goals (SDG's) can serve as the basis for entrepreneurship education at institutes of higher education (HEIs). On the basis of examples and experiments we will engage the audience to think of ways in which these SDG's can serve as a basis for inspiration, ideation and impact creation for and by students. We will show how an emphasis on SDG's in entrepreneurship education enables us to prepare the next generation of entrepreneurs and build a more sustainable entrepreneurial ecosystem. The questions that we care about are:

“How can we educate the next generation of entrepreneurs and ensure that they develop the mindsets and skills necessary to create a more inclusive and sustainable economy?”

- What does this mean for current educators in terms of their own professional development?
- How does it affect the design of our curricula if emphasis is shifted from stimulating students to start a (any?) business to stimulating them to think about the best ways to create sustainable impact?

Our workshop builds on recent insights of EE as well as sustainability in education. We draw heavily from the materials developed by the UN SDG toolbox and the toolboxes that have been developed by Cifal Flanders. The models embedded therein can be integrated into both case-based forms of teaching as well as more experiential forms of learning about entrepreneurship in which students have to develop their own business idea or even start their own venture as part of the curriculum.

EDUCATOR - MAY THE FORSE BE WITH YOU! DEVELOPING A FRAMEWORK FOR ORGANIZING STUDIES ENTREPRENEURIALLY

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Workshop summary and Questions we care about

We are interested in facilitating working entrepreneurially in any subject and at all levels in the school system. Although entrepreneurship in the broad sense has been on the table ever since the OECD report in 1989 and many national curricula nowadays include aspects of entrepreneurship, it is still not common in the public school system or at universities. We therefore care about questions related to how one can work practically with entrepreneurship in the broad sense. We aim in a three-year cross-national European project to develop a framework for organizing studies entrepreneurially. As a start and by focusing on a few more narrow questions relating to this overall question we hope to both test our own initial ideas and generate new ideas that can be tested later.

Workshop style

We will first present the foundation of the framework, including main content and why we see it as important for educators in any subject. Then we outline two questions with linked material related to “What can be guiding principles for conducting university studies in an entrepreneurial manner?” and “What can be key elements of an entrepreneurial task in a (non-entrepreneurship) university course?” Then we will invite the participants to contribute to these by working in small groups around one question at the time and note (on white boards or flip charts) comments and ideas that then are presented to the whole group.

Expected outcomes

We expect that the exchange during the workshop will lead to that we get additional examples and insights into the areas we choose to focus on. The participants can test these ideas in their own teaching and also sign up to become involved in the FOrSE community for future exchanges.

Details of any related research

We follow Sarasvathy and Venkataraman (2011) proposing that entrepreneurship is a method for unleashing the potential of human nature. Thus, it is valuable to apply to any subject. A central goal in working entrepreneurially is to develop action-oriented competencies (such as courage, initiative and tolerance for ambiguity) that support the process of learning the subject matter (Palmér & Johansson, 2018).

Takeaways for teaching practice

We believe the overall framework can be a potent tool for educators in any subject and at any level to develop their teaching in an entrepreneurial tangent. From the suggested workshop and similar workshops with participants from other contexts in the education system, we hope to exchange ideas and concrete tips on how to conduct education in an entrepreneurial fashion.

RESEARCH PAPERS

THE IMPORTANCE OF TIME IN A UNIVERSITY STUDENT VENTURE INCUBATOR

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Questions we care about

Given the growing interest in accelerated incubation providing desired results from a shorter amount of time, the research field on incubation has not sufficiently addressed the importance of time for reaching the desired goals of an incubator. The present paper address the importance of time for entrepreneurs' skill development - for example through guidance - in university student venture incubators, and we ask the following main research questions: RQ1: How does time spent in the student incubator influence the development of entrepreneurs' venture creation skills? RQ2: How does guidance from the student incubator influence the development of entrepreneurs' venture creation skills?

Approach

Since the focus is on skill development, the present paper applies human capital as a theoretical base to develop the main research questions into a set of hypotheses for a quantitative study. The hypotheses were tested on a population of 338 student ventures (response rate 36%) that have been part of the same student incubator but chosen themselves for how long. In the present paper we focus on the students' development of venture creation skills such as opportunity recognition, handling change, planning and marshalling through the venture creation process.

Results

The results show that both the time spent in the incubator as well as the amount of coaching received provide a perceived impact on the development of venture creation skills. Hence, the incubator studied provides value adding services and a nurturing environment for development of student entrepreneurs.

Implications

This finding may have implications for shorter accelerator programs, challenges and hackathons with a more quick or rapid incubation focus, as these might not develop the entrepreneur's human capital for instance in terms of networking or resource allocation.

Value/Originality

We contribute to the incubation literature by adding the aspect of time, by focusing on the founder's development of venture creation skills, and the role of the coach. The focus on human capital adds to a less developed stream of incubation literature. The opposite is true for the student incubation literature, where the focus is on the development of the student while the firm is a vessel for learning. A bridging between student incubation literature and business incubation literature would provide additional perspectives to both literatures and enable studies that study in detail how the student and the venture develop in tandem. Our paper show that it is beneficial for the results of student incubators in terms of developing venture creation skills if the time in the student incubator is of some longevity.

Key words: student venture incubator; time; coach; human capital; skills

CONTEXTUAL RESOURCES AND ENTREPRENEURSHIP EDUCATION – A SOURCE TO COMPETITIVE DIFFERENTIATION?

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Questions we care about

Education in entrepreneurship at the universities has expanded from only being classroom activities to embracing the ecosystem and growing into a complex interplay between different actors (Katz 2003; Levie 2014; Siegel and Wright 2015). The purpose of this paper is to explore the connection between entrepreneurship educations and their contexts. The curricular activities and the ecosystem are influencing the students, but how the context and ecosystem are integrated and exploited in the curricular activities are less explored. This paper's research question is therefore: what contextual resources are entrepreneurship education institutions utilising in their educational efforts?

Approach

Ten universities were included in a case study design, where teachers, programme managers and rectors were interviewed in a semi-structured design. The universities were all technical universities and selected from the five Nordic countries. This paper further applies a resource-based lens on the educations explored, and Barney's (1991) framework is used for analysing the different educational offerings and the interplay with the context.

Results

The results show that of the three different classifications of resources, the collaboration with students and student groups, collaboration with TTOs in terms of physical assets and the use of industry partners is of special value and difficult to implement at other educational institutions. In addition are physical spaces and the development of these through the students and the students' initiative something that shapes the ecosystem and the development of the education.

Implications

This paper suggest that educational offerings often depend on resources that are connected to the region, or that has been developed as a culture over time or through long-term collaboration with external partners. Hence, resources that are making different education 'competitive.'

Value/Originality

This paper therefore contributes to entrepreneurship education literature in two ways. First, it illustrates for scholars, programme managers and policy makers the intertwined and complex combination of resources that some entrepreneurship educations have. Second, this paper opens up new questions for further research. One revolves around the symbiotic relationship students and faculty might have through student organisations and initiatives.

Key words: resource-based view; context; environment; programme; courses; students

DEVELOPING ENTREPRENEURIAL SKILLS IN COMPULSORY EDUCATION - INITIAL CHALLENGES WITH WHICH, HOW AND PROGRESSION

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Questions we care about (Objectives)

The worldwide request for a workforce equipped with thorough high qualitative knowledge as well as a capability to use it in complex situations, has become the entrance ticket for entrepreneurial skills entering the curricula of Swedish compulsory education. Thus, schools play an important role providing a space for individuals practicing these skills, for instance being initiative, self-confident, risk-taking, creative and problem solving. With the aim to increase the knowledge of how entrepreneurial skills unfolds as part of the compulsory education at earlier ages, the research question in focus is 'What are the initial challenges building a common thread of entrepreneurial skills in education?'

Approach

The mainly qualitative case study underpinning this paper follows a novel attempt to build the common thread of entrepreneurship in education in a small mid-Swedish municipality, from preschool to grade nine between February and November 2018. The empirical material includes meetings, written inquiries as well as six workshops with preschool teachers, teachers and school managers. Here, addressing what the teachers knew about entrepreneurship and entrepreneurial skills; which of the skills they thought will be of most importance to the pupils in their future and what the teachers claim they focus the most on within their teaching, how they do it and make this work visible for the pupils.

Results

Focusing on initial challenges, the findings show the teachers struggle with both content, methods and progression. Related to the curricula's formulation arena, there is a discrepancy between this and the teachers' transformation and realisation arena. This suggests they do not always do what the curricula stipulate or they themselves classify as most important, they seem to struggle to link their subjects to entrepreneurial skills and there is a lack of progression between grades and in transitions between school levels.

Implications

The insights are useful for researchers from both entrepreneurship and education. The research adds to curriculum theory by providing an empirical study investigating the theory in practice. Further, to the research field of entrepreneurship, since addressing a growing field focusing on entrepreneurial skills in compulsory education, and engaging in issues, levels of education and contexts suggested neglected. The results are also of interest for practitioners.

Value/Originality

The research of enterprise learning is still in its early stages (Fayolle, 2013; Leffler, 2014) and existing research primarily focus on higher education (Byrne et al., 2014). Therefore, the attempt to build a common thread of entrepreneurship, focusing on entrepreneurial skills throughout an educational system from preschool to elementary school in a municipality, which in itself is a novelty, can provide important insights for both practice and research.

THE UNIVERSITY'S ROLE IN DEVELOPING ENTREPRENEURIAL ECOSYSTEMS: LESSONS LEARNED FROM 20 YEARS OF EXPERIENCE

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Abstract

We suggest that the resource orchestration needed for building local and regional entrepreneurship ecosystems may come, in part, from university-based initiatives that help to foster local and regional entrepreneurial cultures. We describe the efforts of 20 years of experience by a major state university in developing a local and regional entrepreneurial ecosystem.. We provide outcome data for each of these efforts. Using a knowledge spillover perspective we evaluate the results of efforts in both strategy formulation and strategy implementation. Based on this 20 years of experience we propose a process based model to assist universities' efforts to build a strong local and regional entrepreneurship ecosystems. We conclude with specific recommendations for universities to help to build, maintain and grow strong local and regional entrepreneurial ecosystems.

Key words: entrepreneurship ecosystems; knowledge spillover; resource constraints; university-based initiatives; teaching hospital model; university culture; entrepreneurial mindset.

SUSTAINABLE ENTREPRENEURSHIP EDUCATION THROUGH SOCIAL INNOVATIONS, DIGITALIZATION AND COLLABORATION

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Questions we care about (Objectives)

Innovation and entrepreneurship are significant sources for economic growth and job creation. Innovation and internationalization are part of the public mission of Norwegian universities, to develop the students' entrepreneurial skills and knowledge. State of the art research in entrepreneurship education answer the "why", "how" and "what" questions. This paper adds to this body of knowledge by developing a framework for how to include sustainability. Furthermore, we consider how to facilitate innovative solutions and sustainable internationalization on campus by virtual exchange/blended mobility.

Approach

To explore how universities can contribute to solve the UN Sustainable Development Goals (SDG), we do a literature review on the subject, combining elements from entrepreneurship, sustainability, innovation, co-creation, and digitalization literature. Since 2017, we have carried out pilot projects in an entrepreneurship course Technology Management (ING101). In one of the pilots, we studied how interdisciplinary teams can solve real life cases, with more than 100 engineering students and 30 nursing students participating. Digitalization of emergency room processes and upcycling of building materials were two of the cases presented to the students.

Results

The framework we develop, building on previous state of the art research in entrepreneurship education, includes sustainability and digital collaboration as important dimensions. In addition to "do something for others", we emphasise "do something now", solving real world problems.

Value/Originality

We explore how universities, government bodies, companies and Non-Governmental Organizations (NGOs) can solve the problems together, and we discuss how students can gain international experience without travelling abroad.

Key words: entrepreneurship, sustainability, innovation and social innovation, co-creation and open innovation, digitalization, entrepreneurship education with virtual mobility

THE PHILOSOPHICAL FOUNDATIONS OF ENTREPRENEURSHIP EDUCATION

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Questions we care about

How can we focus attention on philosophy being a key consideration in entrepreneurship education? From being abstract considerations, the assumptions and deep beliefs we hold and enact - our philosophy – will significantly influence the way we engage as scholars and our potential impact. How can calls for more criticality in the field be addressed, if philosophical assumptions are left unexplored?

Approach

This collaborative paper provides an opportunity for reflection on philosophy in entrepreneurship education by reviewing the most co-cited research in the field from an ontological, epistemological and sociological perspective. We adopt a problematising agenda, aiming to identify and challenge implicit but routinely taken-for-granted assumptions within *an existing body of literature* (Alvesson and Sandberg, 2013). We chose to review the 44 most co-cited articles in entrepreneurship education (Loi et al, 2016), looking at these articles from a number of meta-theoretical perspectives to help loosen up and explore implicit assumptions.

Results

The field has previously been characterised as fragmented and heterogeneous (Fayolle, 2013), but this pattern of diversity is less apparent when considering the philosophical assumptions discernible in the field's most co-cited literature. Indeed, distinctly common assumptions emerge about: the existence of an external social reality which is accessible to the dispassionate researcher, the possibility of objective knowledge, the superiority of scientific methodology and, overall, research products which reproduce the social status quo.

Implications

An appreciation of the philosophical assumptions contained within the field's most co-cited works enables a moment of reflection upon the deep beliefs which are embodied in research products, but which are often taken for granted. We consider that this philosophical homogeneity may be in conflict with the reflexive spirit needed for more critical scholarship.

Value/Originality

The 44 most co-cited articles in entrepreneurship education are said to reveal the field's Invisible College¹ and its *theoretical foundations* (Loi et al, 2016). By this logic, (re)considering this body of work from ontological, epistemological and sociological perspectives reveals something of the *philosophical foundations* of entrepreneurship education.

Key words: entrepreneurship education, philosophy, problematisation, review.

¹ The collective logic, behaviour, cognitive patterns of a scientific community (Loi et al, 2016); a scientific 'In-Group' (De Solla Price & Beaver, 1966).

CLASSLESS ENTREPRENEURSHIP EDUCATION? – HOW SOCIAL ORIGINS PREDICT INDIVIDUAL ENTREPRENEURIAL ORIENTATION

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Questions we care about

Entrepreneurship as the proverbial great equalizer allowing everyone to pursue their individual dreams requires effective education to counteract potential drawbacks in individuals' starting conditions. Against this background, we ask whether there are any differences in students' entrepreneurial skills and orientation with regard to their social class origins and question whether the impact of entrepreneurship education is truly inclusive.

Approach

To answer this research question, we conduct a survey among 700 HEI students, representative for the overall German student population and analyze the final sample by building a moderated mediation model.

Results

Our results indicate that social class origins positively influence students' individual entrepreneurial orientation which is mediated by entrepreneurial self-efficacy for higher values of entrepreneurial learning, suggesting that different starting conditions are rather reinforced than attenuated through entrepreneurship education.

Implications

This research has shown that not considering the social class origin of students when designing entrepreneurship education initiatives is potentially hazardous. Not considering social class origin equals discriminating against social class origin thereby excluding many potential change makers of the future from a promising career path.

Value

The study contributes to the academic discourse of entrepreneurship education by 1) introducing social class as an underresearched concept 2) echoing the emergent social identity research 3) and explaining contradictory findings in the impact of entrepreneurship education.

Key words: social class, entrepreneurial self-efficacy, identity, individual entrepreneurial orientation, entrepreneurship education

THE DEVELOPMENT OF AN ENTREPRENEURIAL MINDSET - A SYSTEMATIC LITERATURE REVIEW

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Questions we care about

Entrepreneurial mindset, defined as the ability to sense, act and mobilize, even under uncertain conditions, has been recognized as a critical ability to meet future challenges. Therefore, higher education institutions are increasingly faced with calls of instilling an entrepreneurial mindset in students. This article explores the impact of different pedagogical models in entrepreneurship education on developing students' entrepreneurial mindset.

Approach

A systematic literature review is applied to highlight the empirical evidence on the impact of entrepreneurship education on developing students' entrepreneurial mindset. We categorize prior findings into a teaching model framework and explore if, and how, different pedagogical methods in entrepreneurship education relate to the development of students entrepreneurial mindset.

Results

The literature review reveals a gap between current needs of developing students entrepreneurial mindset and the theoretical perspectives, research designs and the measures used in the literature to assess the outcomes of entrepreneurship education. Our review calls for new directions for research, which at best has been underemphasized in the current literature. Particularly with regard to 1) theoretical development for explaining the linkage between higher entrepreneurship education and students entrepreneurial mindset 2) research design that allows to measure change in students entrepreneurial mindset and 3) emphasize on operationalizing and developing measures that capture students entrepreneurial mindset.

Implications

The results have practical implications for local and national government agencies seeking to promote entrepreneurship policies, and for higher education institution, educators and others seeking to instil an entrepreneurial mindset in students. The review pinpoints the need to align higher entrepreneurship education and subsequent research, and reveals directions for future research.

Value/Originality

We contribute to the ongoing debate about how entrepreneurial mindset can be developed through entrepreneurship education It is the first review to rigorously explore whether and how pedagogical underpinnings of entrepreneurship education relates to the three key elements of the entrepreneurial mindset – the ability to sense, act and mobilise.

Key words: entrepreneurship education, entrepreneurial mindset, pedagogy

IN THE EYE OF THE BEHOLDER - EXPLORING ENTREPRENEURSHIP IN EDUCATION WITH A VISUAL RHETORICAL LENS

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Questions we care about

The last decades have seen a development of entrepreneurship education across disciplines in higher education, and in research conducted within the intersection between entrepreneurship and educational science (Blenker et al., 2008, Hägg and Kurczewska, 2016, Kyrö, 2015, Lackéus, 2016). Simultaneously, there are calls for additional understanding of students' perspectives, and pedagogical approaches involving university students as co-creators (Byrne et al., 2014, Fayolle, 2018, Gabrielsson et al., 2018, Jones, 2013, Neck and Corbett, 2018, Robinson et al., 2016). This study explores students' various (pre)understandings by examining a proven visual-based interactive teaching exercise. The question being explored is: How can visual-based methods in entrepreneurship education contribute, when students with widely different experiences make sense of entrepreneurship as a learning objective?

Approach

The work is methodologically based in the visual research field (Rose, 2001, Spencer, 2010) since it applies photo-elicitation as a teaching tool. It is theoretically based in educational science it adopts a *phenomenographic* approach (Marton, 1981) and applies the *didactic triangle* (Klafki, 1995) as analytical framework, highlighting the students' relationship (the *why*) to the predefined learning objectives (the *what*), by a visual exercise (the *how*). The empirical material consists of interviews with three entrepreneurship teachers and 28 students.

Results

The visual exercise allows the students to be a substantial part of the entrepreneurship education practice by making their implicit entrepreneurship theories more explicit. The phenomenographic approach helps to strengthen a student focus, and visual materials seems to stage this perspective in a relevant way for teachers and students.

Implications

Visual material elicits, and makes the students understanding visible for the teachers, who then, during the learning process, can help the students to develop their understandings in relation to entrepreneurship as a learning content. The multifaceted nature of photos hence frames a didactic triangle, characterized by a diversified pool of *why*, and emphasize the relationship between the teacher and the palette of experiences of the subject the students bring to the classroom. The *how* hence contribute to the teachers' possibilities to base the learning of the *what* on the students' *why*.

Value/Originality

The value of considering students' (pre)understanding in entrepreneurship education has been emphasized in previous studies (Nabi et al., 2017, Williams Middleton and Donnellon, 2014), and this study shows how photo-elicitation contributes to how this can be implemented. By increasing the understanding of how students, with widely different approaches and experiences, relate to the learning subject (the *what*), the teachers become better equipped to continue the didactic analysis of *why* and *how* entrepreneurship can be learned.

Key words: entrepreneurship education, phenomenography, student-centred, visual methods

INTEGRATION OF ENTREPRENEURIAL EDUCATION AS VALUE CREATION INTO THE HUMANITIES

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Summary

The Humanities are under pressure, particularly by administrative and political stakeholders, for not delivering enough value to society. Unfortunately, value is often not very clearly defined. For policy makers value usually means contributions to the economy and GDP. But value has a much broader and more significant meaning (Graeber, 2001). Further, many current definitions of entrepreneurship and entrepreneurship education focus on value creation and a broader definition of value that go beyond (and include) venture creation (Lackéus 2018). One would therefore expect universities to launch larger entrepreneurial initiatives by, for example, creating more courses and entire degree programs, integrating more entrepreneurial elements into existing courses and establishing incubators. This is not the case, and that make us wonder: *How could entrepreneurial education, that takes account of academic knowledge, skills and competence in the Humanities, be organized to enable students to create societal value?*

Approach

This paper is a conceptual paper combining a literature review on previous evidence on why and how entrepreneurship and entrepreneurial education should be integrated into the faculties of humanities, existing frameworks for developing and evaluating entrepreneurial education aiming at value creation and a case study of an embedded entrepreneurial course. These components are used to point to core arguments for integrating entrepreneurial education at the humanities and key questions regarding the implementation of this integration.

Results

Based on a literature review, existing value creation frameworks and a case study, a preliminary rubric for integrating entrepreneurial education at arts faculties is developed.

Implications

Both the literature review and the case study documents great potential in integrating entrepreneurial education at the faculties of humanities, but also challenges and dilemmas. The proposed rubric is intended for facilitating reflection, discussion and decision making among educational designers, teachers, researchers etc., especially those who are new to field of entrepreneurship and entrepreneurial education. The hope is that this can lead to more aligned entrepreneurial education - and ultimately relevant competences in value creation among graduates at the faculties of humanities.

Value/Originality

A preliminary literature review showed that there are relatively few studies exploring the benefits and challenges of integrating entrepreneurship or rather entrepreneurial education at the arts faculties. Even fewer are concerned with how this integration can be implemented in a single course, a study programme or on institutional level. This study contributes primarily with knowledge on how the integration can be handled on course level.

Key words: entrepreneurship education, value creation, humanities

PLAYFULNESS - A NOVEL APPROACH TO LEARNING ABOUT FAMILY-OWNED BUSINESS DYNAMICS

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Objectives

How does playfulness contribute to our understanding and teaching of family business dynamics? This paper examines how the concept of 'playfulness' occurs in family businesses as the basis for developing a novel view of teaching decision-making in family businesses that face increasingly entrepreneurial, complex and uncertain environments.

Approach

Using a convenience sample interviews suggest, that currently family business education can be broadly divided into three sections: University (academic led), Family Business networks (practitioner led) and Banks/Lawyers/accountants (knowledge specific led). Three different areas are explored: Problem based learning, learning environments and the flipped classroom approach.

Results

The results show a gap in the market for a new approach. Examining the current market offerings for Family Businesses ranging from University, professional networks and individual firms similar approaches are found in terms of learning style and course set ups.

Implications

We suggest that play offers family business and instructors a different way of perceiving and intervening in family-business processes. Play is not perceived as separate from business. Instead work, play and learning are synonymous. This, we argue, is because play embraces uncertainty and entrepreneurship. Playfulness might very well be the only way we have to reach an understanding with all this uncertainty, or at least more or less cope with it. It allows us to teach about family decision-makers as they experience emergent and entrepreneurial possibilities afforded by multi-disciplinary teams and across the 3-circle boundaries of family businesses.

Value/Originality

This research contributes to emerging thought on the teaching and understanding of family businesses as process-based entities, particularly that which considers the family business' role as a non-market institution with its own set of dynamics distinctive from similar non-family based firms. It also contributes to the discussion about entrepreneurship within family firms as a growing interest-cluster within entrepreneurship education and emergent discourses about entrepreneurship as play (Hjorth 2005, 2018).

A THEORY-DRIVEN META-ANALYTICAL FRAMEWORK FOR INTERNATIONAL RESEARCH ON EE IN HE

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Questions we care about

Until today, several studies showed that EE (entrepreneurship education) is rarely embedded to the HE (higher education) curriculum, in particular not in STEM degree programs (Gossel et al., 2018). In addition, only few studies reach an international dimension in EE research, and, there is still lack of theory. Respecting this, our main questions are: (1) How can a theory-driven meta-analytical framework be developed for international comparative research of EE in HE? (2) Which specialties have to be considered regarding specific target groups, e.g. specific subject areas as STEM? (3) Which specialties have to be considered in international comparative research, e.g. respecting cultural differences?

Approach

Comparative international research in EE in HE is existing. We know studies that elaborate the approaches at selected universities / case studies, e.g. for universities in Europe (Volkmann & Audretsch, 2017) or for universities with STEM focus in Nordic Countries (Warhuus & Basaiawmoit, 2014); other studies compare implicitly by doing systematic meta-analytical work (Nabi et al, 2017). While praxis-oriented frameworks exist (e.g. HEInnovate), theory-driven meta-analytical frameworks beside examples like Bécharde & Gregoire (2005) are still a rarity. This paper elaborates existing theory-driven and praxis-oriented meta-analytical frameworks to research EE in HE and deduces a new approach, primarily inspired by constructivist social theory (Luhmann, 2000) and meta-theoretical perspectives of organizational theory (Tsoukas & Knudsen, 2011).

Results

The present study is work in progress. In focus of this paper is the development of a theoretical framework for EE in HE that is basis for an international study. In 2019/2020, data will be collected at universities with focus on STEM degree programs in five English speaking countries (Republic of Ireland, United Kingdom, Australia, United States of America, Canada). Data collection is planned with an explorative focus, using mixed-methods and starts in April 2019. The paper provides a theory-driven meta-analytical framework and illustrates its applicability by presenting first insights of this project, and – hopefully – comes up with a lot of interesting and inspiring questions.

Implications

Our work can be seen as an important basis for future research questions: How can theory-driven meta-analytical frameworks in EE research be developed? In how far are meta-theoretical insights from other disciplines (e.g. organizational theory, constructivist social theory) helpful? Which dimensions are relevant for a framework to research EE in HE? Which specialties (e.g. specific target groups, cultural dimensions) are relevant and have to be included? In addition, this study is intended to provide the EE research community with a theoretical framework that supports international research projects in future.

Value/ originality

While the EE community is discussing advanced pedagogical approaches, holistic and theory based approaches for international research are still underway. This study provides (a) a suggestion of a framework for international research on EE in HE and (b) a first impression of empirical work from one country (Republic of Ireland). The aim of this paper is to discuss the status quo of work with the community before settings in other countries will be observed. In addition, this paper aims contribute to the community with a specific focus on theory development in EE research.

Key words: entrepreneurship education; higher education; theory development; international comparative; STEM

Note: This study is financially supported by the Hans Weisser fellowship program.

STUDENT ENTREPRENEURSHIP: DEVELOPING RESOURCES TO BUILD LEGITIMACY

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Objectives

Student entrepreneurs lack credibility and legitimacy due to their limited work experience, and even though they have poor access to profound advantages and resources they still manage to build successful businesses. How do these student entrepreneurs go about finding and developing the needed resources to grow new ventures? The purpose of this study is to better understand the phenomena of early-stage resource development among student entrepreneurs, and how they use resources as a means of building legitimacy towards different stakeholders.

Approach

In this preliminary study the authors use a qualitative approach applying observations and semi-structured interviews, in order to understand how student entrepreneurs use the university ecosystem and surroundings to develop resources in the early stage of venture creation. The study is conducted with a multiple-case research design. Four early-stage startups at NTNU Trondheim have been observed and interviewed during February and March 2019.

Results

Preliminary analysis show that student entrepreneurs have an entrepreneurial bricolage-mindset and build different “resource-packages” from resources available in the university ecosystem. They do this by finding new uses for resources, balancing the use of the student-label depending on its situational value, and collecting resources for the sole purpose of establishing legitimacy towards different stakeholders. Especially important resources were found to be student-to-student mentoring, experts and the student network at the university.

Implications

The findings in this paper indicates that student entrepreneurs have an active relationship to the student-label and highlights the university context as an important resource-arena to them, this can lie the basis for future research within the field of student entrepreneurship. Interesting research areas include how student entrepreneurs use or turn away from the student-label, how they collect resources to build legitimacy and the importance of other student entrepreneurs as a resource within the university ecosystem. Moreover, the study has practical implications for student entrepreneurs as it brings knowledge about ways of conducting resource development and highlights important resources.

Value/Originality

Literature exploring how students go about early-stage resource development, and combine these to build legitimacy, is limited. This study contributes new insight to how these mechanisms happens based on actual observations of student entrepreneurs in the context of the university ecosystem. As a result this study provides new knowledge on how student entrepreneurs think and what they actually do when developing resources to build new ventures at a very early stage.

Keywords: legitimacy, resources, student entrepreneurship, university ecosystem

EDUCATING THE INNOVATIVE AND ENTREPRENEURIAL INDIVIDUAL IN CHINA

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Questions we care about (Objectives)

This paper investigates the relationship between policy and subject-making in the context of entrepreneurship education in China. It focuses on how the ambitions that are stated in the Chinese government's policy on innovation and entrepreneurship education unfold in the learning environment at a Chinese top-university. The study aims to contribute to the existing research literature by understanding how Chinese university students take up and reflect on these new educational practices that seek to counteract China's educational tradition in favour of fostering autonomous learners who can think creatively and solve complex problems.

Approach

This study applies ethnographic methods, including participant observation and qualitative interviews. The results stem from a fieldwork conducted in a design thinking course, where data was collected through active participation in group work and interviews with Chinese students as well as the educator.

Results

The study demonstrates the existence of three dilemmas in which the role of the individual is negotiated. Those dilemmas concern the relationship between the teacher and students, the collaborative processes in group work, and factors that constitute the purpose of becoming innovative and entrepreneurial. It shows that the ambitions stated in the Chinese government's policy on entrepreneurship education were both internalized and challenged by Chinese university students. The students thus internalized the ambitions by explaining that the new educational approaches inspired them to think more independently and not only expect that the teacher can tell them the right answers. At the same time, the students also challenged the ambitions by emphasizing that innovative and entrepreneurial processes can become more efficient when a student assumes the role of a leader in the groups and one avoids pursuing alternative ideas that go against the decisions made by the team.

Implications

The results suggest that to understand the reality of innovation and entrepreneurship education, we cannot solely rely on policy papers, but must study the actual practices taking place in institutions tasked with teaching innovation and entrepreneurship. The study thus encourages us to be aware of how students make sense of these educational approaches in relation to their own background and experiences, interaction with other students as well as future career paths.

Value/Originality

The interviews conducted with Chinese students reflect dilemmas and questions that do not necessarily only relate to China but point to challenges that concern innovation and entrepreneurship education in general. For example, the Chinese students struggled to negotiate factors that can motivate one to engage in innovation and entrepreneurship courses. Those factors were, on the one hand, an expression of the individual ambitions to create products that generate value for society and, on the other, the fear of being eliminated in the fierce competition on the job market if one does not achieve the ability to "innovate".

Key words: Policy; impact; student learning; didactic methods; higher education; China

ASSESSING ENTREPRENEURSHIP EDUCATION IN PRIMARY SCHOOLS IN HONG KONG

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Objectives

The purpose of this paper is to provide insights into the impacts of entrepreneurship education in primary schools in Hong Kong. Dreamstarter is a social enterprise that introduces entrepreneurship education to primary schools through experiential learning, design thinking and crowdsourcing. The objective is to gain insights on the impacts of entrepreneurship education at the primary level through the following questions:

- What were teachers' expectations on Dreamstarter? Were their expectations met?
- Did the program impact the students in terms of Entrepreneurship Competency (EntreComp)? If so, what are those competencies? If not, what are those competencies?
- Do they feel confident in implementing the Dreamstarter program in the current system?
- Did the program help them or students better understand the United Nations' sustainable development goals?

Approach

This paper provides background information on the conventional public primary education system in Hong Kong, the Dreamstarter program, and the differences between teacher and student's role in each learning environment. In addition, the teachers who were involved in the Dreamstarter program were surveyed for a better understanding of their expectations of the program, their expectations of students involved in the program, and their experience in general.

Results & implications

Overall feedback for the program was positive. Teachers reported positive changes in certain EntreComp qualities more than others, such as "taking the initiative", "working with others" and "learning from experience." Responses also revealed that students get a better understanding on context-based issue/process, enhanced context-based skills and stronger action-oriented entrepreneurial attitudes/ skill sets.

Value/Originality

As entrepreneurship plays an increasingly important role in the overall development of a person as well as a region, the discussions of entrepreneurship education at the tertiary level become much more prevalent over the years. However, entrepreneurship education at the primary level remains a relatively unexplored area. We hope this will spark more discussions and future research on such topic.

SOCIAL MEDIA AS AN ASSESSMENT TOOL IN UNDERGRADUATE ENTREPRENEURSHIP EDUCATION

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Questions we care about (Objectives)

The major questions of the current study are: How effective is social media as an assessment tool for reflection? How did undergraduate Entrepreneurship students change their reflective writing pattern over time?

Approach

It was hypothesised that the social media would provide a more spontaneous, direct and interactive platform for students to share their own thoughts about entrepreneurship, thus encourage them to engage in more reflective thinking from real-life context. A total number of 47 students enrolled in an undergraduate Entrepreneurship course in Hong Kong were required to post their reflections on the course Facebook page after watching the discussion videos by entrepreneurs. Content analysis of comments and replies were conducted, and the influence of interaction between students, instructors and entrepreneurs on their quality of work was also examined. A longitudinal overview of their progress on self-reflection assignments in terms of content was also investigated.

Results

The result shows that students initially produced self-reflections that were comparatively more related to their personal thoughts, experience and aspiration about entrepreneurship; however as the course progressed they had gradually returned to their conventional practice of writing formal academic reflective assessment by including more summaries and linking explicitly to the course content. The active participation of speakers on Facebook may also encourage more interactive discussion and in-depth reflection on Facebook among the students.

Implications

It is suggested that more thorough consideration can be given to the assessment requirement and interaction between different parties of the course, so that students would be more motivated to engage in the reflective tasks, hence formulate their unique understanding and vision about entrepreneurship.

Value/Originality

This paper attempts to explore the possibility of using social media for assessment purposes in entrepreneurship education, and examine if young adults' familiarity with the social media would lead to positive impact on writing reflections which usually requires more sharing of personal thoughts and feelings than usual academic writing.

Key words: entrepreneurship education; social media; Facebook; student assessment; higher education

THE ENTREPRENEURIAL DIARY – A METHOD TO ENHANCE STUDENT ENTREPRENEURS REFLECTIVE THINKING ABILITIES IN EXPERIENTIAL ENTREPRENEURSHIP EDUCATION

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Questions we care about

How do we learn through entrepreneurial experience in the absence of prior knowledge? Being one of the oldest methods for introspection, the diary has an important place for transforming what we learn through practice into new or modified forms of knowledge in a given domain.

Approach

Entrepreneurship education has seen a tremendous growth and development when it comes to its teaching methods and underlying theories of learning. In a contemporary entrepreneurial classroom, the influence of highly experiential and student-centred learning approaches has become the norm. When tracing the inclusion and development of experiential learning in entrepreneurship education there has been a somewhat skewed attention towards implementing action, which if one follows the early thoughts on progressive education would only tell half the story on how to learn through experience. A main thought that guided early theorizing about learning through experience is based on a dualist interplay between knowing and doing, which is synthesized through the process of reflective thought. The present study seeks to discuss and also explore the entrepreneurial diary as a potential teaching method for developing reflective thinking to balance the action orientation that has been argued necessary when learning entrepreneurship. To support the continued discussion, empirical evidence from a master's program in entrepreneurship that adopts an experience-based pedagogical approach is used together with the literature review on reflective thinking and its importance when learning through experience in an educational setting.

Results

Building on a highly structured diary format based on two streams of literature together with a highly tailored form of feedback derived from cognitive load theory and empirical findings from a longitudinal mixed method study on the development of reflective thinking, the present study provides both a practical teaching method to be used in the entrepreneurial classroom and a theoretical contribution on how entrepreneurial experience is transformed into entrepreneurial knowledge.

Implications

The study addresses an important aspect when learning through experience and it also provide a potential teaching method for developing reflective thinking, which open up for the development of self-regulated learners.

Value / Originality

Despite being one of the oldest forms of introspection the reflective diary as a teaching method and its underlying theoretical and instructional antecedents have received scant attention within the research field of entrepreneurship education.

Key words: entrepreneurship education, entrepreneurial diary, reflective thinking, cognitive load theory

PRINCIPALS DEVELOPING ENTREPRENEURIAL CULTURE IN SCHOOLS

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Questions we care about

The aim of this paper is to study how principals are developing entrepreneurial culture in school. Furthermore, we were keen on understanding what kind of a role principals have in developing entrepreneurial culture, and especially, how principals' perceptions of their activities are associated with their practices. Promoting entrepreneurship education in schools requires schools to have an entrepreneurial culture. The term entrepreneurial culture is widely used in everyday school speeches and educational documents, however it seems as it is not clearly defined (Hörnqvist and Leffler, 2014; Hämäläinen, Ruskovaara, Pihkala 2018a; 2018b). Afriye and Boohene (2014) argue that entrepreneurial culture can vary in different contexts, but basically it is about set of common norms, beliefs, and shared values. In a school context, for example creativity, shared expertise and planning entrepreneurship education are related to entrepreneurial culture (Gupta et. al 2004; Antoncic, 2007; Heinonen and Korvela, 2003).

Approach

Finland is the first country in European Union, which has included entrepreneurship education in curricula at all school levels. Furthermore, almost all Finnish regions has its own specific curriculum to implement entrepreneurship education in their region. (Yes-network, 2018). As entrepreneurship education has been included in Finnish core-curricula since 1994, the entrepreneurial culture should have become a part of schools' everyday life. The data consists of 201 principals' responses from Finnish primary and secondary schools, where in Finnish education system also the vocational education and training (VET) are included.

This study uses quantitative data collected through MTEE measurement tool (www.lut.fi/mittaristo). The idea of the tool is, that while taking the survey principals and teachers reflect their actions, and look back what they have done as entrepreneurship educators during the last 6 to twelve months. The reliability and validity of the tool have been secured by tests and re-tests (Ruskovaara, Pihkala, Seikkula-Leino, and Rytkölä, 2015).

Results

To understand the structures of principals' activities, we ran an exploratory principal components analysis with Varimax-rotation to uncover the underlying common nominators between 9 measures. After that, we conducted a discriminant analysis to test the principals' activity factors' ability to detect the development of entrepreneurial culture among the sample. As a result, two factors of principals' activities are able to predict the development of entrepreneurial culture. This result suggests that for the principals the development of entrepreneurial culture in schools seems best associated with traditional managerial activities. Surprisingly, the principals' activities in supporting sharing seem counterproductive for schools' entrepreneurial culture.

Implications and value

According the results, developing an entrepreneurial school culture does not require excessive efforts from the principals. It seems, that the best way to develop entrepreneurial school, is to leave the creativity and ideation practices implemented by teachers in their teaching, while principals can focus on developing the entrepreneurial culture through managerial activities.

Key words: entrepreneurship education, entrepreneurial culture, school, principal

THE ENTREPRENEURIAL PROCESSES AS EXPERIENTIAL LEARNING

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Questions we care about (Objectives)

This paper aims to develop additional understanding of the entrepreneurial process, through analyzing action and reflection as students attempt to earn real money in the common marketplace.

Approach

We follow Corbett's advice to consider explicitly how individuals learn, specifically aiming to contribute to the understanding of entrepreneurial opportunity by focusing on elements of the entrepreneurial process. In specific we draw upon the theory of experiential learning (Kolb & Kolb 2005) and the reconceptualization of opportunity (Davidsson 2015). This investigation uses a quasi-experimental, process and reflectively oriented method focused on 28 team based, week long, startup attempts, pursued by graduate students.

Results

We find the experiential learning framework (Kolb & Kolb, 2005) and the reconceptualization framework (Davidsson 2015) as useful and largely complementary. We find that using concepts of learning disequilibrium (Piaget 1970) and growth mindset (Dweck 2016) are helpful to integrate the two frameworks. Learning disequilibrium helps to explain various effects of learning on venture ideas and opportunity confidence. Growth mindset helps students to reshape venture ideas at moderate levels of disequilibrium. Fixed mindsets among individuals and groupthink among student groups limits the student groups' ability to change as unanticipated experiences are encountered.

Implications

The present findings suggest that early and frequent information seeking behavior surrounding new venture ideas through concrete experience and reflection is critical to reducing dissonance because such behavior is likely very beneficial for learning. In case of positive deviations, this results in a positive shift in opportunity confidence, and conversely it can lead to increasing valuations of the activity itself. This finding is consistent with Corbett's (2005) proposition suggesting that accommodative learning styles are a tight fit with emphasis on leveraging concrete experience and active experimentation. In case of negative deviations, it can lead to decreasing motivation, but also increasing cognitive change and learning. It can also lead to unchanged cognition. This points towards the role of the teacher and the learning environment. A good learning environment can increase the likelihood of cognitive change and development with minimal motivational loss or even motivational gain (Berk & Winsler 1995), while other environments can have opposite effects (Park & Reuter-Lorentz 2009).

Value/Originality

The paper contributes to rejoin research on experimental entrepreneurship education with research on entrepreneurial processes. By doing so, we provide contributions to both entrepreneurship education as well as to research on entrepreneurial processes.

Key words: entrepreneurial process, experiential learning, disequilibrium, dissonance reduction strategy

STUDENT-EXPERT COLLABORATION AND THE ROLE OF KNOWLEDGE DOMAINS IN DEVELOPING TECHNOLOGY-BASED NEW VENTURE IDEAS

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Questions we care about (Objectives)

Entrepreneurship education receives much attention as a means to develop capabilities and mind-sets that can contribute to economic growth and venture creation. Although originally based in business schools, entrepreneurship education has long been adapted to a variety of other disciplines. We investigate the specific case of a student-expert collaboration in an entrepreneurship course of an engineering education to answer the following question: which capabilities are necessary to identify and assess technology-based new venture ideas?

Approach

We adopt an inductive, longitudinal case study approach to investigate 6 cases of student-expert collaboration embedded in an engineering course. The student-expert teams pursued the goal to develop technology-based new venture ideas. We assume a cognitive perspective in the study of activities that compose capabilities for the identification and assessment of technology-based new venture ideas.

Results

Taking prominent entrepreneurship theory into account, we propose an iterative process model that integrates key activities and the role of knowledge domains in the development of capabilities for the identification and assessment of technology-based new venture ideas. Furthermore, we connect pedagogical activities and desired learning outcomes of entrepreneurship education.

Implications

Our work has implications for entrepreneurship education research as we relate prominent entrepreneurship theory with education practice. Furthermore, as we study an engineering setting, we explore a promising new context for entrepreneurship education in general. The results of the student-expert collaboration are of relevance to research commercialization and academic entrepreneurship.

Value/Originality

By adopting a cognitive perspective in our data analysis, we provide an approach towards establishing a stronger link between entrepreneurship theory and education practice. We explore entrepreneurship education within new contexts; technology entrepreneurship provides a fitting context for the investigation of the development of desired learning outcomes as the technology aspect increases the complexity of the new venture idea construct as well as the height of cognitive barriers that need to be overcome to assess the respective new venture idea.

Key words: technology-based new venture ideas, student-expert collaboration, knowledge domains, cognitive perspective

SHOULD ENTREPRENEURSHIP EDUCATION FOCUS ON MAXIMIZING THE NUMBER OF ENTREPRENEURS?

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Questions we care about (Objectives)

Entrepreneurship education make use of contests, games and other competitions. In our situation where we have a junior startup challenge for secondary level students, which is a combination of theoretical and practical elaborations and supported from the university. These types of contests often have the goal to improve the interest for entrepreneurship or start a business for real. However in our experience, not every student is capable of being an entrepreneur or starting a business. So perhaps it could be also a good result if the participants conclude that entrepreneurship, or running a business, is not their cup of thee. This would avoid them, and the society, to fail and cause damage. This emerges the question: *Why should we focus on improving the entrepreneurial intention of students, if we know that not all students are suitable to become an entrepreneur?*

It is also often mentioned that students with experience in entrepreneurship by their parents or close family are more considering entrepreneurship as a career option. This has its effect at the change of entrepreneurial intention during the education. This leads to the question and discussion: *How should entrepreneurship education differ to students with and without close contact to entrepreneurship?*

Approach

We developed a startup challenge for secondary school students from 15-18 years. At the start and at the end of the challenge we measured the entrepreneurial intent (Thompson, 2009) of the students.

Results

There were 38 participants at the challenge. There were 19 participants (50%) from which we received the pre- and post-measuring. The results show no change in the entrepreneurial intention for the group. When looking at it on a personal level we saw some interesting changes. This indicates that the challenge had significant impact on several of the individual participants. We also found out that the five students whose parents have a business on their own changed their entrepreneurial intention with less than 1 point.

Implications

We presume that not all are students are suitable for a career as entrepreneur. This is best found out themselves before starting a business. That is why we think that measuring the changes of the entrepreneurial intention has more value than measuring the level of the entrepreneurial intention. This includes the need to measure the results on a personal level. Doing so shows that although a group does not change the entrepreneurial intention there can be considerably change at a personal level. This is supported with the result that the students who are expected to have less impact from such a challenge (students who already have close contact to entrepreneurship) indeed did not change their entrepreneurial intention that much.

Value/Originality

Several papers have been published about entrepreneurial Intention. Only a few measure the effect of entrepreneurship education programs that include 'at least pre- and post-measures to assess impact' (Liñán and Fayolle, 2015). Most times they did not measure the impact on an individual level to measure the amount of change, but measured the change in (mean) level of entrepreneurial intention (Fayolle and Gailly, 2015). Focusing on the personal change would help the suitable students to become entrepreneurs, instead of as much as possible.

Key words: entrepreneurship, education, entrepreneurial intention, failure, competition

EMANCIPATING THE 'WHO AM I?' QUESTION IN ENTREPRENEURSHIP

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Questions we care about

Entrepreneurship and thus entrepreneurship education need some fixing. In a time when entrepreneurship is infiltrating everyone and everywhere, we need to ask how this is done for better and not for worse. Many people in society do not find the stereotypic image of an entrepreneur fitting for them. How do we avoid them being alienated by a narrow version of entrepreneurship that simply is not for them? Could we offer tools and terminologies that can emancipate the question "Who am I?" in relation to entrepreneurship? This paper takes the stance that the stereotyped concepts of "entrepreneurship" and "entrepreneur" will not do the job. Therefore, faith is put into deepening our understanding of "being and becoming entrepreneurial". Top-cited research using the term "entrepreneurial" is reviewed. An interpretivist "from within" perspective is applied when answering the main question: *How can the term "entrepreneurial" help in breaking away from narrow and stereotyped conceptions of entrepreneurship, without diluting an entrepreneurial identity into being almost anything for anyone?*

Approach

Literature on stereotypes in entrepreneurship and on previous attempts to broaden entrepreneurship are reviewed, such as the concept "enterprise education" and a framework for entrepreneurial competencies. A systematic literature review on the use of the term "entrepreneurial" is conducted, reviewing 250 articles that use the term "entrepreneurial" in their title. The nine most common uses are reviewed more in-depth. 45 articles are reviewed in relation to what the authors mean when they use the term "entrepreneurial". In the analysis, an interpretivist perspective is applied to the identified meanings of "entrepreneurial", aiming to develop new answers to the question "Who am I?" in relation to entrepreneurship.

Results

250 publications that have the word "entrepreneurial" in their title link the adjective to 99 nouns. Focus is simultaneously on many different aspects of being entrepreneurial. Unit of analysis varies considerably; individuals, teams, organizations, regions and nations. Also, most of the publications explore "entrepreneurial" phenomena as something happening to people or firms "out there" rather than as a more personalized entrepreneurial identity. The term "entrepreneurial" is found to be weakly claimed, making it more open for new understandings than "entrepreneur" or "entrepreneurship". Analysis of findings leads the authors to propose four cornerstones for a more emancipatory understanding of being entrepreneurial, presented as a framework of agency, learning, novelty and value-for-others to guide entrepreneurial people.

Implications

There is a strong potential in offering understandings and tools for being and becoming entrepreneurial that emancipates beyond a narrow view of entrepreneurship as economic value appropriation through new ventures. The proposed framework focuses on value creation and is societal (social, ecological and economic value creation in all kind of contexts).

Value/Originality

This paper, to our knowledge, offers a first systematic review of literature focusing on "entrepreneurial". It also presents a novel, easy to understand and useful framework for what it means to be "entrepreneurial".

IDENTIFY HIDDEN CURRICULUM IN EXPERIENTIAL ENTREPRENEURSHIP EDUCATION THROUGH STUDENT REFLECTIONS

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Questions we care about (objectives)

If we agree that students at an experiential entrepreneurship education program learn from the *social learning* functions within the education, what do they learn? This study tries to answer this question and aim to identify *what* students at an experiential entrepreneurship education learn from the *social learning* functions within the education.

Approach

Student reflections are underused as a source to uncover the hidden learning potential within higher education. This paper analyses reflection papers from 64 first-year students from an experiential entrepreneurship education master program. Thematic content analysis was used to code the different texts from the students' reflective paper. Thus, this paper addresses the following research question: *What topics do students reflect about at an experimental entrepreneurship education program?*

Results

The analysis of student reflections uncovered two main themes: "*Efficient Working and Learning*" (36%) and "*Team*" (32%). The third most reflected theme was "*Motivation* (14%)", followed by "*Creativity and Idea Generation*" (8%). All the student who reflected around "*Creativity and Idea Generation*" was from the cohort 2017 and none from the cohort 2018.

Implications

The paper reveals that there is hidden curriculum present within an experiential entrepreneurship education, and the paper managed to identify themes from the student reflections which can be of interest for educators and researchers within entrepreneurship education who wish to deeply reflect on their practices through listening more actively to their students. The paper provides theoretical implications to the literature related to hidden curriculum and experiential entrepreneurship education by highlighting the importance of understanding student perspectives.

Value /Originality

There is a consensus that entrepreneurship education should rely on *experiential learning*, however these learning methods may put educators in a position where they don't know what the students actually learn, and lose control over the learning from the students. Similar research about hidden curriculum within experiential entrepreneurship education has not been found elsewhere.

Key words: entrepreneurship education; experiential learning; student reflection; hidden curriculum

KOLB INTERRUPTED: A PHENOMENOGRAPHIC STUDY OF EXPERIENTIAL LEARNING IN ENTREPRENEURSHIP EDUCATION

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As entrepreneurship education has grown from an area of practice into an area of scholarship, it has emerged as a multi-disciplinary pursuit best taught and learned using experiential learning. This study aimed to understand the manner in which experiential learning theory is applied to a long-term programme of entrepreneurship education located within but parallel to credit-bearing higher-education studies, in order to understand the manner in which Kolb's theory of learning was being applied, or misapplied, as a pedagogical tool. The research uses a phenomenographic methodological framework, an educational research tradition that seeks to understand the qualitatively different experiences of students within a learning environment. The results of this study yielded an Outcome Space that reflects sixteen qualitatively different ways in which programme participants experienced the entrepreneurship education programme. This Outcome Space exposed four criteria - the nature of the learning environment, the interaction between participants, levels of engagement by participants and reflective practice, that in turn have an impact on the manner in which the programme is experienced by participants. These criteria give rise to qualitatively different ways of experiencing, and the Outcome Space presents a roadmap that can guide educators towards developing experience-based entrepreneurship education programmes that serve to engage participants and in turn lead to action. Paramount among the factors identified is reflection or reflective practice, a cornerstone the experiential learning cycle. This was found to be largely absent within the context of the study, and as such calls into question the manner in which experiential learning theory is and can be applied in different learning and geographic contexts. This study has important implications for practice; as entrepreneurship education and training programmes continue to proliferate, the need to fully understand how learning theory applies to curriculum design and development as well as teaching and learning is necessary. The study was conducted in South Africa, an emerging economy with an educational deficit that leads to differentiated educational histories among programme participants. The study yields important insights into how to manage the integration of a diverse student/participant group into an experiential-based entrepreneurship learning programme. This will help both curriculum and programme designers, and those involved in teaching and learning.

A HYPOTHESIS-BASED DIDACTIC IN ENTREPRENEURSHIP EDUCATION

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Questions we care about (objectives)

Entrepreneurship education primarily concerns teaching entrepreneurship to students so they can become entrepreneurial in their mindset and behaviour. Teachers in continuing education need to learn to become entrepreneurial and to obtain competences in practising entrepreneurship education. This requires 'double-looped didactics'. The question we care about is: What didactical approaches are particularly effective in the transformation from learning to doing entrepreneurship education?

Approach

This paper presents experiences with a particular approach to entrepreneurship education, namely a hypothesis-based didactic inspired by Charles Sanders Peirce's notion of abduction. We have tested this approach in the continuing education of vocational teachers, where teachers, based on observations of their own teaching, formulate hypotheses and afterwards test them in their classrooms.

Abduction is a particular way of reasoning, where one formulates a hypothesis based on single observations (in contrast to deductive or inductive reasoning) and then checks and adjusts the consistency of the hypothesis through iterative testing. This process is similar to entrepreneurial effectuation processes as described by Sarasvathy, where a possibility is discovered and then tested through trial and error. Thus, the ability to set up a general hypothesis based on a single idea or observation can be characterised as both abductive and entrepreneurial reasoning and it is therefore especially interesting to establish a didactic connection between abductive hypothesis building and entrepreneurship education.

With this paper we present a conceptualisation of such a hypothesis-based didactic and its connection to entrepreneurship education and theory in order to discuss the didactic implications and perspectives.

Results

It is a well-known problem that the transfer from theory to practice in continuing education is a challenging process. The connection between an entrepreneurial focus on opportunities and abductive hypothetical reasoning has, in our experience, shown itself to be promising. We see a strong potential in our connecting approach for guiding and framing the didactic transfer from theoretical learning to experiments in the individual practice of vocational teachers.

Implication

This paper outlines the theoretical framework of a hypothesis-based didactic in order to build the conceptual grounding for a didactic model to be used in further empirical investigation. This paper can thereby provide the grounds for systematic research in the continuing education of vocational teachers and it will contribute to the didactics of entrepreneurship education, especially regarding the elements which support transfer from the teachers' own learning to their practice.

Value/Originality

It is the intention that this paper can have an impact on the entrepreneurial didactic of continuing education. The hope is to improve the effect of continuing education by presenting an entrepreneurial didactic design, which scaffolds the students' entrepreneurial learning in connecting theory and practice through a hypothesis-based didactic. Furthermore, we hope to contribute with a new understanding of the relation between entrepreneurship and hypothesis building.

Key words: Entrepreneurship education, entrepreneurial learning, abductive learning, vocational teachers, continuing education

SOCIAL ENTREPRENEURIAL INTENTION – ARE WE BEHIND THE CURVE?

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Questions we care about (Objectives)

The purpose of this paper is to provide insights into the social entrepreneurial intentions of students and whether there is an appetite for studying social entrepreneurship as part of a student's degree.

Approach

The primary data used to answer the research question was collected by the authors from a sample of students attending higher education institutes (HEI's) in Ireland. The data consists of responses from 531 students.

Results

The results show that the vast majority of students have social entrepreneurial intention in that they are interested in starting a business to help others in the future. A significant majority are interested in studying social entrepreneurship as they want to find out more about this domain, however, the research tells us that very few students have the opportunity to access social entrepreneurship modules in HEI's in Ireland. This gives us the impetus to find out why, and build a case for including social/societal focused entrepreneurship into third level programmes with greater frequency.

Research Limitations/Implications

Social entrepreneurship modules are not prevalent in the Irish Third Level Education System which is a limiting factor on the assessment and impact of social entrepreneurship education.

Value/Originality

This research will contribute to the entrepreneurship literature by exploring the extent to which students' exhibit social entrepreneurial intention and give credence or otherwise to the value of including social/societal focused entrepreneurship into third level programmes, this has been identified as a gap in the research literature and is ripe for exploration.

Key words: social entrepreneurship, social enterprise, entrepreneurial intention, entrepreneurial education, pedagogy

VALIDITY PROBLEMS IN QUANTITATIVE STUDIES ON ENTREPRENEURIAL COMPETENCIES

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Questions we care about (Objectives)

Entrepreneurial competencies (EC) are important in entrepreneurship education (EE) because they are thought to drive the success of new ventures and SMEs. The question we care about is whether there is valid evidence in support of the idea that ECs cause business success in the economy. The objective of this paper is therefore to critically analyze the quantitative studies on the relationship between the entrepreneurial competencies of SME owner-managers and the success of their firms, to answer the question of whether there is valid evidence for ECs as causes of business success.

Approach

This paper uses an SLR approach to find quantitative studies on the relationship between the ECs of SME owner-managers and the success of their SMEs. Directed acyclic graphs (DAGs) are used to analyze the causal assumptions of the sampled studies in the context of the surrounding entrepreneurship theory.

Results

The results indicate that 26 of the 27 studies analyzed in this paper lack internal validity. The main threats to internal validity arise due to not including failed entrepreneurs in samples and from cross-sectional research designs that rely on the SME owner-manager's self-reported assessment of their own level of entrepreneurial competencies.

Implications

There is a lack of valid evidence for ECs as causes of SME success. Studies must include data on failed entrepreneurs to be internally valid. The most common research design for studying the relationship between SME owner-manager ECs and business success, i.e. cross-sectional studies that rely on self-reported measures of SME owner-manager ECs, are unlikely to produce valid research and should not be used.

Value/Originality

This paper is the first of its kind in using directed acyclic graphs (DAGs) to model the causal assumptions of quantitative studies on ECs. This paper provides a pedagogical account of how threats to validity arise at the level of individual studies and it indicates how these threats may be overcome.

Key words: entrepreneurial competencies, entrepreneurship education, research design, quantitative, methodology, DAGs

EDUCATING FOR SUSTAINABLE ENTREPRENEURSHIP: LEVERAGE POINTS FROM THE LITERATURE

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Questions we care about

Sustainability issues are one of today's main concerns worldwide. Increasingly, entrepreneurship is seen as part of the solution rather than merely a cause of environmental deterioration (York and Venkataraman, 2010). Seminal publications in entrepreneurship related to sustainable development are now 10 years old (Dean and McMullen, 2007), yet entrepreneurship education has not fully embraced this orientation. Thomas (2018) raises the misalignment between the urgency of sustainability and its peripheral integration into business curricula. Lourenço et al. (2012) argue that the "profit-first mentality" impedes the ability of business schools to deliver sustainability-related education programs. Obrecht (2016) stresses the need for sustainable entrepreneurship education to develop an ethical posture in students, which is a big challenge in business education in general (Arce & Gentile, 2015). Given both the relevance and the challenges of integrating sustainability into entrepreneurship education programs, our concern is therefore related to the possible ways to develop sustainable-oriented entrepreneurs. Hence, the question we want to address in this paper is: "What are the leverage points to educate for sustainable entrepreneurship?"

Approach

Leverage points are "places" in a system on which to act in order to produce changes in the whole system (Olson and Raffanti, 2006). To address our question, we therefore needed to view entrepreneurship as a system, i.e. as a set of interrelated parts into a coherent whole. To do so, we first present the process-driven model of entrepreneurship proposed by Pepin (2012). This model then serves as an analytical tool to organize the most recent and relevant contributions to sustainable entrepreneurship, resulting from a scoping literature review (Arksey and O'Malley, 2005).

Results

This exercise results in four categories (sustainability opportunity identification, sustainable business modelling, sustainable business venturing and sustainable value creation) that are, from our theoretical framework's perspective, the basic activities one must go through in order to launch a successful new sustainable venture. Focusing on those activities allow us to identify specific leverage points which are finally organized around two types of drivers, personal and contextual, relevant to sustainable entrepreneurship education.

Implications

This essay contributes, first, to a much-needed process-driven view of sustainable entrepreneurship (Muñoz and Cohen, 2017) and, second, to the identification of educational "grips" needed to integrate sustainability into entrepreneurship education programs.

Value/Originality

Educating for sustainable entrepreneurship will, hopefully, become the new global standard in years to come. Yet, there are still few reports on how to achieve this kind of entrepreneurship education. This research gives direction and offers several leverage points to design sustainable entrepreneurship education programs.

Key words: sustainable entrepreneurship; entrepreneurship education; sustainable development.

FROM MAKING GADGETS TO MAKING TALENTS: EXPLORING A STUDENT-DRIVEN MAKERSPACE

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Questions we care about (Objectives)

The maker movement has gained increased attention worldwide and has recently spread to universities, contributing to strengthen the entrepreneurial university. The maker movement builds on an individual's ability to be a creator of things, a "maker". In makerspaces, individuals build competence in using new tools and technologies. Makerspace communities are seen as open and democratic social spaces where knowledge sharing and peer-to-peer learning is essential. However, few scholars have deliberately examined the social processes and learning dynamics in makerspace communities. With our research, we contribute to the recent calls for investigating makerspaces and their relevance in enhancing learning in a university context. The overall aim of this research paper is to explore the relevance of making for students' learning. Second, and interrelated, we seek to understand the future role of makerspaces in the entrepreneurial university.

Approach

We used a case study design to obtain insights of the social learning dynamics in a practice community. We used observations and interviews to gather rich data of ten members, including two founders during a 5 months period. This triangulation of methods contributed to validate the different levels of participation and the underlying learning trajectories.

Results

Our study reveals that the development of skills in cutting-edge technology, and the creative use of technical tools and equipment, was at heart of the makerspace. Yet, the makerspace differed from the common ideas of the maker mindset and makerspaces. The students started with inner motivations of play and learning, and then gradually adopted the guiding norms of serious play complying with the founders' idea. In contrast to free choice activities, this makerspace practiced a highly hierarchical and well-managed regulation of activities. The high emphasis on project work and serious play illustrates a community where technology is rather a means to delivering value through projects, than a means to play and learn in itself.

Implications

Peer learning combined with close supervision and guidance from experienced founders offered a unique possibility to learn about technology. The makerspace model represents an advanced type of pedagogy and mastery development in STEM subjects, which may inspire educational designs, but challenge traditional education. Seen in light of the rapid technological development, we are facing the danger of teaching outdated skills. Institutionalizing of the makerspace into education might be on way of meeting this challenge.

Value/Originality

This study contributes by scrutinizing the social learning dynamics in a student-driven makerspace. The research provides insights into makerspace as a producer of talents and re-positions the role of technology transfer and value creation from the entrepreneurial university. Both themes are hitherto scarcely examined.

Key words: maker movement and makerspace, making and maker mindset, entrepreneurial university, social learning dynamics, community of practice

MAKING SENSE OF ENTREPRENEURIAL KNOWLEDGE IN RECOGNITION OF PRIOR LEARNING AND STUDIFICATION PRACTICES

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Questions we care about (Objectives)

The paper focuses on how Finnish HE teaching staff make sense of students' experientially gained entrepreneurial knowledge as part of academic curriculum in entrepreneurship.

Approach

Drawing from a qualitative sense-making methodology, the paper makes use of inductive analysis of personal and group interviews of HE teaching staff regarding practices in recognition of prior learning (RPL) in entrepreneurship and studification of co- and extra-curricular activities that develop students' entrepreneurship competences.

Results

The findings highlight that sensemaking of experientially gained entrepreneurial knowledge is multidimensional. The study participants introduce issues working at different levels including: *theoretical* (denoting entrepreneurship as a discipline), *institutional* (denoting organizational objectives and requirements), *practical* (denoting guidelines and administrative processes) and *HE political* (denoting the role of HEIs in producing entrepreneurial individuals). Especially, the epistemic questions related to control over curriculum are made visible when discussing fitting the entrepreneurial knowledge into the students' degrees via RPL and studification practices.

Implications

While Finnish HEIs have taken up the recommendations provided by the Ministry of Education and Culture on providing the HE students with support for self-employment orientations and entrepreneurship in different forms, they partly struggle with adjusting experientially gained and practice-oriented entrepreneurial knowledge with the academic requirements in connection with RPL and studification practices.

Value/Originality

Research focuses on generating understanding how HEI teaching staff make sense of entrepreneurial knowledge in RPL and studification that are novel practices in entrepreneurship education and allow the students to fulfill their academic requirements in entrepreneurship outside the academic curriculum. This study enables us to understand the complexities related to these novel practices in the field of EE and, to contribute to the discussion on entrepreneurial knowledge development in HE in the broad sense.

Key words: entrepreneurial knowledge, experiential learning, recognition of prior learning, studification, sensemaking

ENTREPRENEURIAL PROTOTYPES: IDENTITY CONSTRUCTION IN ENTREPRENEURSHIP EDUCATION

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Questions we care about There are an estimated 582 million entrepreneurs globally. Despite this, popular literature and social media still focus on a narrow set of stereotypes. Entrepreneurial stereotypes plague the educational environment, as they set preconceptions of what entrepreneurship is, but they are far from representative of the early-stage of venturing, or the broad spectrum of entrepreneurial careers accounted for globally. Entrepreneurial prototypes embody attributes that characterize entrepreneurs “and distinguish them from other groups, including beliefs, attitudes, feelings, and behaviors” used to establish provisional selves when aiming to adopt a new professional role. Entrepreneurial prototypes can serve to provide identity comparisons between an actual self and a possible (future) entrepreneurial self. When addressing preconceptions, prototypes which include counter-stereotypical models are necessary to highlight the breadth of how entrepreneurs are understood. But, one may be challenged to identify such examples, and legitimize them relative to the strongly anchored ‘heroes’. Therefore, the question we care about is: What is the utility and what is the risk in presenting entrepreneurial prototypes in entrepreneurship education?

Approach This paper builds upon narratives from individuals who have recently transitioned into an entrepreneurial role in the last 3.5yrs, defined as ‘early-stage entrepreneurs’. The study employed non-representative, purposeful, criterion sampling. Participants were recruited through relevant professional context/networks. Confirmed participants completed an online questionnaire and 60 minute phone interview. Interviews were recorded and transcribed. Selected participants were coded for prototyping themes established from the literature.

Results The participants studied sought out prototypes to help guide their identity development and practice in their entrepreneurial journey. Typical venues for such prototypes included stories of entrepreneurs as depicted via podcasts, TV shows or in person. Participants were disappointed by or resistant to stories available, as these highlighted high-profile success cases. Rather, participants sought stories of entrepreneurs that did not fall into the “heroic” stereotype, but seemed realistic and relevant to their own context. More realistic prototypes were found through personal networks, sometimes associated to institutional ecosystems. Prototyping was not exclusive to identifying representative individuals in the ‘role’ entrepreneur – such as a provisional self, but also involved prototyping the practices which were attributed to acting entrepreneurially. Socializing a new entrepreneurial identity was particularly valuable when within an entrepreneurial community, as the legitimizing expanded beyond a role-set, towards a community of practice.

Implications There is a need to directly discuss the breadth of definitions of entrepreneurs and entrepreneurship and to engage an appropriate spectrum of prototypes to reflect them. Addressing entrepreneurial prototypes, particularly in comparison to oneself, allows for rich discussion as comparing oneself to an entrepreneurial prototype can indicate comfort levels with certain elements of being an entrepreneur and point to areas where new entrepreneurs are feeling a conflict with another existing identity. While bringing-in ‘real-life’ entrepreneurs from the community can help energize the classroom with stories of real-life experience, it is critical to be mindful to present a broad diversity of entrepreneurs (race, gender, age, personality, background, field, experience-level, etc.), as having students perceive patterns in the speakers may inadvertently aid in reinforcing entrepreneurial stereotypes. Educators can use targeted conversation helped to raise identity reflections that illustrate challenges in associating to the entrepreneurial prototype. Being able to have targeted discussions on how students can reconceptualize themselves as entrepreneurs can be helpful for strategizing with students on how to become comfortable with both their intended future selves and their existing self-concept. Educators also need to consider the impact of social media and popular culture, and train students in filtering inputs and information and find means to appropriately select prototypes that fit their particular interests and context.

Value/originality The paper investigates the way in which preconceptions of entrepreneurship influence entrepreneurial identity development and how this can be utilized or mitigated in the classroom. The paper helps to merge role and activity mimicry in the concept of entrepreneurial prototype, and allow for entrepreneurial prototypes to be ‘future’-oriented rather than dependent upon existing societal images of entrepreneurs/-ship.

TACIT KNOWLEDGE AND IMPLICITNESS IN ENTREPRENEURIAL LEARNING SETTINGS

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Questions we care about / research questions

What parameters constitutes tacit knowledge in entrepreneurship education?

Approach

The current paper is conceptual suggesting a design for research on tacit knowledge within entrepreneurship education. Since this is an overlooked area for empirical investigation the paper suggest and discuss ways forward for designing a case-study that can provide empirical detail to the RQ.

Results

The conceptual understanding of tacit knowledge and implicitness in entrepreneurship education covers a wide range of interrelated areas. The paper suggests an empirical research design that enables to provide documentation and evidence of tacit knowledge and implicitness.

Implications

By better understanding the nature of tacit knowledge and implicitness, educators within entrepreneurship education can benefit from expanding the range of pedagogical and didactic methods used in a classroom. The understanding of tacit knowledge in the relation of entrepreneurial processes can furthermore provide a framework for including tacit knowledge when either engaging in or designing learning processes or settings that includes idea development, creative processes and entrepreneurial actions.

Key words: entrepreneurship education, actions, entrepreneurial leadership, curriculum design, case study

LEARNING TO LEAD IN THE ENTREPRENEURSHIP EDUCATION CONTEXT

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Questions we care about (Objectives)

Objective of this study is to investigate how entrepreneurial leadership actions during educational activities can effect students' entrepreneurial identity and reflections on future employability or self-employment. Questions in focus:

- How can educational activities with focus on entrepreneurial leadership actions enhance the perceived employability amongst students?
- What entrepreneurial actions lead to significant learning events?
- What underlying educational philosophy provide a supportive framework for teaching students to lead in the entrepreneurship education context?

Approach

Through a qualitative case study, the project explores the perceived outcomes of a variety of entrepreneurial leadership actions in an educational program in health at a university of applied science in Denmark. This is investigated through a case study with twenty participants investigated through focus groups, qualitative interviews and observation over two years.

Results

This is a work in progress. The results are still under analysis. The pre-interviews are being analyzed for the current paper indicating some preliminary findings and relevant suggestions to investigate further. However, the preliminary result indicate that especially three parameters are important when students learn to lead in the entrepreneurship education context. First parameter is the concept and understanding of leadership, second is the concept of entrepreneurial actions, and third parameter is the concept of entrepreneurial identity.

Implications

A better understanding of entrepreneurial leadership in entrepreneurship education can provide educators with a closer and thorough development of skills needed by professional practice.

Value/Originality

Through the current case study indications of some of the tensions around leadership development in the early phases (during and right after completing an education) are investigated. Since the study consists of two consecutive years, the data set provides a rich indication of suggested findings.

Key words: learning, leadership, employability, professional identity, case study, entrepreneurial actions.

TOWARDS A SYSTEMIC MODEL FOR THE ASSESSMENT OF ENTREPRENEURIAL COMPETENCIES

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Questions we care about?

How can we define successful entrepreneurship education? Outcome-based methodologies offer limited insights on how to assess the learning process. Thus, entrepreneurship education is envisioned as somewhat of a black box. We can compare the characteristics of a student before and after taking the course, but can tell little about what happens during the course. How can we assess the progress of the learning process in an entrepreneurship course as it takes place? A framework for the assessment of entrepreneurship learning is necessary in order to begin to answer these questions.

Approach

We look at entrepreneurial competencies because these can be developed through training and entail the execution of some actions in a context. This favors the experiential nature of entrepreneurship education. Also, entrepreneurial competencies are known to have an effect on successful entrepreneurial activities. Hence, we take a set of entrepreneurial competencies believed to be standard and comprehensive from the literature and follow learning and evaluation theories to develop the structure necessary to evaluate a competency. That is: a definition, an activity, outcomes, and some scales or scripts. Next we integrate these structures in a model where each competency fits a stage of the entrepreneurial development process.

Results

We propose a systemic evaluation model comprising the set of entrepreneurial competencies. This model is adjusted to the stages in the development of an entrepreneurial project, which is the prevailing learning activity in most entrepreneurship courses. The validation of the hypotheses made in the ideation and business-generation stages is put forth as the space where competency assessment can take place, for evidence from interactions with the context is generated there.

Implications

A conceptual framework for the elaboration of learning and evaluation plans for entrepreneurship courses is provided. This may allow for a more robust and encompassing analysis of entrepreneurial competencies, which have so far always been analyzed individually and with a strong focus on the outcomes, in contradiction to the process-based nature of experiential education.

Value/Originality

This study contributes to the research on entrepreneurship education, in general, and its evaluation, in particular. To the best of our knowledge this is the first comprehensive, conceptual framework for the evaluation of a competency-based entrepreneurship program. Thus, it gives insights to researchers and educators on how to assess the progress of the learning process, and could potentially provide some measure of the success of an entrepreneurship program.

Key words: entrepreneurship, entrepreneurial education, competencies, assessment.

NURSING STUDENTS RECOGNISING ENTREPRENEURIAL OPPORTUNITIES THROUGH A THREE-DAY ENTREPRENEURSHIP CAMP

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Questions we care about

While nursing and entrepreneurship have been a controversial combination, it is now gaining increased legitimacy and interest. The context-specific insights of nurses and nurses acting entrepreneurially may be valuable when changing and developing health care. Unfortunately, knowledge barriers challenge the development of nurse entrepreneurship. This study focuses on entrepreneurship camps in nursing education as a means to develop opportunity recognition, asking; how can an entrepreneurship camp enable nursing students to improve their ability to identify opportunities to act entrepreneurially?

Approach

This is a single case study analysing a three-day entrepreneurship camp for nursing students at a Norwegian university. The study relies on multiple methods; interviews pre-and post-camp with seventeen students, observations during camp and a document analysis.

Results

Most students had scarce prior knowledge of entrepreneurship. Several students explained that the camp seemed irrelevant to nursing and that the mandatory participation caused frustration. Pre-camp students only identified problems in the nursing context but no solutions. During the camp, the students were pushed to imagine combinations of products and resources in a future venture. The camp broadened their view of entrepreneurship and influenced their perspective of nursing. In addition to a more concrete view on potential solutions students seemed to develop their opportunity confidence during the camp. Students saw themselves as potential actors in entrepreneurial processes, discovering that their nursing knowledge could provide unique opportunities to create change for a better society.

Implications

The paper reveals the development of opportunity recognition through the learning process in an entrepreneurship camp. It provides theoretical implications to the literature on entrepreneurship education for nurses and related non-business disciplines, by highlighting the need for context-specificity. The study has practical implications for faculty and administrators facilitating entrepreneurship education for nurses as it shows that only three days may accomplish a small but important change.

Value/Originality

This paper is of value to the research area of entrepreneurship education for non-business students. There is a need for more research about entrepreneurship education for students with context-specific needs, and this paper brings new knowledge about the field of nursing education. This is a context with high barriers to entrepreneurship, and context-specific entrepreneurship education is thus both original and highly valuable. There is a need for more research on the combination of nursing and entrepreneurship and how to tailor entrepreneurship education for this particular audience.

Key words: entrepreneurship education; nurse education; entrepreneurship camp; opportunity recognition

UNINTENTIONAL EXPOSURE TO ENTREPRENEURIAL BEHAVIOR AND VALUE CREATION

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Questions we care about (Objectives)

Recently entrepreneurship scholars have emphasized that the pedagogical choices that support the development of entrepreneurial skills are dependent on the objectives, contents, and constraints of the institutional context of the teaching. Still, the scholarly focus is mostly on entrepreneurship education and less on the teaching outside the entrepreneurship domain. In our study, we focus on unintentionally embedded entrepreneurship education. We are interested in how business school teachers in non-entrepreneurship teaching in higher education unintentionally focus on entrepreneurial skills. We are also interested in what learning methods they are using to embed entrepreneurship in the courses.

Approach

We draw on the concept of embedded entrepreneurship in investigating how entrepreneurial skills are supported in non-entrepreneurship teaching in higher education. We employed a qualitative approach and interviewing 11 higher education teachers. In our thematic analysis we the findings are reflected in the EntreComp framework.

Results

Our findings imply that learning entrepreneurial skills does not need to take place only in the context of entrepreneurship education. Teachers use a variety of teaching methods to embed entrepreneurship in their courses. There are indications that some entrepreneurial skills seem to be more embedded in the courses than others. Business school teachers clearly provide less exposure to for instance creativity, opportunity recognition or valuing ideas. Financial literacy, learning through experience and facing uncertainty are more present in non-entrepreneurship education.

Implications

Our findings imply that the outcome of entrepreneurial pedagogics might not be a number of new startups or increased entrepreneurial activity but the development in perceived entrepreneurial self-efficacy among students. Whatever the outcomes of embedding, it requires that teachers are motivated to embed entrepreneurial methods in their teaching. It is not clear that teachers are overly enthusiastic of entrepreneurship learning per se, but one pedagogical approach could be the concept of blended learning which is understood as a learning environment that combines different modes of teaching styles and methods.

Value/Originality

Teaching entrepreneurial skills, unintentionally embedded or not, may produce important learning outcomes beyond new venture creation. Our findings offer new insights about how different pedagogical practices can enhance students' entrepreneurial behavior and value creation. Our results show that regardless of the teachers' personal opinion about entrepreneurship, they do not seem to oppose using teaching methods that also support entrepreneurship. This kind of unintentional embedded entrepreneurial teaching provides students with opportunities to learn entrepreneurial skills without them even knowing it.

Key words: embedded entrepreneurship, entrepreneurship education higher education

STRUGGLING FOR AUTHENTICITY: A DIALECTIC FRAMEWORK FOR SENSE-MAKING ENTREPRENEURIAL EXPERIENCES

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Questions we care about

Achieving learning environments that corresponds and connects to events, practices and practitioners beyond the confines of the classroom has become a popular strategy to for making higher education learning more relevant and engaging. While it is usually asserted that entrepreneurial competences should be developed by engaging students in learning through entrepreneurship, whether or not students actually interpret the experience they get as authentic and meaningful for entrepreneurial practice is not well-understood. What aspects of engaging in entrepreneurial projects do students find authentic or in-authentic? How can teachers act to bolster the authenticity of entrepreneurial learning environments?

Approach

This paper draws on insider action research undertaken in three iterations of an undergraduate project-based entrepreneurship course, with an explicit ambition to contribute to the capacity of students to connect their previous experiences and expectations of entrepreneurial activities to the experiences gained through the intervention. Classroom observation undertaken from a participating observer position, students' reflective writing and course evaluation documentation served as the empirical base for the study. The data was analyzed through a theoretical thematic analysis focusing on perceived authenticity.

Results

Students were found to struggle with coming to terms with three main aspect of their entrepreneurial projects: contacting externals, engaging in idea development and working with team dynamics. These experiences are discussed in terms of being *authentic struggles*, perceived by some students as the most authentic and by some as the most inauthentic at the end of the course. A multi-level framework is suggested for educators to use for engaging in dialogue regarding the way in which students sense-make the emotional and confounding experiences inherent to entrepreneurial activity.

Value/originality

The findings suggest that students and teacher do not necessarily agree on what can be considered authentic entrepreneurial activity, and that working these disagreements out is not unproblematic. The study highlights the importance of talking about entrepreneurial experiences in the classroom and provide a tools for educators to take active part in students sense-making processes.

Key words: authentic learning, learning through entrepreneurship, experiential learning, reflection, sense-making

THE EFFECTIVENESS OF THREE-DAY ENTREPRENEURSHIP PROGRAMS IN JAPAN

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Questions we care about

The impact of the entrepreneurship university program on entrepreneurial self-efficacy (ESE) and entrepreneurial intention (EI) is a contentious issue. Most studies targeted formal continual programs, whereas, we targeted a non-credit program. We conducted an evaluation of ESE and EI using a pre-post design, on an intensive program based on an experiential learning method and a lean startup / effectual approach. Does a three-day intensive program influence students' EI, and if so, in what ways?

- RQ1. In what ways can a three-day entrepreneurship educational event increase students' ESE and EI?
 RQ2. What personal attributes can be observed in those students for whom ESE and EI increased?
 RQ3. Is there any difference in increase of ESE and EI between the levels of initial ESE ?

Approach

We recruited Startup Weekend participants from nine locations in major Japanese cities between 2016-2018 (n=93).

Results

In terms of RQ1, we recognized ESE and EI increased on all respondents. In terms of RQ2, we conducted a pre-post test after dividing participants into two groups describing each individual's attributes. The result shows respondents categorized in non-business major, low subjective norm and low university climate represent a significant increase in ESE and respondents categorized in non-entrepreneur parent represent a moderate increase. In terms of RQ3, the low pre-ESE group represents a significant increase in ESE, whereas, it does not represent an increase in EI. That result might suggest much time is required to increase EI in initial low ESE types. Actually, we realized some respondents expressed hesitation about becoming entrepreneurs regardless of showing an increase in ESE. The high pre-ESE group represents no significant increase in ESE and a significant increase in EI. Probably, no significant increase is due to a ceiling effect.

Implications

We could verify effectiveness of a three-day program although most of previous studies were targeting formal or continuing semester programs (Karlsson & Moberg, 2013, etc). We confirm that the existing program for adults was also useful for young students.

Value/Originality

We found there were gaps between ESE and EI. One is thought to be a time gap. That is to say, considerable time would be necessary for linking ESE to EI. And the other is a psychological gap caused by inward reflection. Some participants looked back on their experience and re-evaluated their capability. Moreover, they faced the harsh reality of entrepreneurial activities and anticipated major obstacles.

Key words: entrepreneurial self-efficacy, entrepreneurial intention, "Startup Weekend"

ENTREPRENEURSHIP - WHAT ARE WE TALKING ABOUT? - GAPS CREATED BY RHETORICAL CHALLENGES AND MISGUIDED FOCI

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Questions we care about (Objectives)

Entrepreneurship has made its way from business educations into the majority of educational fields in higher education. Much funding is channelled into educations to promote and embed entrepreneurship, but what is entrepreneurship in an educational context and what should it be? I ventured into the world of entrepreneurship education research 5 years ago and I have read and heard many definitions of entrepreneurship; it is the creation of an organization, a method, a process, a mind-set, a trait, value creation or behaviour. On many occasions, entrepreneurship is used interchangeably with enterprise blurring the borders of the terms. When educators and researchers operate with vague definitions and/or different understandings of the term gaps are formed, both within the field of entrepreneurship education and between the field and other educational fields, by this rhetorical challenge. It poses as a problem for developing entrepreneurship as a field of research and in implementing entrepreneurship education in practice. Therefore, once again this paper raises the question “what are we talking about when we talk about entrepreneurship in higher education?” and maybe more importantly “what should we be talking about?”

Approach

Starting from key contributions in relation to definition issues in entrepreneurship and entrepreneurship education (EE) and snowballing, a minor literature review has been conducted to identify definitions of entrepreneurship, primarily relating to EE, in theory. The result was compared with empirical data of definitions in practice from five different Danish engineering educations. Based on these definitions, and drawing on practical experience, a conceptual discussion is spurred. A discussion about what entrepreneurship education should be about, in higher education, to start bridging the gaps.

Results

Entrepreneurship is defined in many ways both in theory and practice. In the definitions there appears to be two foci, a people focus and a process focus. With the definition issues many descriptions of entrepreneurship becomes outcome focused. The described outcome vary from the narrow establishment of a new economic entity to the very broad new value creation.

Implications

One final suggestion of how to define entrepreneurship to bridge the rhetorical gaps is not proposed by this paper. It acknowledge the multiple definitions and advocates for explicitly defining entrepreneurship in any given context. Furthermore, it seeks to raise the question of not only what is entrepreneurship but also what should it be in a higher educational context. In this connection a greater focus on intrapreneurship is proposed along with the embedment of enterprise in general formation.

Value/Originality

This paper seeks to shed light on the multiple definitions of entrepreneurship that is in play in theory and practice in entrepreneurship education. The multiple definitions of entrepreneurship can be the source of gaps between researchers and educators. However, bridges can be built through explicitly defining the term. In future reference, what should entrepreneurship be about in higher education? This paper takes a critical position in relation to the relevance of entrepreneurship, as new venture creation, for the majority of the student body. In extension, enterprise education, as acting on opportunities, easily becomes intangible and the utility can be difficult for students to grasp. For this reason, it is proposed that in the future more attention should be directed towards intrapreneurship. This focus could potentially help students bridge the gap between being learners and becoming value-creators as employees.

Key words: entrepreneurship education, definitions, intrapreneurship, rhetorical challenges, development

TRIGGERING IDENTITY PLAY IN ENTREPRENEURSHIP EDUCATION THROUGH GAME-BASED LEARNING

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Question we care about

How can we as entrepreneurship educators facilitate experimentation with possible selves through authentic, coherent, and legitimate self-narratives to help the narrating student internalize a new role identity?

Approach

Research on entrepreneurial identity often emphasizes narratives and storytelling as an important part of entrepreneurial identity transition and construction (Johansson 2004; Fletcher & Watson 2007; Steyaert 2007; Harmeling 2011; Rigg & O'Dwyer 2012). A central aspect of this professional transition is the actual experimentation with possible selves through self-narratives and the narrators' evaluations of these in order to internalize a new role identity (Ibarra & Barbulescu, 2010). Throughout the experimental process, self-narratives are then used to revise and reconstruct identities, which make self-narratives expressive as well as constitutive to identity in the sense that the entrepreneurial subject has to become explained and created itself (Steyaert, 2007). Facilitating and assisting entrepreneurial identity transitions through the experimentation with multiple self-narratives, a process we refer to and conceptualize as identity prototyping, is thus an important aim for entrepreneurship education or any other activity aimed at promoting entrepreneurship as a career choice.

To achieve this objective, this paper combines research on entrepreneurship education with research on identity construction and self-narratives during work role transitions. Furthermore, we use game-based learning (GBL) initiatives to enable both the act of identity prototyping as well as the necessary reflection connected to the activity (e.g. Pivec & Sfiru, 2004). Establishing the importance of identity in entrepreneurship education activities the paper then uses insights from research on professional role transitions to organize a conceptual framework that signifies the core adaptive elements and tasks involved in role transitions and how these tasks may be facilitated through self-narratives. Establishing the importance of the self-narratives on its own will not necessarily lead to identity prototyping, i.e. we have to consider a delivery mechanism to deliver this to the target audience – students – in a convincing manner. It is here that we identify GBL as a suitable delivery mechanism to facilitate identity prototyping via a coherent, legitimate framework that will enhance the perceived authenticity and validation of students' self-narratives.

Results

The paper offers a conceptual framework for working with identity prototyping in entrepreneurship education using GBL as a pedagogical method of choice to facilitate identity play through experiments with self-narratives and possible selves. At centre stage is a gamified development of authentic, coherent, and legitimate self-narratives in a class room setting in conversation with peers.

Implications

The implications for entrepreneurship education are that we should utilize and facilitate identity prototyping as an important part of entrepreneurship education. Playful Identity prototyping will enable entrepreneurial learning and collaboration as well as the potential realization of an entrepreneurial possible self.

Originality/value

While 'identity' as a phenomenon has attracted much attention recently (e.g. within entrepreneurship education there is only little research suggesting how to work and play with identity transitions in the class room. Moreover, while the relationship between narratives, storytelling and games is both well-known and documented (Simons, 2007), the link between the narratives in a gamified environment and how it could be useful for entrepreneurship education is rather unexplored. Finally, various prototyping activities is a well-known and accepted concept in Entrepreneurship Education. By adding Identity as one of the many things one can prototype, we believe that this will only lead to better and more impactful entrepreneurship education.

VICARIOUS LEARNING FROM ENTREPRENEURIAL FAILURE

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Entrepreneurship education (EE) has become a rising phenomenon across institutes of higher education in various corners of the world. Factors such as its association with economic growth, changes in the labour market, and the increased -sometimes rock star-like- popularity of contemporary entrepreneurs have contributed to the rapid rise in supply and demand of EE. Higher education institutions in the Netherlands have followed the same trend and included programs and minors in their curricula.

Conspicuously, most programs, courses and modules on offer focus on aspects of entrepreneurship related to the fostering of start-up, growth and success. However, adversity and failure are, in fact, more common than success. Based on initial studies looking at the negative financial, social, psychological and inter-relational outcomes for both the entrepreneurs and society, it is surprising how little attention has been devoted to these topics inside EE.

The lack of attention for entrepreneurial adversity, failure and recovery may have several causes but given the occurrence of failure in entrepreneurship, when students do not address it, they develop an incomplete and unrealistic picture of being entrepreneurs. Moreover, it prevents them from developing the necessary skills and tactics to deal with problematic situations and to reduce its associated costs.

Hence, we were encouraged to create a module that empowers students, rather than demotivate or scare them and that builds on the notion of vicarious learning. Vicarious learning is a form of individual learning that occurs through being exposed to and making meaning from another person's experience. Specifically we integrated a plug-in module that required students to interview a (previously) failed entrepreneur, and apply their reflection in their own prospective venture.

Taking a qualitative approach and based on the students' reflection reports, we sought to establish whether and how they were able to draw lessons learned from the entrepreneur's experiences and whether they translated these lessons into ideas for action in their own future ventures. To determine the influence of being exposed to failure on their own entrepreneurial motivations, we analysed the self-reported changes in their reflection and their intentions to engage in entrepreneurial activities themselves.

Using a qualitative approach and drawing from a subsample of 81 reflection reports our initial analysis shows that students are able to learn lessons and reflect on these in relation to what it takes to be an entrepreneur but that most of them find it difficult to translate this to their own future ventures. This case is also seen in combination with students whose own entrepreneurial aspirations are not yet clear. Most importantly, we showed that addressing this topic does not seem to lead to significant reductions in student's entrepreneurial intentions – a crucial aspect that some educators could be worried about.

With our study we aimed to contribute to the literature on EE in a way that sheds light on the inclusion of the topic of failure and recovery in existing entrepreneurial programs. We show the value as well as the limitations of vicarious learning through interviews with entrepreneurs who have experienced failure themselves. To complete the picture about the learning effectivity of the vicarious learning, a longitudinal follow up of the business plans and their execution could be carried out.

EXPERIENCED ENTREPRENEURIAL LEARNING AND PREFERRED LEARNING STYLES

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Questions we care about (Objectives)

Are students with extensive entrepreneurial experience more concerned about how they learn and how this learning fit their preferred learning style? Experiential learning can be considered as an important approach to teach entrepreneurship (NIRAS, 2008). Entrepreneurial learning theory defines learning as “*the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience*” (Kolb 1984:41). How do learning styles relate to students’ previous entrepreneurial learning? By answering the related questions, more insights might be provided into entrepreneurial learning.

Approach

In order to reveal the links between gained entrepreneurial experience and preferred learning style, we examine students from South-Africa (n=1270), Norway (n=834), and Finland (n=18). Among these are 1128 males and 994 females. These students were then asked to report their preferred learning style through previously used and verified Likert-scale measures on preferred learning styles (Manolis et al., 2013), as well as asked to respond yes/no to items capturing their level of entrepreneurial experience.

Results

A two-dimensional Principal Correspondence Analysis explains 35% of the variance in preferred learning style modes among the eight groups of entrepreneurial experienced students. The x-axis reveals that a match between the offered and the preferred learning style mode is more important for the highly entrepreneurial experienced students than for the less entrepreneurial experienced students.

Implications

If students with entrepreneurial experience have stronger concerns for how they learn, they might have grown this concern through their entrepreneurial learning path. If experienced portfolio entrepreneurs also have a stronger concern for how they learn than do novice entrepreneurs, we might be closer to explain the content of entrepreneurial learning. Further, it is found valuable for students to be aware of their primary learning styles, since these students are more prone to transfer their knowledge into practice compared with students who don’t know their preferred learning style(s).

Value/Originality

Scant research has investigated the possible links between entrepreneurial learning experiences and preference for learning styles. In this research we explore these links and points to how these insights could inform entrepreneurship education. We also explore the relationship between students’ past entrepreneurial experiences as one form of entrepreneurial learning and learning style preference, aiming to bridge the two research fields.

Key words: experiential learning, learning styles, entrepreneurial experience, entrepreneurship education

MEASURING ENTREPRENEURIAL MINDSET: DEVELOPING IMPLICIT AND SITUATED MEASURES TO ASSESS ENTREPRENEURIAL GROWTH MINDSET

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Objectives

The object of this paper is to introduce growth mindset into entrepreneurial mindset, review its conceptualization and discuss common measurement methods and their downsides. This paper proposes to measure mindset with implicit and situated measurement instruments, presents a first experiment with which implicit and situated measures and mindset specific interventions were tested and discusses first results.

Approach

For a broader conceptualization of the construct mindset literature from the field of cognitive, social and positive psychology were reviewed. A twofold approach is proposed to systematically implement growth mindset theory into entrepreneurship education. In addition, an experiment was conducted, which used proven explicit measurements, a new developed implicit measurement using the lexical decision task, a new developed situated instrument using case vignettes and a new developed growth mindset intervention which used a collection of research based growth mindset interventions from common literature. Outcomes were measured before the intervention, post the intervention and one week later.

Results

Reviewing the different literature of implicit theories and entrepreneurial mindset showed, that there is no common conceptualization of the concept mindset and entrepreneurial mindset. Furthermore, in many times a specific definition is absent, exists on a very general level as a way of thinking or acting or is a bundle of different constructs put together. Results of the experiment showed a significant effect of the developed intervention on the explicit measure of growth mindset. Small effects were found in the case of the implicit measurements which points in the right direction, but high failure rates in the lexical decision task have to be taken into account for further research.

Implications

On a conceptual level, a more precise definition for mindset in general and for entrepreneurial mindset specifically have to be found. For the implicit measurement of growth mindset small adjustments have to be made and retested. In further steps growth mindset has to be transferred to the domain of entrepreneurship and domain-specific implicit theories have to be conceptualized and tested.

Key words: entrepreneurial mindset; growth mindset; implicit theories; implicit measurement of mindset; situated measurement of mindset; lexical decision task