Calling for student engagement in an entrepreneurial university

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INTRODUCTION

Universities desire to become entrepreneurial (Rae et al., 2009). This change in mentality can be traced back to the early 1980s when universities started to create stronger links with industry and take a more active role in regional development (Mascarenhas et al., 2017). As a result, the vision and mission of entrepreneurial universities has become a broadly researched topic (e.g. Urbano and Guerrero, 2013; Rubens et al., 2017). In recent years, the stakeholder approach to entrepreneurial universities has raised more interest among entrepreneurship scholars; as a result, students have begun to be recognized as an important internal stakeholder group within an entrepreneurial university (Clauss et al., 2018; Redford and Fayolle, 2014). This reflects the adaptation of the wider perspective of the entrepreneurial university, which emphasizes the development of an entrepreneurial culture at all levels of the university (Urbano and Guerrero, 2013).

Subsequently, discussions on universities as entrepreneurial ecosystems have emerged (Hayter, 2016). In successful entrepreneurial university ecosystems, all stakeholders should be involved in entrepreneurial activities (Greene et al., 2010). Hence, all members should be invited to develop the community (Greene et al., 2010; O'Brien et al., 2019). However, research conducted among university actors tends to focus on the university management or academic staff's point of view (Guerrero and Urbano, 2012), while the student perspective remains neglected. As the literature review conducted by Clauss et al. (2018) reveals, only 6 out of 108 papers published

between 1900 and 2015 addressed students as stakeholders in entrepreneurial universities. This is a somewhat perplexing result considering that one of the key dimensions of the entrepreneurial university is to create an environment that encourages and supports the development of entrepreneurial behaviour and mindsets of students and university staff (Guerrero and Urbano, 2012; Hannon, 2013). One reason for this may be that students are not necessarily seen as equal stakeholders in community development (Clauss et al., 2018).

Acknowledging that students are an important, but often neglected, stakeholder group in entrepreneurial universities, there is a need to strengthen discussions and research on the role of students and to explore how this approach has been studied in the existing research on entrepreneurial universities. Further, as Guerrero and Urbano (2012, 55) underline, an entrepreneurial university should be seen as 'an instrument that not only provides a workforce and value added with the creation or transformation of knowledge but also improves the individual's values and attitudes towards these issues.' Nonetheless, there seems to be a lack of research focusing on student engagement in extra-curricular activities which would allow students' voices to be heard in the university community (Trowler, 2010). This calls for us to address the knowledge gap that exists in understanding students' engagement in entrepreneurial universities. Therefore, this chapter participates in this discussion and applies a critical approach to the predominant administration-centred approach which has focused more on the technology transfer discussion (Mascarenhas et al., 2017). In this chapter, we address the following questions: Why should student engagement in entrepreneurial universities be studied? How can student engagement in entrepreneurial universities be studied? This chapter first introduces entrepreneurial university as a research topic and conceptual construct. Drawing from higher education research, the next section addresses different viewpoints on student engagement. Finally, the chapter ends with a research agenda for the future.

ENTREPRENEURIAL UNIVERSITIES AS A RESEARCH TOPIC

Entrepreneurial universities

An entrepreneurial university is a multifaceted concept and it can be studied from different perspectives. Furthermore, it is important to clarify what we mean when talking about entrepreneurial universities. The different conceptualizations reflect the emergent nature of entrepreneurial universities. According to Hannon (2013), an entrepreneurial university is an agile organization adapting its actions, due to new challenges and under pressure, in order to find new solutions to address the demands presented by unpredictable and uncertain environments. Etzkowitz (2013) states that entrepreneurial universities evolve through three different phases, starting from 1) setting their own strategic priorities and seeking and negotiating funding accordingly, 2) commercializing the intellectual property and establishing their own technology transfer capabilities and further 3) taking a proactive role in regional development. Furthermore, entrepreneurial universities are shifting from the narrow elitist view of entrepreneurship education focusing on start-ups and moving towards universities that provide entrepreneurship education which is relevant for everybody and that acknowledge a broader range of entrepreneurial behaviour and entrepreneurial activities (O'Brien et al., 2019).

Occasionally, the definition of an entrepreneurial university arises from the university's third mission (Wissema, 2009; Etzkowitz, 2016), where the university's core missions of teaching and research are crucial, and the third mission, societal interaction, is tackled as an all-embracing concept and solution for a majority of societal challenges, competitiveness problems and unemployment (Lahikainen et al., 2018; Rubens et al., 2017). Moreover, the concept of academic entrepreneurship is used as a partial synonym for entrepreneurial universities, where commercialization, spin-offs, patenting and licensing are all embraced (Bronstein and Reihlen, 2014; Grimaldi et al., 2011). According to the systematic literature review by Mascarenhas et al. (2017), research on entrepreneurial universities is strongly associated with academic entrepreneurship and the creation of technology-based companies. This is not surprising, because entrepreneurial universities are seen as an answer to the need for economic growth by transferring knowledge and to fulfilling the needs for increasing global academic competition (Wissema, 2009).

As can be seen above, the emphasis on studies concerning entrepreneurial universities has been on technology-transfer and commercialization related activities. However, in this chapter, we take a broader view and build our approach on a holistic perspective of entrepreneurial universities. That is, in addition to the aforementioned aspects, in a holistic view entrepreneurship and an

entrepreneurial approach are embedded in all the activities of the higher education institution (HEI), starting from the strategy and followed by appreciating an entrepreneurial mindset in the students and faculty members (Lahikainen et al., 2019; 2018; Greene et al., 2010). In this chapter, we focus on the student perspective, and especially on student engagement in entrepreneurial universities.

Students in entrepreneurial universities

As highlighted in the previous chapter, entrepreneurial university research is strongly focused on academic entrepreneurship and the creation of technology-based companies (Mascarenhas et al. 2017). The few studies that include a student perspective, mainly explore the involvement of students in the venture creation process of university-based spin-offs (Boh et al., 2016; Hayter et al., 2017; Jansen et al., 2015; Lundqvist and Williams Middleton, 2013). Further, in those studies, the students seem to play only an indirect role in the technology transfer and development of university-based spin-offs (Boh et al., 2015; Rasmussen and Wright, 2015). Additionally, universities' entrepreneurship initiatives, such as entrepreneurship programmes and curricula, have been separate for the students and faculty (Huang-Saad et al., 2017).

Students are recognized as a potential resource that could be stimulated in order to get them involved more systematically in the commercialization actions of university-based inventions (Jansen et al., 2015). Although students are recognized as a potential resource, the current studies tend to take a commercialization approach towards entrepreneurial universities. According to the study by Åstebro et al. (2012), university graduates establish more start-ups than faculty members, and consequently graduate students could play a similar role as individual faculty member entrepreneurs in university-based spin-offs. The development and success of student-led spin-offs are, however, closely linked to the availability of and connections to relevant contacts and their resources in the surrounding ecosystem. Furthermore, support mechanisms and programmes, as well as networks, can be unknown to graduate students (Hayter et al., 2017). This means that, in addition to offering new study programmes that foster student entrepreneurship, smooth information flows between all stakeholders are essential to the functioning of entrepreneurial universities and in their ecosystems (Ferreira et al., 2018).

However, some studies apply a broader perspective, by considering the involvement of students in commercialization of technology within a university entrepreneurial ecosystem (Levie,

2014), different types of entrepreneurship education programmes (Culkin and Mallick, 2011; Rasmussen and Sørheim, 2006; Ribeiro et al., 2018) or venture creation programmes combining entrepreneurship education and technology transfer (Lackéus and Williams Middleton, 2015).

Siegel and Wright (2015) called for a wider perspective on academic entrepreneurship that would involve more stakeholders, including students. Some studies that have applied student perspectives have investigated the university's support for academic entrepreneurship from the PhD students' points of view (Bienkowska et al., 2016) and the influence of research and teaching activities on graduate start-ups (Marzocchi et al., 2017). Based on a survey conducted among all PhD students in a Swedish university, Bienkowska et al. (2016) suggest that PhD students should especially be put in a central position, when attempting to create a more entrepreneurial university, since they are more receptive to communication about the commercialization of results than senior academics. Further, the studies based on the Global University Entrepreneurial Spirit Students' Survey (GUESSS) investigating the university's influence on student entrepreneurship and student involvement highlight the importance of cross disciplinary learning opportunities and social networking among students (e.g. Bergman et al., 2016; Morris et al., 2017)

Taking into consideration the social context of student entrepreneurship, it is important to enhance the social networking opportunities of students in the university community by integrating different programmes and activities, as well as enhancing the inter-relationships between different actors (Boh et al., 2016; Morris et al., 2017). This means universities should offer programmes and practices for cross-disciplinary teams, such as training and education for faculty members and students (Bergmann et al., 2016), as well as informal opportunities such as mentoring programmes, business accelerators/incubation programmes and business plan competitions (Boh et al., 2016; Wright et al., 2017). Universities should also involve students in venture creation with scientists through action-based education (Lundqvist and Williams Middleton, 2013). Additionally, student-led entrepreneurial clubs or societies can act as vehicles for engaging students in an entrepreneurial community and can offer them extra-curricular learning opportunities (Pittaway et al., 2015). These clubs and societies can also increase the interaction between students and the stakeholders of a surrounding entrepreneurial ecosystem and enhance the proactive formulation of an entrepreneurship agenda for mutual benefit and synergy (Björklund and Krueger, 2016).

As can be seen, the current literature is strongly built on commercialization and technology-transfer processes of universities, with the assumption that if students are involved,

they have an indirect role in entrepreneurial processes, e.g. through thesis and projects related to university spin-offs (Rasmussen and Wright, 2015). Furthermore, if students are not aware of alternative positions available for them, the students may see themselves more like customers of the university (Niemi and Tuijula, 2011). If so, their involvement and engagement in the university community may be a challenge. Therefore, we combine views from entrepreneurial university literature and student engagement literature. Thus, the next section outlines the existing research on student engagement focusing on helping students achieve positions in which they are seen as an equal stakeholder group in an entrepreneurial university. It is important that students can interact with other students, staff and other stakeholders in ways that allow their voices to be heard.

STUDENT ENGAGEMENT

Viewpoints on student engagement

The modern student engagement literature has its historic roots in higher education studies (e.g. Astin, 1984) concerned with student involvement and it has received increasing academic attention since the mid-1990s (Trowler, 2010). Student engagement is a fuzzy concept with multiple meanings depending on the context (Vuori, 2014) and object of engagement (Ashwin and McVitty, 2015). Fredricks and McColskey (2012) defined engagement as a multidimensional construct, including behavioural, emotional and cognitive dimensions. Behavioural engagement includes, extra-curricular and other social activities, for example. The emotional dimension relates to the sense of belonging and the connectedness to the educational institution, while the cognitive dimension refers to students' investments in their learning (Fredricks et al., 2004; Fredricks and McColskey, 2012).

Student engagement does not take place in isolation, and therefore it cannot be separated from its environment (Fredricks and McColskey, 2012). According to Trowler (2010), student engagement is the responsibility of both students and their institutions. Coates (2005, 26) emphasized that 'Learning is seen as a "joint proposition"…., which also depends on the institutions and staff providing students with conditions, opportunities and expectations to become involved. However, individual learners are ultimately the agents in discussions of engagement….' Consequently, recent discussion on student engagement has focused more on finding different ways that educational institutions are fostering student engagement (Budd, 2017; Hockings et al.,

2007; Mandernach, 2015; Masika and Jones, 2016) and involving students in shaping the learning societies of which they are a part (Vuori, 2014; Ashwin and McVitty, 2015). Pike and Kuh (2005) captured a social view of student engagement as part of the concept of institutional engagement. This means that when intellectually stimulated, students are engaged in a variety of academic activities. Additionally, by being interpersonally supportive, students may have many contacts with faculty members inside and outside the lessons (Pike and Kuh, 2005). Hockings et al. (2007) and Koro-Ljungberg (2007) point out the teacher's role in engaging students in their studies and environment is important by emphasizing each student's rights and allowing different students' voices to be equally heard. This supports involving the teaching staff as informants in studies focusing on student engagement in entrepreneurial universities. Furthermore, Kuh (2009) and Magolda (2005) pointed out that students may engage themselves in extra-curricular activities and impact the university community by participating in different committees or groups, as an example. Referring to Lizzio and Wilson (2009) the students should be functionally involved in decision making processes at the university level to benefit the university.

As can be seen above, student engagement is a widely used concept in educational research and student engagement is seen as one of the key ingredients in developing learning communities in higher education (Ashwin and McVitty, 2015). This developmental characteristic, as Ashwin and McVitty (2015) further explain, means that student engagement entails the aspect of change. Yet, student engagement, involving the idea of student agency in learning communities, has not received much attention in entrepreneurial university research. Thus, in the following we link the student engagement perspective with discussion on entrepreneurial universities.

The need for student engagement in entrepreneurial universities
According to the stakeholder approach (Clauss et al., 2018), students are considered not only as 'consumers' of higher education, but significant actors in entrepreneurial universities and in wider entrepreneurial ecosystems. Seeing students as one of the core stakeholder groups within an entrepreneurial university also calls us to look for the different ways that students are engaged with entrepreneurial university structures and activities (Clauss et al., 2018). Drawing on higher education research, student engagement means much more than simple participation in courses and extra-curricular activities, as it also incorporates feelings and sense-making as well as activity (Trowler, 2010). According to Planas et al. (2013, 578), one of the main reasons for low

participation is that students perceive the university as an institution which is 'not their own' and one which they are only 'passing through'.

Increasing student engagement in entrepreneurial universities requires supportive initiatives from different hierarchical levels within the university. For example, the study by Bienkowska et al. (2016) on PhD students indicated that implementing policies on the university governance level is not enough, but that perceived support coming from the faculty level is also needed. Similarly, a study by Kahu (2013) emphasizes that relationships with staff and feelings of being part of a learning community have a positive influence on student engagement.

Furthermore, student engagement and participation in the university and wider entrepreneurial ecosystems require resources and flexibility from the university management in order to legitimize the internal initiatives at the university. For this reason, it could be likely that such programmes would be implemented without formal connections to study programmes. (Rasmussen and Sørheim, 2006). Moreover, universities aiming at developing student entrepreneurship need to interconnect the 'traditional' model based on the commercialization of research with a 'student-based' entrepreneurship model and develop them in parallel, as well as implement internal changes to increase cooperation within the university and focus more on behavioural transformation than on venture creation (Matt and Schaeffer, 2018).

RESEARCH AGENDA FOR THE FUTURE

Why to study student engagement?
We chose students' engagement as a key concept for our methodology. We see students as an important, but neglected, stakeholder group in entrepreneurial universities. Studying student engagement in entrepreneurial universities is a complex theme, which calls for pertinent methodological choices. Thus, in this chapter, drawing from student engagement research combined with a holistic entrepreneurial university approach, we outline new potential topics and methodological approaches to study student engagement. The existing research on students tends to focus on the involvement of students in technology transfer and the commercialization actions of the university, thus limiting the positions available for students (Boh et al., 2016; Hayter et al., 2017; Jansen et al., 2015; Lundqvist and Williams Middleton, 2013). Venture creation programmes (Lackéus and Williams Middleton, 2015), action-based entrepreneurship education

(Rasmussen and Sørheim, 2006) and student-led entrepreneurial clubs (Lahikainen et al., 2018; Pittaway et al., 2015) seem to be prominent ways to engage students in the university community. In the context of entrepreneurial universities, behavioural and emotional dimensions are interesting aspects to examine, since they offer lenses to investigate student engagement as a social construct, which can include various formal and informal activities (Fredricks et al., 2004; Fredricks and McColskey, 2012) and incorporate feelings and a sense of belonging (Trowler, 2010).

Instead of considering students merely as 'customers' passing through the university (Niemi and Tuijula, 2011; Planas et al., 2013), they need to be seen as significant actors (Clauss et al., 2018) and equal stakeholders in the university community, who should be engaged in developing the university community and actively involved to informal and formal activities and decision-making processes (Lizzio and Wilson, 2009; Pike and Kuh, 2005; Rasmussen and Sørensen, 2006). To increase the students' entrepreneurial engagement in formal university activities more attention could be put, for example, on examining different ways how lecturers' possibilities, abilities and resources to make students' voices heard could be increased. Furthermore, students' engagement could also be studied through an entrepreneurial lens by focusing on the students' ways to participate in their extra-curricular activities and student clubs. Conducting research, for example on these different student-led initiatives, through the lens of student engagement would contribute to the current literature on entrepreneurial university.

We set our focus on students; however, there might be also other interesting but, as of yet, understudied stakeholders in the entrepreneurial university ecosystem. Therefore, in the future, researching the involvement of other understudied stakeholder groups within and outside the university, such as political initiatives, competitor universities, and press, could generate more understanding of the topic, especially how they possibly impact students' experiences and their engagement with the university (Clauss et al., 2018).

How to study student engagement?
Owing to the multidimensional nature of student engagement, multiple ways of studying and assessing the focus, level and nature of engagement, capturing all dimensions, are needed. Student engagement can be assessed at both the institutional and course levels. Institutional-level assessment methods include student self-reports, experience sampling, interviews, observations

and focused case studies (Fredricks and McColskey, 2012; Mandernach, 2015; Vuori, 2014), for example.

When studying student engagement in their own environment, which in this case would be an entrepreneurial university, using behavioural and emotional approaches, self-reporting survey measures may be used, as these are the most common methods in student engagement studies; whereas, observation better suits behavioural engagement (Fredricks and McColskey, 2012). To study student engagement in the class or educational institution, it is possible to exploit experience sampling (ESM) or different interview techniques (Fredricks and McColskey, 2012). Narrative and descriptive techniques may be better suited than pre-specified coding categories for measuring the multidimensional construct of engagement (Fredricks and McColskey, 2012).

Methodologically, this means that a mixed-methods approach needs to be more rigorously applied. For future studies, we suggest using mixed methods based on large quantitative surveys on student engagement at the institutional level. The results of the quantitative study could be deepened by micro- or meso-level qualitative data, based on elements such as student self-reports or thematic interviews. Further, it would be very ambitious to create a longitudinal data gathering setting, focusing on students' engagement and experiences of entrepreneurial universities. It would be captivating to analyse and compare the data gathered at the beginning of the studies, in the middle, at the end and some years after graduation.

Teachers' checklists or rating scales may also be useful methods for studying student engagement (Fredricks and McColskey, 2012). Observational methods are recommended in order to better discover variations in student engagement relating to affordances in contexts. However, as noticed in student engagement studies (Fredricks & McColskey, 2012), in entrepreneurial education-related studies (Blenker et al., 2014), and in business ecosystem studies (Järvi & Kortelainen, 2017), the obviously dynamic nature of student engagement in an entrepreneurial university would benefit from a wide range of methods, connecting both quantitative and qualitative approaches. As an example, Hockings et al. (2007) studied higher education students' academic engagement using questionnaires, focus groups, and finally to gain deeper insight into the students' lives, through interviews. To investigate the perceptions of business management students regarding their engagement in learning together, Masika and Jones (2016) utilized Wenger's (2009) social theory of learning, which advances a multi-dimensional view of learning, and this fits with a multi-faceted nature of engagement. Finally, as Lawson and Lawson (2013)

suggest, more nuanced intervention research, interdisciplinary research design, and research conducted by teams are needed. Interestingly, similar findings on research methodology have been presented in the research field of entrepreneurship education. This is in line, for instance, with Fayolle's (2013) findings about a lack of variation in methodological approaches. In the same vein, Blenker et al. (2014) call for methodological triangulation to bring more depth and width into findings. They claim that research would benefit from combining the empirical sensitivity of qualitative techniques and the strict rigour of quantitative measuring.

Adopting a wider perspective of the entrepreneurial university requires that instead of concentrating only on one stakeholder group, more attention needs to be put on the linkage and interplay of the stakeholders. However, here we have deliberately focused on students' perspective as this stakeholder group has been understudied (Clauss et al., 2018). We consider this a limitation, and therefore challenge ourselves and other researchers to broaden the view to be more holistic. For example, the concepts and challenges of entrepreneurial universities, as well as the university's entrepreneurial ecosystem, entrepreneurship education and entrepreneurial learning could all be studied at the same time.

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