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Transformation in the liminal space ‘in between’ student and entrepreneur

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ABSTRACT

This paper builds on the literature on transformative learning in entrepreneurship education by drawing on the concept of liminality. Scholars have argued that entrepreneurship education should provide experiences that challenge students to think differently about their skills and abilities while developing entrepreneurial attitudes that render them capable of coping with rapid societal changes. The study takes a narrative approach to an in-depth exploration of students' liminal processes in a venture-creation programme: How do the students cope with and learn from being in the liminal space ‘in between’ student and entrepreneur? The findings suggest that students find different ways of coping with liminality and that peers play a vital role in students' transformational processes by providing feedback and stimulating reflection. By exploring the ‘black box’ of student learning processes in entrepreneurship education, this study contributes to the literature on transformational learning and how individuals become entrepreneurial. Moreover, this paper builds on the literature by suggesting how learning *through* entrepreneurship can help develop liminality competence.

1. Introduction

Entrepreneurship education (EE) is expected to be transformational in the sense that individuals undergo a change from being students to viewing themselves as entrepreneurs (Nielsen & Gartner, 2017). To facilitate this process, Neergaard et al. (2021) argued that EE must provide experiences that challenge students to think differently about their skills, abilities and experiences, thereby changing their mindset from merely seeing obstacles to perceiving possibilities for themselves in the future. Kakouris and Liargovas (2021) proposed that learning *through* entrepreneurship by engaging in the entrepreneurial process and real-world problems provides experiences that are inherently transformational. This learning approach develops entrepreneurial attitudes (vs. knowledge and skills) that make participants capable of coping with rapid societal changes. The *through* mode is a process-based and experiential approach of which uncertainty and ambiguity are significant parts (Pittaway & Cope, 2007).

Previous research has recognized and examined EE's transformative potential, facilitated by different methods and approaches. For instance, Lackéus (2014) found links between emotional events and the formation of entrepreneurial identity, and Donnellon et al. (2014) suggested that engagement in creating a new business helps students become entrepreneurial. Arpiainen and Kurczewska (2017) proposed that it is possible to develop competencies related to risk-taking and coping with uncertainty through education, thereby emphasising EE's transformative nature. Recently, Klapper and Fayolle (2023) suggested a transformational framework for sustainable EE by emphasising factors such as authentic problems, dialogue between learners and meaningful learning that involves

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heart, body and mind. Furthermore, Neergaard et al. (2021) found that pedagogical nudging techniques, which encourage students to consider other possible behaviours, can provide a transformative learning environment in which students reflect on and become more aware of their qualities. As the literature indicates, studies have pointed towards the transformational character of learning *through* entrepreneurship (e.g., Arpiainen & Kurczewska, 2017; Kakouris & Liargovas, 2021; Neergaard et al., 2021). Simultaneously, we know that experiential and action-oriented learning environments can be highly emotional and demanding for students (González-López et al., 2019; Lackéus, 2014). Entrepreneurial endeavours are not always successful and can include negative aspects that students engaging in the entrepreneurial process may experience¹ (Shepherd, 2019; De Sordi et al., 2022). To date, relatively little extant research has examined EE's *through* mode of learning, how students learn by doing and how they experience being in the 'thick of it'. To obtain a deeper understanding of student transformational learning, these processes must be explored in depth over time by employing perspectives that acknowledge different vital dimensions of human change and learning.

The concept of *liminality* (Turner, 1967; Van Gennep, 1909/1960) has received increased attention in management and entrepreneurship studies because of its capacity to capture the social, emotional and temporary elements of the transformational process (Söderlund & Borg, 2018). Liminality, meaning 'threshold' or 'border', originally was a concept from anthropology related to analysing rites of passage within tribal sociocultural systems (Van Gennep, 1960). As Thomassen (2015) described it, 'Simply put, liminality is about how human beings, in their various social and cultural contexts, deal with change' (p. 40). Liminality is a phase of uncertainty and ambiguity, as well as creativity and transformation, that also characterises the *through* mode in EE. This paper aims to build on extant knowledge about student transformative learning in EE by drawing on the concept of liminality. To this end, the first research question is: *How do students cope and learn from being in the liminal space 'in between' student and entrepreneur?*

Moreover, in the *through* mode, learning is organised as a collaborative effort, often in teams. The main arguments are that collaboration increases learning about specific entrepreneurship content (cf. Vygotsky, 1978) and that teams reflect the reality of how most entrepreneurs are organised (Karlsson & Nowell, 2021). Therefore, peer influence in learning-by-doing situations is emphasised in the EE literature (Donnellon et al., 2014; Fauchald et al., 2022; Rasmussen & Sørheim, 2006). Although collaborative learning methods can exert a positive effect on student well-being by reducing perceptions of isolation and lack of support (Mali et al., 2023), several studies in the EE context point to teamwork as being demanding for students (González-López et al., 2019; Pazos et al., 2022; Pittaway & Cope, 2007). Rose et al. (2019) even suggested that teamwork constitutes its own liminal space in EE. In the liminality concept, peer relations are described through the idea of *communitas*, which provides essential support for the individual undergoing the liminal transition (Turner, 1969). However, few extant studies have examined the role and significance of *communitas*. Thus, this paper's second question is: *What role do peers play in students' liminal process?* Here, *peers* refer to fellow students in a course or programme, on a team or in the wider entrepreneurial community in which students engage in a learning process.

The phrase 'betwixt and between' originates from Turner (1967) and concerns capturing liminality's essence because the present study's entrepreneurship students were viewed as being in between the roles of student and entrepreneur. The research questions were explored through students' narratives based on real-time data and interviews. The narratives entail each student's learning processes during an action-based two-year venture-creation programme (VCP) in which the students worked in teams to develop their own businesses (Rasmussen & Sørheim, 2006). Thus, these students experienced the 'double expectations' of being both university students and student entrepreneurs (Gaggiotti et al., 2020; Haneberg et al., 2022). Furthermore, in a VCP, most learning activities are team-based; thus, this context can offer valuable insights into peers' role in the transformational process.

For clarity, the terms *transformational* and *transformative* processes are applied in the present paper to describe potential outcomes of students' learning in liminality. These terms are related to transformative learning, which Illeris (2014) defined as 'changes in the learners' identity' (p. 573). Thus, potential changes in the students' perspectives are not only cognitive, but also include all dimensions of mental activity and exclude less-critical learning (Illeris, 2014). The term *entrepreneur* refers to individuals who can act entrepreneurially, and the terms *entrepreneur* and *entrepreneurial* will be used interchangeably in the text.

The present paper makes two main contributions to the literature. First, by exploring the 'black box' of student learning processes in the *through* mode, it contributes to the literature on transformational learning in EE and how individuals become entrepreneurial. Second, this paper builds on the literature by suggesting how learning *through* entrepreneurship can help develop liminality competence. Furthermore, this novel perspective on entrepreneurship students being 'in between' offers both practical implications and questions for further research.

2. Theoretical framework

2.1. Being 'in between' and the liminality concept

In the present paper's context, liminality refers to the transformational process of students being 'in between' students and entrepreneurs. Turner (1969) viewed liminality as having three characteristics: a transformation of state; a changing of status and oscillation between old and new understandings. Liminality describes the transition process and state of being that a person making the transition experiences (Van Gennep, 1960). Through liminality, this person is in an 'in-between' place that bridges 'what is' and 'what

¹ In the present study, I defined the students in the VCP as being in liminality per se because they were all 'in between' in the sense that they entered the programme with student status, and they all expected to develop entrepreneurial competencies through the VCP and become entrepreneurial. This concept application differs from Van Gennep's (1960) original use in that the students do not necessarily reach the incorporation phase, in which they obtain full status as entrepreneurs.

can or will be' – the old and the new. In the present study's case, the students were *no longer* engineering/social science/business students while also *not yet* entrepreneurs—or as Turner (1974) put it, 'neither here nor there, betwixt and between all fixed points of classification' (p. 232).

Through its characterisations, liminality emphasises the temporal dimension, the subjective emotional experience and the social dimensions of a transformation process (Meyer & Land, 2006; Rattray, 2016; Söderlund & Borg, 2018). First, the *temporal* dimension is associated with three phases, as Van Gennepp (1960) put forth initially, in which the individual experiences 1) a separation from one's existing environment, routines and status; 2) a liminal phase or transition in which learning emerges; and 3) an incorporation phase into a new status and role in society.¹

Second, liminality is a phase of uncertainty and ambiguity (Garsten, 1999) that represents a subjective *emotional* component of experiencing doubt, frustration, confusion and anxiety. Simultaneously, liminality also entails hope, potentiality, opportunities, creativity and transformation (Beech, 2011; Garcia-Lorenzo et al., 2018; Ibarra & Obodaru, 2016). However, the limbo of having no specific status provides possibilities for playfulness and new ways of doing things. Turner (1979) describes it as 'a time of enchantment when anything might, even should, happen' (p. 465).

Third, social guidance is another central aspect of liminality, as described by Turner (1967), in the form of *communitas*, comprising others going through the same liminal passage. An equivalent to the *communitas* described in traditional rituals are peers in an education programme that provides social support and a point of comparison to help shape a student's self-understanding (Ibarra & Obodaru, 2016). Felten (2016) pointed further to the importance of developing confidence from a sense of belonging in threshold crossing. In this respect, the entrepreneurial student team can function as a 'home' for the student's transformation process. However, previous studies on EE often have examined the team level in learning (e.g., Karlsson & Nowell, 2021; Steira & Steinmo, 2021) or the individual level (e.g., Neergaard et al., 2021) without paying enough attention to the interaction between these two levels, which *communitas* represents.

Scholars have argued that crossing the liminal space can lead to acquiring skills and knowledge, as well as elicit a change in self-perception (Meyer & Land, 2006) and how the learner views, feels about and experiences the world (Rattray, 2016). Thus, the liminal space triggers new ways of thinking and practising, thereby replacing old ways (Meyer & Land, 2005). As Conroy and O'Leary-Kelly (2014) suggested, the liminal space can engage individuals in sensemaking and emotional regulation to determine who they used to be, who they are, whom they are becoming and whom they would like to become. They argued further that the liminal process involves cognitive and emotional processing regarding loss and restoration orientation. In the context of EE students, this is a question of whether they must let go of their identities as engineer/social science/business students to create a new identity as entrepreneurs.

The literature has acknowledged that learners are very different in terms of liminal experiences; thus, what is transformative for Person A may not be for Person B (Heading & Loughlin, 2018). Some students may become 'stuck' when facing one type of challenge, while others may find it stimulating and motivational (Brandshaug & Sjølie, 2021), or resist entering the liminal phase in the first place (Meyer & Land, 2006). Thus, the liminality phase is different for all students, and each student's trajectory from being a student to viewing themselves as entrepreneurs is different.

2.2. Liminality in entrepreneurship

The notion of liminality has been applied often in organisational literature to explore 'liminality at work' (e.g., Beech, 2011; Garsten, 1999; Tempest & Starkey, 2004), such as mobility project workers' experiences (e.g., Borg & Söderlund, 2015a; 2015b). Beech (2011) argued that liminality provides a way of thinking about the 'more longitudinal experience of ambiguity and in-betweenness within a changeful context' (p. 288). In the entrepreneurship literature, liminality has offered a lens through which to explore the challenges, dilemmas and opportunities that entrepreneurs experience in various settings, including institutional entrepreneurs (Henfridsson & Yoo, 2014), academic entrepreneurs (Hayter et al., 2021), women digital entrepreneurs (Kelly & McAdam, 2022), entrepreneurs running an online home-based business (Di Domenico et al., 2014) and necessity entrepreneurs (Garcia-Lorenzo et al., 2018). It is common in the organisational and entrepreneurship literature for liminal experience to trigger a paradox of both belonging and not belonging (e.g., Borg and Söderlund, 2015b; Kelly & McAdam, 2022), which captures the very notion of being 'in between'.

Being in liminality often has negative connotations, but in the entrepreneurship literature, the more positive features tend to be emphasised, e.g., how opportunities can exist side by side with current trajectories (Henfridsson & Yoo, 2014), how necessity entrepreneurs creatively deal with the entrepreneurial process (Garcia-Lorenzo et al., 2018) and how the liminal space triggers identity play that fosters agency, heightened reflexivity and creativity (Kelly & McAdam, 2022). Liminality's paradoxical notion, which Jeremiah et al. (2020) described as 'fuelled by opportunity, but clouded in uncertainty and ambiguity' (p. 1), is close to the reality of entrepreneurship, the very essence of which is to act on opportunities under conditions of uncertainty (e.g., Sarasvathy, 2008). However, although the ideal approach is to act, this is certainly demanding, particularly for novice entrepreneurial students.

2.3. Liminality competence

Borg and Söderlund (2015a, b) have suggested, through their empirical studies on mobile workers, that individuals have varying 'liminality competence' levels. They have referred to previous studies that found individuals with higher liminality competence levels perceive liminality as a positive element of work, e.g., through increased freedom (Garsten, 1999) and by taking advantage of learning opportunities (Tempest & Starkey, 2004). Liminality competence depends on how individuals perceive the work they perform, and individuals with high liminality competence both thrive under liminal conditions and use the possibilities that liminality offers (Borg &

Söderlund, 2015a, b). Borg and Söderlund (2015b) proposed that liminality competence can be developed by understanding the value of in-betweenness, embracing the insider-outsider role and translating liminal experience through reflexivity. Pantic-Dragisic and Borg (2018) suggested further that it is possible to develop a higher liminality competence level through formal training and by promoting activities that go beyond the one-sided focus on particular knowledge, skills and abilities, and emphasising how individuals perceive being in liminal positions. Entrepreneurship scholars also have discussed liminality competence (e.g., Chen et al., 2021; Hayter et al., 2021); however, the development of liminality competence has not been explored in EE research yet.

To sum up, liminality has been suggested in the literature as a valuable concept with which to explore transitions and experiences of being 'in between', both in the context of mobile workers and in various entrepreneurial settings. In this paper, I propose that liminality can capture the complexity of students' transformational processes, thereby adding new and essential insights to the EE literature. We know little about how students deal with the challenges, paradoxes, uncertainty and ambiguity in education approaches that are expected to be transformational. The present study applies liminality to explore student narratives in depth regarding their subjective emotional experiences of ambiguity and uncertainty in their learning processes.

3. Methods

3.1. Study context and case selection

Given the scarcity of research on transformational learning in EE and on attempts to understand these processes as a liminal phase, this paper applied an exploratory narrative approach and is part of a larger research project that explores students' learning experiences in action-based EE. The project aims to develop knowledge on how students manage and learn from the challenges they encounter in an action-based learning context. With the aim of exploring the process of becoming entrepreneurial, i.e., how students cope and learn as part of *communitas* in the liminal phase, it was necessary to go in depth into some students' subjective emotional experiences. Thus, 4 of the 36 students who participated in the project were chosen for an in-depth analysis. The four students were selected based on two main criteria: 1) Their liminal experiences participating in the same programme varied and 2) they had diversity in terms of disciplinary background, gender and personality.

In this particular VCP, the students were expected to learn by practising entrepreneurship, so the programme was well-suited for observing EE's potential transformational power as it takes place. In the first semester, the students conducted feasibility studies in teams as the main activity. A feasibility study is a preliminary exploration of an idea's business potential to identify or discard the idea as a possible start-up. This process was repeated five times during the semester. The teams' composition, as well as the origin of the business ideas that the teams evaluated, differed every time. In the subsequent three semesters, the main basis for entrepreneurial learning was the start-up, which the students developed from one of the ideas from feasibility studies. Both the task of conducting a feasibility study and the venture-creation process entailed considerable uncertainty and ambiguity (Haneberg & Aadland, 2020).

3.2. Data collection

I observed 36 students from August–December 2019 during their first semester of the VCP, when they worked in different teams conducting feasibility studies. At the end of the semester, the four selected students were interviewed about their experiences and what they viewed as critical events. Prior to the interviews, each student drew a timeline, and during the interviews, they elaborated on the 'ups and downs' they had encountered. In April 2021, during their fourth and final semester, the students were interviewed once more, this time about their experiences creating their own ventures and the critical events for them in this process. The conversations again focussed on their pre-drawn timelines. Furthermore, they could comment on their perspectives from the first interview. The students also were asked to reflect on their learning from the first semester through the last semester. An overview of the data collection is provided in Table 1.

3.3. Narrative approach and data analysis

The present study employed a narrative approach, telling four students' stories. There were several reasons for choosing a narrative strategy. First, narratives are well-suited to address the complexities and subtleties of students' learning experiences by illustrating the temporal notion of experience and recognising that one's understanding of people and events changes (Mertova & Webster, 2007), as the present study aimed to illuminate. Narratives also can provide a holistic conception of an issue and illustrate how it is addressed in

Table 1
Data collection.

Data collection	Description
Observation	Teams were observed while working on the feasibility study. Detailed notes were taken.
Group reflections	The four students were observed on three different teams during the first semester. Open sharing (evaluation and feedback) after each feasibility study; recorded and transcribed; duration: 45–80 min. Relevant to this study are what the four students shared with their team and the feedback they received from their peers.
Interview 1	End of the first semester. Semi-structured interviews on critical events; duration: 50–75 min; recorded and transcribed.
Interview 2	End of the final semester. Critical events, team experiences, and reflections on learning; duration: 55–80 min; recorded and transcribed.

practice. Few narratives can provide ‘thick descriptions’ (Geertz, 1973), and a high degree of authenticity that cannot be achieved with large samples (Golden-Biddle & Locke, 1993). This makes the narrative approach particularly appropriate for studying learning processes, particularly critical learning events (Mertova & Webster, 2007).

Second, as Jeremiah et al. (2020) noted, ‘liminality is present long before the onset of change; researching liminality is, therefore, about examining the spaces before, during and after change occurs’ (p. 7). Thus, process research that employs a narrative strategy can help illuminate the ‘whole story’ to provide a more coherent understanding of the liminal experience (e.g., Beech, 2011; Borg and Söderlund, 2015b; Muhr et al., 2019). Third, a narrative is viewed as a credible source of knowledge for theory-building in entrepreneurship research (Larty & Hamilton, 2011). Entrepreneurial identity has been highlighted as a particularly fruitful area for narrative research, as a strong link appears to exist between how entrepreneurs tell their life stories and how they run their businesses (Johansson, 2004). Thus, novice entrepreneurs’ ‘life stories’ from the VCP could offer insights from the beginning of their potential transformation into entrepreneurs by identifying different motivations and ‘critical events’ that constitute their emerging stories. As Johansson (2004) nicely put it, ‘We are in the middle of our stories and do not yet know what the end will be’ (p. 275).

The narratives were constructed mainly based on the interviews, during which the students reflected on their challenging experiences and learning, in addition to group reflections. However, observations were important in providing a better understanding of students’ liminal experiences in terms of context and their peers’ role. The empirical data from the interviews and team reflections were loaded into NVivo 12 data analysis software, then analysed by identifying liminal aspects of the students’ learning processes using liminality identifiers discussed in the literature (Muhr et al., 2019), including confusion, uncertainty, ambiguity, frustration, multiple identity positions, feeling out of control and identity struggles (e.g., Beech, 2011; Czarniawska & Mazza, 2003). Likewise, students’ experiences related to hope, potentiality, opportunities, creativity and transformation were analysed to identify potential ways of coping with liminality (Borg & Söderlund, 2015a).

As Riessman (2008) noted, the researcher and research participant jointly construct the narrative and meaning, and what events are viewed as meaningful. What is presented below is only part of the students’ stories, emphasising what I, as the author, viewed as the most important in exploring the study’s aim.

4. Students’ narratives

In this section, I present the liminal experiences identified in the four students’ analyses. Although the students encountered several challenges during the two-year programme, some experiences seemed particularly important in their process of becoming entrepreneurs. Peer relations were central to all four narratives.

4.1. Helen

Helen, a female student with an education background in social sciences and economics, was hard-working and enjoyed tackling practical and open-ended problems. Thus, engaging in an entrepreneurial process came naturally to her. Based on earlier negative experiences of being excluded and bullied, Helen expected team relations to be the most challenging part of being a VCP student. Unfortunately, in her first team experience, she had a conflict with a teammate, M, and her negative expectations were confirmed. They simply could not communicate with each other, as Helen felt that M would neither listen to her views and suggestions, nor trust the information she had gathered. She felt that M, as an engineer, looked down on her for being educated at a ‘simple college university’: *‘I felt stupid and, simply, a little useless. (....) So, I thought that if this is how a feasibility study is, then I do not want to be part of this’*. At that point, Helen considered quitting the whole programme.

In Feasibility Study 4, two months later, Helen experienced more strife with team members. This time, the students were assigned to teams of 8–10 people to test highly technical ideas at CERN. Helen did not find the idea or the team itself very motivating, and her frustration peaked when she offered to help some team members who were struggling with writing the report. They rejected her offer, and as in Feasibility Study 1, she felt useless and left a team meeting angry. Some team members went after her, told her it was a misunderstanding, and invited her to contribute. She then put significant effort into writing the report, which the other team members greatly appreciated. Looking back on that week, she viewed Feasibility Study 4 as the most valuable in terms of learning. *‘Nothing motivated me, but I learned to keep going, even though everything was crap’*.

Interestingly, Helen reflected on a substantial change in how she experienced team challenges from Feasibility Studies 1 to 4. She felt that she was not good enough on the first team and considered quitting the programme. In Feasibility Study 4, she felt that she was good enough, but the others did not see it. *‘Initially, I questioned whether I could be in a programme with engineers. I would be looked down on for the whole semester. However, by Feasibility Study 4, I had learned that I have quite a lot to offer, but it was frustrating that it was not used’*.

In the second semester, Helen was motivated to start working on her business idea, and she was pleased that several of her peers wanted to join her team. Although the start-up idea had been developing for two years, Helen could not build a stable start-up team during this period, with team members joining, then leaving often. At two points in the programme, she was the only start-up team member left. Several factors contributed to the heavy turnover: the COVID-19 pandemic, changes in the business idea and team members having different ambitions and preferences. Furthermore, Helen became frustrated because she could not find someone with whom she had a ‘perfect fit’. The same pattern as in the first semester was repeating itself: On several occasions, Helen tried to do most of the work herself.

However, during this same period, Helen had a positive team experience outside the VCP as an ‘employee’ of an established start-up company. There, she found what she had been missing on the VCP teams: people with the same hard-working mentality and an

environment where she could be creative and curious, and have fun—with ‘stupid’ questions appreciated. In Helen’s view, the start-up was an absolute dream team, and she appreciated the opportunities and responsibilities that the team leader gave her and how the team included her. However, working on her own start-up while working in the established start-up and writing a thesis turned out to be too demanding in terms of work hours, and at one point, she became physically and mentally burned out. However, she said that she would never regret joining another start-up company. *‘To try and fail is very motivating to me because I can potentially learn a lot. There is value in it’.*

4.1.1. Helen’s reflections on her liminal process

During the first semester, Helen realised that she enjoyed challenges related to business ideas. When other team members wanted to pivot and find another idea, she refused to give up. She found it exciting to look for ways to get around problems and was able to engage the people around her in this creative process. As she gained more entrepreneurial experience through the programme and while working with different people, she began to understand that her work capacity and mentality were somewhat unique, having a set of attributes that she could use to create something new. Her experiences during the two-year period changed how she viewed herself: *‘I see very few limitations in myself compared with before. I probably thought more often that I was not good enough or intelligent enough, but now, I think the opposite. So, I have gained a lot more self-confidence to try’.* Before she entered the VCP, she wanted to start a business, but needed to believe that she had the tools to do it. By the end of the programme, she realised that she could use her qualities to develop ideas into a business. Because she felt confident in these qualities, she could start looking for people who complemented her. At the end of the programme, Helen saw few limitations in what she could achieve in the future and also felt that this transformation put some pressure on her to achieve something in the future.

Helen emphasised team members and peers’ role as critical factors in changing how she viewed herself and her qualities. Her peers’ positive feedback made her feel valuable: *‘It’s, in a way, a kind of confirmation from others that I have not received before’.* This confirmation made her realise that her qualities were somewhat unique and that this was not just an assumption in her head. Simultaneously, team relations were still the most challenging part of the entrepreneurial process. Based on feedback from others and her reflections, she wondered whether one source of her team problems was her fear of depending on others: *‘Because people are, in the end, more unpredictable than an idea and a technology, which you can twist and turn’.* However, the varying team experiences made her realise that she must find the courage to look for team members whom she would view as irreplaceable—people she could not manage without. At the end of the programme, she was both motivated and optimistic that she would find such people soon.

4.2. Susan

Susan, a female student with a background in social sciences, had experience as a leader within student organisations before entering the VCP. However, in the programme, she took on the role of a ‘flexible team member’, preferring to be more in the background. Susan experienced a challenging start as a VCP student. In the first feasibility study, she had no idea where to begin, what to do or how she could be a helpful resource on the team. Furthermore, one team member took on a dominant leadership role, which made Susan reluctant to take the initiative. She felt useless and lost, and doubted herself. Therefore, Susan Googled information on her computer instead of asking other team members for information and help. In the group reflection at the end of the week, she openly shared that she felt overwhelmed during the first weeks of the VCP. *‘I feel like I have lost a little bit of myself. I am feeling like, “Susan, this is not you”’.*

On her own, and as a parallel process, she also was thinking a lot about the role of an entrepreneurship student. Initially, her picture of the ‘preferred student’ in the programme was that of an extroverted man with an engineering background who was motivated to start a business for economic reasons. At the beginning of the first semester, this idea guided her observations, which confirmed her assumptions. As a relatively introverted woman with a background in social sciences and ambitions to create societal value, she asked herself whether she could fit in as a student in this programme and as an entrepreneur. She said she felt like she was in a class with 30 copies of Petter Stordalen, a successful and highly extroverted Norwegian entrepreneur, and felt that she could not identify with this role. However, after working with other people in the first feasibility study, she realised that the programme comprised different types of people. It made her think that the faculty at the VCP wanted different types of people and that there was no ‘one answer’ to how you should perform as an entrepreneurial student. She started to change how she approached her role as a student in the programme and had a ‘pep talk’ with herself, saying, *‘I must make this work. I am going to fix this’.*

Her team members on various teams acknowledged her efforts and development, and gave her positive and specific feedback that encouraged her to take a more active role and take more initiative. At the end of the first semester, she said, *‘I feel I know much better what I am good at now’.* Furthermore, the experience of being on different teams helped her change her approach from trying to adapt and needing to be more confident to searching actively for team members with whom she could thrive. For Susan, the most valuable learning experience from conducting the five feasibility studies on different teams was getting to know herself better and who she was on a team. *‘Now, I know who I can collaborate with quite well, and that is ‘down-to-earth’ people, not those aiming to become millionaires. I want to work with people who will listen to me and who can see me as a competent team member’.*

Susan was satisfied with her start-up team. Although it was not personal qualities, but rather shared interest in the business idea that brought the three team members together, they found that they had formed an effective team. Susan was the creative person who saw opportunities, the second team member was the critical voice interested in numbers, and the last member was a doer and diplomat who helped the other two understand each other better. In the beginning, Susan found it challenging that they had pretty different working styles and ways of thinking, but she appreciated that they all were humble and could listen to each other. It helped her become more confident in her competence as a non-engineer. The team was motivated to work on the start-up and made significant progress.

However, after three months, the COVID-19 pandemic made testing and further developing their product idea impossible because it was a sustainable solution for big festivals. They kept working to find different approaches, but failed and had to end the business after five months, which saddened Susan.

To continue playing a role in the innovation community, Susan applied for part-time positions in different student organisations, but did not land any. She was very disappointed because, unlike how she had felt as a new student in the VCP, she viewed herself as competent and felt that she had what it took to 'make things happen'. Eventually, she landed a position as a business developer at a newly established company, but found it challenging to be thrown into the position without much training. However, she realised that her experience with the VCP had made her competent in managing uncertainty and quickly understanding different markets. Because many of the ideas were highly technical, she confirmed that her background in the social sciences was crucial in bringing new and relevant perspectives into the business development process.

4.2.1. Susan's reflections on her liminal process

Susan's positive experiences applying her entrepreneurial skills and attitudes in a context outside the VCP was a vital confirmation for her: *'Now I know that this has been the proper education'*. The experience of having to end the start-up she had put so much effort into, made her think that the start-up world was not for her and she could not picture herself starting a business again. However, she was eager to use her entrepreneurial competence at other organisations. Susan felt much more self-confidence at the end of the programme. From feeling neither like a social science student (because of her initial doubts about relevance in this context) nor like an entrepreneur (because of her perceptions of entrepreneurs as being extroverted male engineers), in the end, she felt like she could integrate her education background into the entrepreneurial role, thereby being 'both/and'. Susan was able to focus on her strengths, rather than her weaknesses, and was more willing to try new things. This change started during the first semester, when she decided to take on a role for which she had no qualifications. Her attitude was that the VCP was a place to learn, and she aimed to try different team roles and experiment with different ways to solve problems.

4.3. Peter

Peter, a male student with a disciplinary background in engineering and economics, described himself as rational and calm. He experienced ups and downs, but none of his experiences was very emotional or difficult to manage personally. The only exception might have been the first feasibility study, in which he was on a team in which one team member assumed an informal leadership role that Peter found problematic. This member's attitudes and behaviours led to misunderstandings, and he felt that other team members did not dare raise their voices. This dynamic caused conflicts and a lack of shared competence in the team, which Peter viewed as unfavourable to the team's learning process and results. He felt excluded in a way he never had experienced before. This experience gave him a new perspective on how to lead a group, emphasising the importance of being inclusive and committed.

Overall, Peter focussed on creating effective team dynamics on his teams. For the rest of the semester, he worked to include and motivate all team members to participate and use their competencies. Peter felt that the teamwork had improved throughout the first semester. With Feasibility Study 5, he found that a highly diverse group of five people from different backgrounds could share different opinions and views on problems, products and solutions effectively. Unlike Feasibility Study 1, in which he felt like giving up at one point at the end of the semester because of the dominating group leader, Peter felt that he could contribute to a healthy team dynamic. He found that improved team dynamics made the work feel more rewarding and increased work quality.

At the end of the VCP, the start-up looked very promising. It had been a long process, and during the year and a half of working on it, they had changed their initial business idea and the market they planned to target. Peter experienced many ups and downs during this period. The most challenging time was when they were waiting for support from a technology-transfer service and felt that they had waited in vain because the company did not offer what they had promised. It took a significant amount of time and energy, and was frustrating for the team members, but Peter saw no reason to give up. Instead, it pushed him to go 'all in' in his role as chief technology officer (CTO), and during the following summer holiday, he invested time and money to learn machine learning from scratch. It was a tough summer, but he viewed this competence would add value to the start-up. It also changed how he perceived his role as CTO. At that point, he felt that he had grown into the role. Simultaneously, his ambitions for the start-up increased, and he believed that their business idea could succeed.

The situation with the technology transfer office was one of several examples of times when the team experienced being stuck and not knowing what to do. To remain motivated, Peter remembered that the start-up was, after all, an academic course project, and that the goal was to maximise learning outcomes. This helped him not to take setbacks personally, but rather view them as learning experiences. Furthermore, because they continued to work despite the hurdles, they experienced their ideas becoming relevant again several times.

4.3.1. Peter's reflections on his liminal process

Because of their diverse backgrounds, building a shared understanding among team members regarding both problems and solutions was challenging for the feasibility and start-up teams. Therefore, Peter implemented structures that helped them, as a team, regularly share their understanding of the idea and check their assumptions about what others were doing and why. However, Peter was very pleased with his team and how they used their strengths and competencies. Peter thought of himself as a specialist, pushing the technology forward. Peter did not view the challenges that he experienced as personally demanding, and found the experience of facing hurdles to be the most valuable: *'Of the ups and downs, I have learned that you always find a solution to the downs. That is perhaps the biggest lesson I have learned: You just have to keep looking, and something comes up. Then most of the problems can be solved'*. At the end of

the VCP, Peter was motivated to continue working with the start-up. If it failed, he planned to try again. He thought that, with all his new experience, developing something would go much faster the second time.

4.4. Jimmy

Jimmy, a male student, described himself as a minority in the VCP because he was older than most of the other students, had a social science background and was not motivated by technology or profit. Furthermore, he was driven by intrinsic motivation, while he initially perceived most of his peers to be driven by achieving results, rather than learning. Jimmy struggled during the programme to find his 'home' and peers with whom he could work. *'It is probably a bit self-inflicted, but I don't feel like an integrated part of the class I feel more like on the outside (....)'* He said the VCP was his first experience feeling like he did not belong.

Jimmy had a very explicit and specific motivation for becoming an entrepreneurship student. He wanted to learn the business development tools necessary to create the organisation he had dreamed of for eight years. Almost all his education efforts in the previous few years were part of a plan to fulfil that dream, but his learning experiences in the VCP were different from what he expected. He struggled to find his role, integrate his disciplinary competence and motivate his team members to share his passion for learning and reflection. In the first semester, he worked hard to find an idea he could be passionate about and a team he believed in. Unfortunately, at the end of the semester, the ideas he liked did not qualify for business development, and the two peers he wanted to collaborate with found other teams. This was a paradox in many ways, as he was very clear from the start that he valued team relations highly. However, he received some negative feedback from one of the team members that he greatly appreciated, forcing him to reflect on his role: *'He said that I often listen, but respond as if I did not because it is so important for me to share my point of view. I think that is very true'*.

During the two years of the VCP, Jimmy functioned as an instigator, challenging his peers and the faculty's decisions and approaches. His motivation was to improve the learning environment, which he felt was too focussed on results (at the expense of process) and narrow economic values (at the expense of societal values). He was very clear about his motivation for becoming an entrepreneur: to increase quality of life. Jimmy described a meeting with one of the educators as a turning point, when he finally got the message: *'Jimmy, I do not know what to do with you because you do not fit in anywhere'*. However, the educator also said Jimmy should do what was essential for him and, thus, agreed that he could start developing his dream. For Jimmy, this was an opportunity to put all his effort into developing the idea he was deeply passionate about. Thus, at the end of the first semester, he was filled with doubt and uncertainty about his role in the class and whether he would feel even more excluded, while still filled with hope and expectations for the chance to work on his idea. Jimmy said that to walk alone, he had to have self-confidence: *'I must say that I chose this because I believe in it, and that is enough'*.

Jimmy pointed to an event during the second semester as being of importance. During a plenary meeting with the whole programme and faculty, a peer from the second-year cohort spotlighted Jimmy as an excellent and inspiring example of someone who finds motivation in things other than profit and that faculty and students should give such ideas higher priority. For Jimmy, this statement meant a lot, and during the third semester, he had a much better attitude. *'I do not know if it is because I feel more confident in who I am, what is important for me and what my project is, but I actually feel closer to the mainstream at this time'*. Throughout the programme, he worked independently, with little contact with his peers, but he maintained his self-confidence and belief in the value of developing his project.

4.4.1. Jimmy's reflections on his liminal process

In reflecting on what he learned from the VCP, Jimmy emphasised that he now has a better understanding of how to develop an organisation and that the market decides what is good information and a good idea, not him. Although this is foundational knowledge for an entrepreneur, it is not transformational in terms of how he views himself. Jimmy thought that feeling like an outsider made him grow because he had to think more about what was essential to him and why—and be able to communicate and justify his ideas to others who might think differently. He felt that his opinions were held to a higher standard, making him more conscious of his own assumptions and the value of testing this line of argumentation on others. He did not mention other ways that 'others' had been important. Although Jimmy still was critical of the programme when he departed, and was a bit sad about not finding his 'home', he still had confidence and hope for the future to achieve his long-held dreams.

5. Analysis and discussion

This paper views student learning *through* entrepreneurship as a liminal process. The study explores in depth how students cope with and learn from being in the liminal space 'in between' student and entrepreneur, along with what role peers play in students' transformational processes. The narratives reveal liminal experiences related to the challenges and opportunities that students encounter when they are 'in between' student and entrepreneur. Such an understanding of transitioning between roles is common in the liminality literature (e.g., Borg & Söderlund, 2014; Hayter et al., 2021). However, the narratives also suggest that this particular context, learning *through* entrepreneurship, triggers another type of liminal experience related to taking part in a complex learning environment 'filled with uncertainty'. These liminal experiences are discussed in this section based on the students' narratives. I then provide examples of how students cope with the liminal phase before discussing their peers' role. Finally, I suggest what liminality competence can imply in EE.

5.1. 'In between' student and entrepreneur

The narratives illustrate two main issues of being between student and entrepreneur: the challenge of *integrating* what they were (i.e., previous competencies and experiences as an engineering/business/social science student) and the challenge of getting a notion of where they are heading (i.e., what does it mean to be an entrepreneur). First, as Van Gennepe (1960) described it, the liminal phase starts when the individual separates from the old status and state of being. In contrast to previous studies on entrepreneurship, in which individuals at some point choose to pursue an entrepreneurial career (e.g., Garcia-Lorenzo et al., 2020; Kelly & McAdam, 2022), the present study's students all were placed in the position of being 'in between' when starting at the VCP – both physically, as they separated from their old peers and education communities, and mentally because the VCP introduced a new way of thinking and acting compared with their core disciplines.

The four narratives illustrate very different experiences of being 'in between' the roles of a student and entrepreneur, which is in line with the literature that has explored liminality among students (e.g., Brandshaug & Sjølie, 2021; Heading & Loughlin, 2018; Meyer et al., 2008). However, common among all four students was the feeling of not being acknowledged for their competence and perspectives in a new and complex learning environment. These experiences made them feel lost, useless, excluded or like outsiders. The findings resonate with the literature describing identity struggles in liminality (e.g., Beech, 2011; Czarniawska & Mazza, 2003). Peter's liminal experience was brief because its origin was a conflict with a team member on his first team, where he felt excluded. This experience hit him hard, and for the rest of the programme, he put extra effort into creating team environments in which inclusion and integration of each member's competencies were prioritised. For Susan and Helen, the feeling of not being acknowledged was a highly emotional and turbulent experience for the first semester of the VCP before they found their roles and ways to contribute later.

Jimmy's narrative was a paradox because he had a clear understanding of his 'preliminary state' when he entered the programme, how his competence could be useful in the entrepreneurial context, and what skills and knowledge he lacked. He also had an explicit motivation to participate in the programme and knew what it meant for him to be entrepreneurial. However, Jimmy struggled to find ways to integrate his disciplinary competencies and find room for his understanding of being an entrepreneur within the programme. He seemed open and relaxed about engaging in a liminal process in a complex learning environment, but regarding his academic background and perception of societal value, he felt like a minority. He did not find a 'safe home' to use as a foundation in which to integrate his competencies and values. Instead, he assumed an oppositional role.

Previous studies have indicated that the liminal experience can trigger a paradox of both belonging and not belonging (e.g., Borg and Söderlund, 2015b; Kelly & McAdam, 2022). Although the other students had a feeling of not belonging at the beginning of the programme, after some time, they found ways to belong. However, Jimmy never found his 'home'. His initial perceptions of himself in the roles of student and entrepreneur did not change much. Perhaps he was not open to fully engaging in the liminal process, thereby blocking his ability to transform. Jimmy's initial motivation was to learn specific entrepreneurial skills and knowledge, but a liminal experience also includes the risk of changing self-perceptions and how 'we view, feel about and experience the world' (Rattray, 2016, p. 67). Such a liminal space is certainly a vulnerable place to enter if a long-held dream is deeply rooted in self-perceptions and worldviews that already have been reflected upon and evaluated thoroughly, as in Jimmy's case.

In contrast to the original descriptions of liminality as a rite of passage (Van Gennepe, 1960), the students did not obtain the status of entrepreneur when they left the VCP. Instead of having a formal status or role, the incorporation included the students' understanding of themselves as entrepreneurs. Susan's narrative provides an excellent example of this process, in which she initially had a typical liminal experience of being confused and lost, 'not knowing who I am' (Kiley & Wisker, 2009). At the beginning of the programme, she felt like she was neither the social science student she knew, nor the novice entrepreneur she was expected to be. For Susan, a critical moment in her liminal experience was becoming aware of her thoughts about what an entrepreneur is. During the first semester, she rejected the stereotypical idea of an entrepreneur as a typical heroic (extrovert) masculine figure. She practised some form of mimicry to adjust to what she thought was expected of her (Kiley & Wisker, 2009). However, through several experiences on different teams and in various contexts, and through her coping in liminality, she found evidence that her competence was valuable. Over time, she managed to integrate competencies from her disciplinary background, personal qualities and the skills and mindset she learned from entrepreneurial activities, creating a new self-conception of being entrepreneurial. Her liminal experience illustrates how students' learning processes can relate to forming alternative entrepreneurial identities (Hytti & Heinonen, 2013). Overall, the student narratives illustrate how their understanding of what it means to be an entrepreneur (or entrepreneurial) opened up to being broader, more nuanced and more personal and authentic (Byrne & Shantz, 2023).

5.2. Coping and learning in liminality

After some time, the four students found ways to cope with being 'in between'. This process started early in the programme with personal reflections and 'pep talks' with themselves. Although all four students initially experienced the negative aspects of liminality, they did not give up or use 'flight strategies', as previous studies found (Berg et al., 2016), but rather tried to boost their self-confidence. The narratives illustrate that over time, they found the learning situation to be an opportunity to learn and experiment with new roles and actions. As Helen put it, their experiences made them see the value of failing. This way of thinking about challenging situations was not new to them, but was developed further by how the educators communicated learning in this *through* mode (Haneberg & Aadland, 2020; Pittaway & Cope, 2007).

Peter's narrative also provides an example that, although the students worked on developing a business, his aim was to learn. He used the status of 'being in between' as an opportunity to have multiple identities, as found in previous entrepreneurship and management literature (e.g., Czarniawska & Mazza, 2003; Nielsen & Gartner, 2017). In this position, he could benefit from both positions.

During challenging periods, he viewed himself as a student in a learning situation and that whatever happened with the start-up, he would learn something valuable for later entrepreneurial efforts. This attitude made it easier for him to handle periods when the team got 'stuck' (Ellsworth, 1997; Meyer & Land, 2005) and to keep working on the start-up because a new opportunity suddenly could develop as their concept emerged. Peter's narrative supports previous studies suggesting that some individuals acknowledge being 'in between' and take advantage of it (Borg & Söderlund, 2015a; Tempest & Starkey, 2004). Ibarra and Obodaru (2016) noted that being 'both' is better than being 'neither' when undergoing liminality; thus, the student narratives demonstrate how being 'in between' can be a challenge when feeling 'neither' like a student nor an entrepreneur, as well as an opportunity when feeling 'both'.

Furthermore, the narratives illustrate several examples of the students' ability to stay open to new opportunities or actively search for new opportunities when in liminality. For instance, Susan did not give up searching for a position in the innovation ecosystem when her start-up failed, and Peter took courses in machine learning when their collaboration with the technology transfer office sputtered. They perceived learning as a process and demonstrated an attitude that if one door closes, another opens. For example, the meeting with the faculty was challenging for Jimmy, an outsider who had no team and had to work alone. However, through this meeting, he confirmed that he should follow his passion and work on his ideas. These examples demonstrate the duality in the liminal experiences of frustration and confusion on one hand, and hope and opportunities on the other (Beech, 2011; Ibarra & Obodaru, 2016). After having some challenging experiences in the VCP, the students seemed to have developed liminality competence to manage the negative aspects of being in liminality and turn these into opportunities. These liminal experiences illustrated EE's overall aim very well, in line with Neergaard et al. (2021), enabling students to change their mindset from merely seeing obstacles to perceiving possibilities for themselves in the future.

5.3. The role of peers

Peers were a vital part of the students' transformational processes, providing social support and a point of comparison that helped shape the students' self-understanding (Ibarra & Obodaru, 2016). Comparisons with others on different teams made them view their qualities and strengths more distinctly, and the positive feedback they received was vital for building self-confidence. Support from peers undergoing the same liminal phase was essential to the critical liminal experiences during the VCP. For Susan and Helen, the feedback they received in the alternative arenas outside the VCP was also important to confirm their initial beliefs that they had something to offer in an entrepreneurial setting. Thus, these narratives demonstrate the importance of peers in other arenas. We can draw from the narratives that it is essential for support, in terms of feedback, to be personal and specific, as well as provide a feeling of mastery.

Interestingly, negative experiences with their 'core peers' (i.e., team members) were also an essential part of the students' liminal experience—and, thus, learning—because the more negative aspects of being in liminality triggered a need for reflection among the students. These troublesome experiences helped shape their self-understanding by stimulating reflection about who they were regarding their values, motivations and needs. Helen's narrative illustrated this, as she had experienced several troublesome experiences with fellow team members, which made her reflect on past experiences and her typical behavioural patterns. This exemplifies how experiences with peers can push students into liminality and what has been pointed out as a uniquely intense period of development that could yield insights into both past and future experiences (Thomassen, 2015; Van Gennep, 1960). Through her reflections and over time, Helen came to acknowledge that although it felt emotionally demanding and frightening because of her past experiences, the next unavoidable step in succeeding as an entrepreneur was to find team members whom she felt were irreplaceable and to become an interdependent entrepreneurial team. In this respect, her experiences and reflections on team (and peer) relations added valuable insights for creating effective entrepreneurial teams in the future (Brattström, 2019; Harper, 2008).

The value in terms of reflection and self-understanding based on negative experiences with peers adds new empirical insights to previous studies that emphasise the importance of a team for learning (Lackéus, 2013; Pittaway & Cope, 2007) and of being in a community with other learners that provides feedback and a supportive environment (Donnellon et al., 2014; Howorth et al., 2012; Mali et al., 2023). Moreover, Jimmy's narrative illustrates that the absence of 'core peers' removes vital *communitas* while in liminality. Thus, the absence of such *communitas* might inhibit transformational learning.

5.4. Developing liminality competence

Borg and Söderlund (2015b) proposed that liminality competence can be developed by understanding the value of in-betweenness. The students in this study were not mainly concerned with balancing academic demands and new venture creation, in line with Gaggiotti et al. (2020), but rather with the feeling of losing their previous identity as an engineer/social science/business student and not properly grasping their new identity as an entrepreneur. However, after some time, they integrated their disciplinary competence into the entrepreneurial process and felt more comfortable finding a more authentic way of acting entrepreneurially in terms of motivation, values and roles. I suggest that this transformation is related to their competence in dealing with a liminal learning environment. Thus, in this context, liminality competence is also an ability to act, experiment with and discover opportunities in a complex learning environment filled with uncertainties and ambiguities. The liminal experience, as such, can provide students with an attitude for dealing with complexities, uncertainties and ambiguities, providing a complementary competence to the knowledge and skills needed to be a successful entrepreneur. Mastering such liminal experiences enhances students' self-confidence in acting entrepreneurially, but liminality competence is not restricted to the entrepreneurial process, but in a broader sense also can help deal with change, as Thomassen (2015) noted.

6. Conclusion and implications

Scholars have pointed to EE's transformational potential to provide a setting in which students can experiment and learn to discover who they are and who they can become (Neergaard et al., 2021). The present study explored the transformational process of student learning in EE, which can be conceptualised as being in liminality, i.e., 'in between' the role of student and entrepreneur. The study has taken an in-depth student perspective over time to better understand students' transformational experiences in EE, which can be emotional, highly personal and developmental. The four students' narratives illustrate very different journeys through liminality, even though they participated in the same programme. The differences are in line with Land et al. (2005), who suggested that (the process of) learning is best described as a root branching out in all directions with multiple points of entry and exit. However, some similarities were found on an overarching level regarding how the students coped with being in between. All four narratives revealed an overall motivation to learn through failure and to remain open to new opportunities during the liminality phase. Transformational learning is enabled through reflecting on values, needs and goals, as generated by positive feedback from peers and negative and troublesome team experiences.

This study conceptualises learning *through* entrepreneurship as a liminal process. The narratives indicate how a 'liminal capacity' – an openness to liminal experiences when being 'in between' – can develop liminality competence (e.g., Pantic-Dragisic & Borg, 2018) in this context. Furthermore, this study builds on the literature by suggesting that liminality competence also entails the ability to learn in a demanding context. It describes an ability to go from the negative aspects of liminality that, in many ways, characterise the entrepreneurship context (uncertainty, ambiguity, confusion and identity struggle) and turn them into opportunities, hope and transformational learning experiences.

In practical terms, a learning-*through* approach exposes students to liminal situations. Liminality competence cannot be developed by observing others, but must be learned through personal experience and a feeling of mastering coping with liminality. Furthermore, this study suggests that supporting and challenging *communitas* and a sense of belonging are essential to developing a willingness to engage deeply in a liminal learning process. These insights have important practical implications. First, they illustrate the importance of facilitating a safe learning environment that enables student reflection on how they perceive themselves in the role of an entrepreneur, as well as experiments on how their competencies can be relevant in the entrepreneurial process. Second, peer relations are essential and can be emphasised in several ways; therefore, educators should acknowledge the potential for learning in the ecosystem outside of education programmes and provide opportunities for collaborative experiences on several different teams. Notably, negative team experiences facilitated reflection and learning because positive team experiences and acknowledgement by peers followed them. Third, Jimmy's narrative illustrates that a lack of 'home' and *communitas* can hamper learning. One reason in this case may have been misalignment between the programme and the student's goals. Thus, it is important to explore students' motivation before they enter nontraditional education programmes, of which learning *through* entrepreneurship is an example.

Finally, thinking about challenging entrepreneurial learning processes through the lens of liminality, as presented in this paper, can scaffold student learning. Teachers can present the concept of liminality explicitly, including the importance of supportive *communitas*, to motivate peer learning. Liminal thinking also can be emphasised by presenting uncertainty, ambiguity and (identity) confusion (cf. negative aspects of liminality) as points of departure to identify new opportunities and new ways of seeing the world and one's own competence levels (cf. positive aspects of liminality). Thus, demanding learning experiences can enhance the ability (cf. liminality competence) to deal with core challenges in the entrepreneurial world.

This paper's results offer several directions for future research to address some of the present study's limitations. The narrative approach provides authentic descriptions that can resonate with readers, offer new perspectives and suggest new practices related to student transformational learning. However, in Weick's (1979) terms, narratives are less focussed on simplicity and generality (Langley, 1999). Thus, more specifically, the low number of participants included in this paper is a limitation that calls for further research to apply the findings as a basis for designing a quantitative study that allows for a broader sample of students. Finally, this study has illustrated some complexities in the role of peers in student learning, but future studies can explore in-depth relationship qualities further that help develop liminality competence.

CRedit authorship contribution statement

Sigrid Westad Brandshaug: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing.

Data availability

Data will be made available on request.

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