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Understanding students' emotional reactions to entrepreneurship education: A conceptual framework

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Keywords: Impacts of emotion, entrepreneurship education, pedagogy, emotional ecology

ABSTRACT

Purpose: This conceptual paper focuses on approaches that acknowledge and make explicit the role of emotion in the entrepreneurship education classroom. As entrepreneurship educators, we are aware of the affective impacts that entrepreneurship education has on our students and we continuously reflect on and support our students through, what is acknowledged in practice, as an emotionally charged experience. With this in mind, we outline how a variety of disciplines engage with the role of emotions and how an interdisciplinary approach to the topic, can support pedagogy.

Approach We synthesise relevant arguments from four discrete disciplines: Neuroscience; Psychology, Education and Entrepreneurship, which have not previously been combined. We argue that the role of emotion in learning generally, has been investigated across these disparate disciplines, but has not been brought together in a way that provides practical implications for the development of pedagogy.

Findings: Through synthesising the findings from four bodies of knowledge that engage with emotion, entrepreneurship and education, we start to develop a theoretical model based around the concept of the emotional ecology of the classroom.

Research Implications: The role of emotion in entrepreneurship education is an emerging topic and our synthesis of research supports further investigation. Our insights will support educators to develop classroom environments that acknowledge relationships between students and between students and educators. Such engagement could help educators and

students to appreciate, acknowledge and address the emotional aspects of entrepreneurship education.

Value: The paper starts to develop new theory around emotions in entrepreneurship education, developing the idea of the emotional 'ecology' of teaching environments and highlighting how this might support future research agendas.

Introduction

Entrepreneurship education and early exposure to (simulated) new venture creation are important determinants in students' propensity to have a positive attitude towards starting a new business (Phan *et. al*., 2002) and their ability deal with complex decisions in the early stages of business start-up. In addition, it is argued that students who have undertaken a venture creation course are better able to assess risks and, therefore, make better decisions (see Clouse, 1990). It has long been established that entrepreneurship education not only develops students as independent thinkers, but also encourages attitudinal change by focusing on skills, behaviours and personality in addition to the academic content of typical higher education (HE) courses (Pittaway and Cope, 2007). However, this paper questions whether the emotional impact of such change is brought into pedagogic design.

Emotions have "evolved through their adaptive value in dealing with fundamental life tasks." (Ekman, 1992, p.169). Basic emotions include happiness, sadness, anger and fear. Such emotions can occur without an object, but others, such as love, hatred and disgust require an object (Oatley and Johnson-Laird, 2014). Indeed, Oatley and Johnson-Laird (2014, p.134) stress the relational aspects of emotions, arguing that they:

> "… are also communications to others, by gestures, postures, facial expressions, and verbalizations. Emotions often produce empathy in others and they can create and maintain relationships such as happy cooperation or angry conflict. "

As the title of this paper suggests, it is accepted that students react emotionally to stimulus within formal entrepreneurship education, and that enterprise educators have developed mechanisms for managing emotional responses. However, our reading of the literature suggests this is a woefully under-researched, and perhaps undervalued, facet of entrepreneurship teaching. Additionally, emotions and their impact on learning, is an area that is dispersed across many fields of knowledge. Indeed, this paper's first concerns were to establish what literature is available for educators to draw on, how this literature frames the role and importance of emotion in education generally, and in entrepreneurship education more specifically. We focus on the current major contributing thematic areas of study; neuroscience, psychology, education and entrepreneurship to synthesise and summarise current understanding.

In doing so, we respond to the practical concerns of educators developing and delivering entrepreneurship education. We also respond to wider calls for interdisciplinary research and theory-building that synthesises findings and debates from a variety of relevant fields with entrepreneurship theory (Ratten, 2011; Lackeus, 2012). Ultimately, this research enables educators to develop new pedagogies that take into account the emotional aspects of teaching and learning, and to consider how these may differ in entrepreneurship education.

Beginning with a brief outline of the narrative review methodology underpinning this paper, we move to explore four discrete bodies of knowledge that have helped to develop understanding of the role of emotion in learning, education and entrepreneurship. Considering the themes, debates and issues highlighted, a theoretical model is developed to integrate and extend these, as a starting point for further research into emotion in entrepreneurship education. We conclude with some suggestions for future research based upon this theoretical model.

Methodology

There is little research within entrepreneurship education that focuses on, or encompasses, the role of emotion in pedagogic design or delivery. Therefore, we explored the disciplines that are having conversations about both 'emotions and learning' and 'entrepreneurship and emotion'. From this, a narrative literature review was conducted to identify themes and findings that could support further exploration of this topic.

Narrative literature reviews, which consist of a broad overview of a body (or bodies) of literature, do not follow strict systematic methods to locate a precise selection of articles (Bryman and Bell, 2007). This was deemed necessary, as the topics under investigation are across a number of different disciplines. It was therefore, likely that a systematic search would limit the variety of sources from which information could be drawn. In addition, these areas of study are relatively new and rapidly developing. Subsequently, we include sources that are not typically covered in systematic literature searches, such as conference papers, working papers and books.

One of the main critiques of this methodology is the bias of researchers selecting what will support their work (Green *et al.,* 2006). However, as the research is exploratory and there is not a specific hypothesis to prove or disprove, we considered this methodology to be appropriate.

The narrative review was conducted by searching sources such as JSTOR, EBSCO and Google Scholar, using specific keywords such as "pedagogy of emotion", "emotional pedagogy" and "entrepreneurship and emotion". This approach highlighted four main bodies of knowledge that engage with the interplay between emotion and education, and emotion and entrepreneurship. These were: Neuroscience; Psychology; Education; and Entrepreneurship. It was decided that research generated within these disciplines would form a theoretically robust literature base. These four bodies of knowledge subsequently underpinned our exploration of the main theoretical themes, and teaching approaches. In drawing together these rather disparate bodies of knowledge, and working in an interdisciplinary way, we sought to develop an understanding of this area and an agenda to take forward as educational researchers.

The Impacts of Emotion on Learning and Entrepreneurship

In line with calls for interdisciplinary approaches (Geake and Cooper, 2003), this paper draws together literature focused on the expression and role of emotion within education and pedagogic design, not necessarily the psychological perspective, which is a more traditional viewpoint. Throughout this review, there is specific identification of theories and/or techniques that support educators to develop pedagogic understanding.

Neuroscience

Neuroscience is a relatively new discipline spanning neurology, psychology and biology (Goswami, 2004). Broadly defined, neuroscience "investigates the processes by which the brain learns and remembers, from the molecular and cellular levels right through to brain systems (e.g., the system of neural areas and pathways underpinning our ability to speak and comprehend language)." (Goswami, 2004, p.1). Neuroscience challenges traditional psychological conceptualizations of emotion, viewing "emotional brain processes (as) more typically unconscious than conscious." (Franks, 2006, p.38). It was not until the mid-1990s that neuroscientists began to apply their understanding of the link between cognition and emotion to the social sciences, particularly in education. Yet, it is now widely accepted that emotions are a "basic form of decision making, a repertoire of know-how and actions that allow people to respond appropriately in different situations." (Immordino-Yang and Damasio, 2007, p.7). Immordino-Yang and Damasio (2007) further suggest that it is at the interface of emotion and cognition, that creativity emerges, one of the most commonly discussed themes in the entrepreneurship literature (Reid and Petocz, 2004). Cognition and emotion can therefore be thought of as overlapping processes in this context.

Immordino-Yang and Damasio (2007) contend that the relationship between learning, emotion and body state (e.g. tiredness or hunger) is interwoven with the notion of learning itself; that the emotional state of learners can have a dramatic effect on the way in which information is perceived. For example, a state of anxiety has been shown to decrease attention span and individuals are less receptive to experiences if fearful or stressed. Many techniques employed to enhance students' understanding of enterprise and entrepreneurship purposefully disrupt the more traditional mode of learning in order to mimic the experiences of entrepreneurs. The resulting anxiety in students, who are unused to and/or unsure about

such methods, is well documented (most recently see Engel *et al*., 2016). This creates an obvious tension in designing effective entrepreneurship pedagogy.

Arguably, the most relevant contributions from the neuroscience literature to emotion and (entrepreneurship) education are twofold. Firstly, emotional processes allow the social influences of culture to shape learning, thought and behaviour. This suggests that emotional cognition, developed through learning, can be linked to student attitudes to entrepreneurial activity, for example in opportunity recognition (Welpe *et al.*, 2011). More specifically, studies have shown that emotions manifest as behaviours. It is a key point of entrepreneurship pedagogy to develop behaviours (often cited in addition to knowledge and skills [*e.g.* Garavan and O'Cinneide, 1994]). If educators genuinely seek to develop entrepreneurial behaviour in students, it would be remiss not to develop, and be able to respond to, their emotional requirements. Secondly, it is suggested that emotional processes are critical for enabling students to take their learning and classroom based experiences into the 'real world' (Saver and Damasio, 1991). This is of huge importance to those engaged in enterprise education which, although largely classroom based, is delivered under the assumption that students *will* apply their experiences to future, real-world scenarios.

What seems clear is that, although great strides have been made over the last 20 years linking cognitive and behavioural development to emotional processing, this has not translated into widespread development and/or adoption of new pedagogies. Subsequently, the education system is still largely based on the promotion of cognition without a role for emotion. By focusing educational pedagogy on the development of rational thought alone, such systems of education may limit the ability of students to transfer learning in formal, structured settings (such as the classroom or laboratory) to the real world. For enterprise educators, this should

be a serious concern, given the emphasis on developing behaviours and skills focused on real-world relevance and application.

Psychology

Debates surrounding emotion in the psychology literature have raged between two camps for over 60 years; those who argue that emotions can be described as 'category-based' and those who suggest that emotions are more appropriately coded into dimensional models. A category-based approach argues that there are a limited number of 'basic' emotions (such as happiness, sadness, anger, fear *etc.*), which enables discrete categorisation of the different signals (muscular movements and expressions) used to convey these emotions. This argument is supported by evidence of cross-cultural recognition of different facial expressions. Dimensional models assume that emotional states are more interrelated and, therefore, better illustrated with a unifying framework that takes into account additional modes of communication, such as vocal timbre. However, despite the prolific research into emotions themselves, and how they may be portrayed/recognised, apart from a couple of notable exceptions (see Weiner, 1985; Zeidner, 1998), the role of emotion in education has been largely ignored until relatively recently (Maehr and Midgley, 1996).

In the psychology literature, Plato is cited as having described emotions as irrational urges, obstacles in the pursuit of truth that should be managed through reason and rationality; a stance that has long influenced views of emotions as interfering with the structures of education (Jaggar, 1989). This echoes the neuroscience position of segregating emotions from other, more highly prioritised, areas of development in education. Dirkx (2001) argues that this view of emotions still underpins current educational practices, and psychology research into the role of emotions has been restricted to classification of motivators or

impediments to learning. Such research focuses on particular emotional states, for example anxiety and fear (Tennant, 1997), or frustration and boredom (Pekrun, 2006), and a search for educational contexts that allow students to control or redirect such feelings. However, during the late-1990s, psychology research suggesting emotion is more deeply intertwined with our rational perception and processing of information from external environments, became increasingly prevalent (Dirkx, 2001). Commenting on 10 years of research into learners' motivation, Meyer and Turner (2002, p.107) write:

> "…in looking back at our research, we see how our theoretical and methodological assumptions obscured our ability to recognise the pivotal role of emotions in learning."

This transformation appears to be (at least in part) linked to neurobiological advances in understanding, as papers from neuroscience begin to be cited in psychological debates with more integrative approaches becoming popular (Pekrun, 2006).

Additionally, Goleman (1995), famed for his pioneering work on emotional intelligence, suggests that it is the specific role of the teacher to recognise the emotional state(s) of students, and to respond appropriately, in order to promote a positive learning process. Certainly it seems that students respond to the educator as the "barometer' of ... values, beliefs and practices that help to regulate emotion, motivation and cognition." (Meyer and Turner, 2002, p.111) within the classroom and there is a common thread, through the psychology literature, that the educator should positively motivate students to learn.

Education

Within the education literature, the interplay between emotion and education has been a research focus since Dewey suggested his theory of emotion in education in 1925, arguing that "reason and emotion are so intertwined...that one never simply thinks without feeling." (Morse, 2010, p.225). This forms the basis of contemporary arguments that emotion leads to better retention of cognitive material and provides learners with "seminal learning experiences." (Taylor, 2010, p.1110); essentially that we have to feel in order to learn (Chabot and Chabot, 2004). This is also apparent in the emphasis on constructivist approaches, which draw upon the work of other influential educational researchers such as Vygotsky and Piaget (Lackeus, 2012) and also in ideas around active or experiential learning (Kolb, 1984; Boud, *et al.*, 1985; Gundlach and Zivnuska, 2010). Indeed, a recent summary of education research suggests that emotions form an important underpinning because:

> "…emotions are important to pedagogical practices, to student-teacher relationships, to issues of reform efforts and processes of change and to an understanding of power relations and social structures in schools and in society." (Zembylas, 2011, p.21)

Rather than a focus on the (internal) individual, prevalent in neuroscience and psychology research on emotion, the education literature increasingly focuses on the social aspects of emotions in teaching and learning interaction (Zembylas, 2011). There is also interest in macro-level influences linked to developing emotional resilience in students. Some go so far as suggesting that emotions are political objectives, pushed by state interventions in education, to emphasise the role of education as preparing students "for the rapid change and uncertainty of modern life." (Cummings, 2009, pp.3-4, cited in Amsler, 2009, p.1). This can be seen in recent Europe-wide calls for a shift in education to produce "highly skilled and

versatile people who can contribute to innovation and entrepreneurship." (EC, 2012, p.1). This intertwining of the external and internal is highlighted by Johnson (2008), who suggests that the *world* possesses emotions, not just the individual, emphasising the role of society, culture and context.

This separation of the internal and external is also evident in calls for distinctions between emotions and feelings; with emotions as a neurobiological *response* to 'external' stimuli, and feelings or moods as the *perception* of emotions within a specific context (Goerge, 2000; Gondim and Mutti, 2011). This further suggests that the specific context is important when exploring students' emotions and is supported by research that emphasises the importance of the lived experience and active/experiential learning (Dewey, 1925; Kolb, 1984; Gibb, 2009).

As with the psychology research, the strategic role of educators within this process is emphasised in education research. McCaughtry (2004, p.30) suggests that:

> "…how teachers understand student emotion is inextricably linked to their thinking and decisions about educational content, curriculum, and pedagogy."

However, educators are not often studied as arbiters and negotiators of knowledge in entrepreneurship education (Jones, 2015). Something that is also evident in the literature on emotion and education generally, with studies more commonly focused on students and their emotional response to teaching (Lackeus, 2012).

Entrepreneurship

Research into the emotions of entrepreneurs is of growing importance. Since 2003, 91 papers that list emotion in any field were published in *Entrepreneurship Theory and Practice*, with those explicitly focused upon emotion totalling six papers. One paper has been published in the *Journal of Business Venturing*. Some of this research focuses on specific emotions such as envy (Biniari, 2011), failure (Shepherd, 2004), and trust (Massis, 2012; Eddleston *et al.*, 2012), while others focus on a wider range of emotions. This interest stems from the fact that emotions impact on entrepreneurial decision making (Cardon *et al.*, 2012; Welpe *et al.*, 2012) and opportunity recognition (Souitaris *et al.*, 2007; Foo, 2011, Welpe *et al.*, 2012, Hayton and Cholakova, 2012).

Cardon *et al.,* (2012) acknowledge the collective as well as the individual notion of entrepreneurial emotion. Although entrepreneurship is generally positioned as an individualistic activity (Dodd and Anderson, 2007) the social context is further acknowledged by other research. Biniari (2011) highlights the emotional embeddedness of the entrepreneurial act as a moderator of its social embeddedness, drawing upon emotional influences (Hareli and Rafaeli, 2008) and the sociology of emotions (Kemper, 2000; Lawler *et al*., 2000). However, others argue that self-efficacy and resilience are potential outcomes of overcoming anxiety producing activities (Bullough, 2013).

Although emotion is increasingly investigated in entrepreneurship generally, there is a lack of empirical studies about the impact of emotions on learning in entrepreneurship education (Gondim and Mutti, 2011; Lackeus, 2012). Despite this, some researchers conclude that the role of emotions and the affective realm are important considerations in the teaching and learning of entrepreneurship (Man, 2007; Man and Yu, 2007; Gibb, 2005; Pless *et al.*, 2011). Gibb (2005) suggests encouraging students to experience the entrepreneurial lifeworld, while

Pless *et al.* (2011, p.237) focus on supporting learners to develop "new lifeworlds (and) a new perspective of self and the world" that is linked to the ability to make sense of the emotions experienced in this process. This engagement with the lifeworld of the entrepreneur suggests the creation of teaching environments where students 'feel' what it is like to be an entrepreneur. Shepherd (2003 and 2004) is one of the few authors to consider the impact of negative emotions within entrepreneurship. He argues educators might consciously try to shield students from negative emotions by emphasising and acknowledging only the positive aspects of entrepreneurship; ignoring the fact that business failures do occur and preventing students from discussing related worries and concerns. Zampetakis, *et al.* (2015) also suggest that students' anticipation of the future negative emotional effects of pursuing entrepreneurship should also be acknowledged.

Hjorth (2011) discusses the role of the educator and actively promotes the role of the pedagogue in entrepreneurship education. Hjorth highlights a tension between the aims of entrepreneurship education (to encourage students to aspire to entrepreneurship; helping them to feel what entrepreneurship is like) and their position as students, learning to deal with and develop emotional resilience.

These papers, and most of those drawn upon for this literature review, highlight a tendency for researchers to concentrate on entrepreneurial emotions in entrepreneurship education. This ignores the emotions that may be engendered in students who do not position themselves as entrepreneurs, and whose own responses, emotions and lifeworld may not be acknowledged in the entrepreneurship education classroom.

Discussion

Although there is a developing body of literature focused upon the role of emotion in entrepreneurship, and the role of emotion in education generally, this knowledge has not been synthesised to further the understanding of the role of emotion in entrepreneurship education. It is known that entrepreneurs have to learn to harness their emotions, and that their responses can impact on their ability to recognise and respond to opportunities (Souitaris *et al.*, 2007; Foo, 2011, Welpe *et al.*, 2012, Hayton and Cholakova, 2012), therefore, should students also do this? Educators encourage authentic experiences, and often argue that entrepreneurship is best learned by doing (Kolb, 1984; Gibb, 2009), but rarely account for the emotional upheaval associated with such teaching practices. Emotions have a considerable impact on teaching (Meyer and Turner, 2002) and thus, the student experience. We now consider the implications of these complexities for pedagogic design.

Towards a Theoretical Model

In recognition of pedagogic design and its impact on the emotional experience of entrepreneurship education, we develop a theoretical model (Fig. 1), which illustrates current conceptualisations of entrepreneurship education and the focus of emotion research in each domain. It illustrates how educators might build on these to develop more robust approaches that actively engage with the affective aspects of teaching and learning in this area. In doing so, we highlight some tensions that have emerged from the literature. These areas of tension seem to be fruitful foci for exploring the struggles of the social space that is entrepreneurship education in HE.

This model also allows us to build theory around the emotional ecology (Ek, 2010) of the classroom. We acknowledge that this is highly contextual and varies from setting to setting, depending upon the relationships between the discipline within which is it embedded, the

student (and how they relate to the entrepreneurial lifeworld) and the educator's lifeworld. Of course, students are not a homogeneous group, and markers of social difference, such as gender and ethnicity, might also inform students' emotional responses and attitudes (Jones, 2010, Jones 2014). Indeed, the emotional ecology of the classroom is based upon "what something (or someone) *does* in relationship to others" (Knudson, 2007, p.240) in teaching environments, their effects and affects. The concept of emotional ecology also challenges the traditional polarisation of reason and feeling (Lackeus, 2012) by "utilizing them simultaneously" (Knudson, 2007, p.240). We believe the concept of emotional ecology has real potential to impact on theory development around the relational aspects of emotions within teaching environments generally, and entrepreneurship education teaching environments in particular.

Figure 1 illustrates our theoretical model; mapping the relationships that make up the emotional ecology of the entrepreneurship education classroom. The model synthesises key points from our review by grouping common conceptual blocks within the different thematic areas. Each white circle summarises a hypothesised area of tension.

--FIGURE 1. HERE--

Educators

In the UK, there is now substantial pressure for universities to include enterprise and entrepreneurship studies within the curriculum, from a number of sources including the government, regulatory bodies (QAA, 2013) and the European Union (EC, 2016). Institutions and educators are pressured to respond to calls to produce "highly skilled and versatile people who can contribute to innovation and entrepreneurship." (EC, 2012, p.1). However, it is also

acknowledged that in teaching entrepreneurship, educators combine external imperatives with their own attitudes and experiences (Jones, 2015) and that there are substantial connections between a lecturer's prior experiences and their "interpretation of the nature of entrepreneurship and how best to teach the subject" (Bennett, 2006, p.9).

Exploration of the role of educators, as arbiters of entrepreneurship education, represents a major gap in our knowledge of classroom interactions and how this may inform the emotional ecology of the classroom. Indeed, in all bodies of literature explored here, the importance of educators' understanding (and management) of students' emotional responses to (entrepreneurship) education is underlined. Allied to this, Carey and Matlay (2011) highlight how educators respond to, amongst other issues, the risks and responsibilities of entrepreneurship education. This may have particular emotional consequences when educators take a hands-off approach, placing the responsibility for the success (or failure) of a business idea wholly on students.

Educator perceptions of student entrepreneurial potential has also been found to be lower than *student* perceptions of their abilities (Shinnar *et al.*, 2009) and this has the potential to impact on how staff and students perceive their chances of success. For this reason, it could be argued that, in order to take account of, and understand, the emotional ecology created within classrooms, educators should develop reflective practices (Schon, 1991). This requires educators to examine critically "the assumptions underlying actions (and) the impact of those actions" (Cunliffe, 2004 p.407). Ultimately this involves educators recognising and reflecting on the potential effects of conscious, pedagogic choices for students. Part of this would seem to involve bringing in the student lifeworld, rather than concentrating solely on the elevation of the entrepreneurial lifeworld. Actively bringing the student lifeworld into the classroom

offers opportunities for students to negotiate the curriculum and for educators to acknowledge and foreground student experiences, and differences, including the emotions that may be prompted during entrepreneurship education.

Students as Learners

There is evidence from the neuroscience literature that negative emotions, such as anxiety, fear and stress, can inhibit the learning process and yet it is widely suggested that students should be actively encouraged to feel a sense of uncertainty and to take risks in enterprise education (Ratten, 2011; Arpiainen *et al.*, 2013). Often the focus is on the experience of students as *entrepreneurs* rather than learners, particularly when attempting to make them *feel* what it is to be an entrepreneur. As outlined above, students might expect their experiences and attitudes to be drawn upon within the classroom, but it seems that both the educator and entrepreneurial lifeworld are privileged (Farny *et al*., 2016). This has the potential to silence students, who may worry about standing out as weak, or as unable to cope with the learning activities, if they admit to feeling anxious, angry or uneasy. This may be particularly difficult, given that their experiences of more traditional teaching environments (and the attainment of 'good' grades) may revolve around them understanding, enjoying and agreeing with the learning activities they are exposed to. Also, as Shepherd (2004) has pointed out, entrepreneurship education is traditionally linked with the promotion of positive outcomes that centre upon success, and to acknowledge the difficulties and potential for failure associated with entrepreneurship may also undermine such traditional approaches.

Students as Entrepreneurs

Another tension manifests in the focus on the entrepreneurial lifeworld, as it is argued that entrepreneurship is not a neutral or value-free activity, although it is positioned as such in

wider society (Lewis, 2006; Jones, 2010). The way that entrepreneurship is framed within the curriculum and classroom may cause emotional unease for some students, particularly where it might clash with their sense of self, linked to the particular discipline they are studying or to their social position relative to entrepreneurship. For example, one could expect different perceptions of (and feelings about) entrepreneurship between students from an arts or humanities discipline in comparison to business, or for female students who may feel a sense of stereotype threat (Steele and Aronson, 1995) when confronted with research that emphasises female deficiency discourses (see Ahl, 2004). This has a potential to impact on the learning environment because engendering feelings of anxiety and stress can actively inhibit the entrepreneurial learning process (Pekrun, 1992; Shepherd, 2003).

Furthermore, entrepreneurs have been found to have high levels of emotional intelligence (Cross and Travaglione, 2003). Arguments continue about the role and importance of emotion in education, with some suggesting that students are not equipped with the social and emotional competences to fully capitalise on their academic knowledge (Seal *et al.*, 2011).

Social Cognition

Further exploration of social interaction within entrepreneurship education is warranted, particularly the social interaction between entrepreneurship educators and students. This interaction is conceptualised as being primarily within the classroom but also includes interactions with the curriculum and the framing of entrepreneurship competencies and behaviours via educator negotiation, arbitration, assumptions and values. Indeed, it may be that social interaction may be a fruitful avenue for exploring the impact of emotions, given that this is important for both the way that entrepreneurs learn (Man, 2007; Pittaway and Cope, 2007; Foo, 2011; Cardon *et al.,* 2012) and also that the classroom environment is

essentially a space of interaction; between students, between educators and students, and between students, educators and the curriculum.

Within the entrepreneurship and psychology literature, there is much focus on the individualist entrepreneur (and, thus, the student) and their individual emotions, skills and behaviours. This creates a tension within entrepreneurship classroom environments, which increasingly emphasise collaboration and group work (Gibb, 2009). Educators can create a classroom culture of competition (which is often framed around getting good marks) or they can emphasise collaboration. This is often predicated on the *intangibles* and implicit responses of the learning process (and the emotions that students have to cope with during the process) rather than the *explicit* product related outcomes (Ek, 2010). Arguably, these different classroom cultures will have different impacts on the emotional responses of students. Higher Education is built upon the idea that the higher the grade, the more successful the student will be in any future endeavours. Group work immediately challenges this individualistic approach to education and we know, from our own experience, that some students find this diversion from traditional education strategies particularly uncomfortable.

Ultimately, our suggested theoretical model acknowledges the need for grounded approaches, which take into account particular contexts, the power relations between students and educators that can emerge, and their impact on the emotional environment (or ecology) created (Ram and Trehan, 2010; Ek, 2010). Reflecting upon whose lifeworld and emotions are privileged in entrepreneurship education classrooms would be a useful starting point for inquiry into these situated and highly contextual emotional ecologies. This also offers scope to bring in more intersectional approaches to research (cf. Crenshaw, 1991), which do not

position students as homogenous, allowing for more nuanced understandings of the potential emotional impacts linked to gender, ethnicity, age, class, etc.

Concluding Thoughts

The emotional impacts of entrepreneurship education are increasingly seen as an important element of the student experience. Pedagogical interventions are seemingly built around supporting students to *feel* what is like to be an entrepreneur and yet there is little research into how this might affect the student experience, their ability to learn and the classroom environment generally. The claims and arguments in the literature, and the tensions that have emerged from this, suggest future research directions could explore how educators might address these. In recognising that knowledge and learning are co-constructed, we encourage a focus on both students *and* staff in future research. Ideally, the use of reflective student and staff accounts should be linked to classroom observations, as these form a large part of the emotional ecology that students experience.

As one purported aim of entrepreneurship education is to support student resilience (Hjorth, 2011; Bullough *et al.,* 2013) longitudinal research that follows students after their exposure to entrepreneurship education could explore whether they have taken this emotional awareness /resilience into other aspects of their lives. It could investigate whether, having been through the emotionally charged experience of entrepreneurship education, they feel better able to cope with the emotional demands of entrepreneurship (or employment in an uncertain economic climate generally). Researchers might also consider whether there are any differences between the emotions involved in engaging students with learning about for-profit and not-for-profit activities. For example, where students are learning *about* and *for*

social entrepreneurship, the emotional drivers might be linked to politics and/or principles, as well as creating and sustaining a business (see Shrivastava, 2010).

Educators are also often invisible in educational research, and their role as arbiters and facilitators is largely ignored in the entrepreneurship education literature (Jones, 2014). A concentration on educators could answer a number of questions: What are the common practices already employed? Do staff already employ these pedagogies and practices, unaware of the theoretical basis? Are these responses actually *conscious* pedagogical interventions or reactions to student responses? What works, for both staff and students and is this dependent on the demographics of particular student groups - i.e. business students as opposed to arts/humanities students?

The importance of socially situated learning is evident in much of the literature reviewed (Kemper, 2000; Lawler, *et al.,* 2000; Biniari, 2011; Zembylas, 2011, 2013) and yet this is often missing from empirical studies, particularly those focusing on entrepreneurs, which tend to privilege the individual rather than the emotions produced *within* and *through* groups. There is also emphasis on the need to research these socially produced emotions as they emerge in real-time (Lackeus, 2012) and to develop research that is classroom based.

The obvious outcome of our review is the need for a more interdisciplinary approach to enterprise pedagogy design, particularly as important theoretical and empirical research is scattered throughout diverse bodies of knowledge (Geake and Cooper, 2003). Specifically, there is an argument that new research directions should focus on the emotions embedded within social interactions, as the classroom is essentially a social environment built upon the relationship between students, educators and the curriculum. We suggest that research

focused on the 'students as learners – students as entrepreneurs – educators/curriculum' nexus, as outlined previously, would be the most immediately fruitful area for unpicking and addressing the tensions and difficulties identified. There is also a call to use the same language across different disciplines, otherwise it is difficult to find each other's research. This is particularly evident in how emotions are discussed, how they are conceptualised and the keywords and titles used as identifiers in published work.

This review, and our theoretical framework, suggests that what is currently missing is an emphasis and understanding of the social/interaction and overall emotional ecology of the entrepreneurial classroom. To develop learning environments and pedagogies that are both effective *and* affective it seems that student emotion must be taken into account, because students (and educators) are potentially changed by pedagogic interventions. In acknowledging this, it is possible to make tangible the intangible impacts on the teaching and learning process. We consider this a major contribution to extending theory development within the emerging research agenda on emotions and entrepreneurship education.

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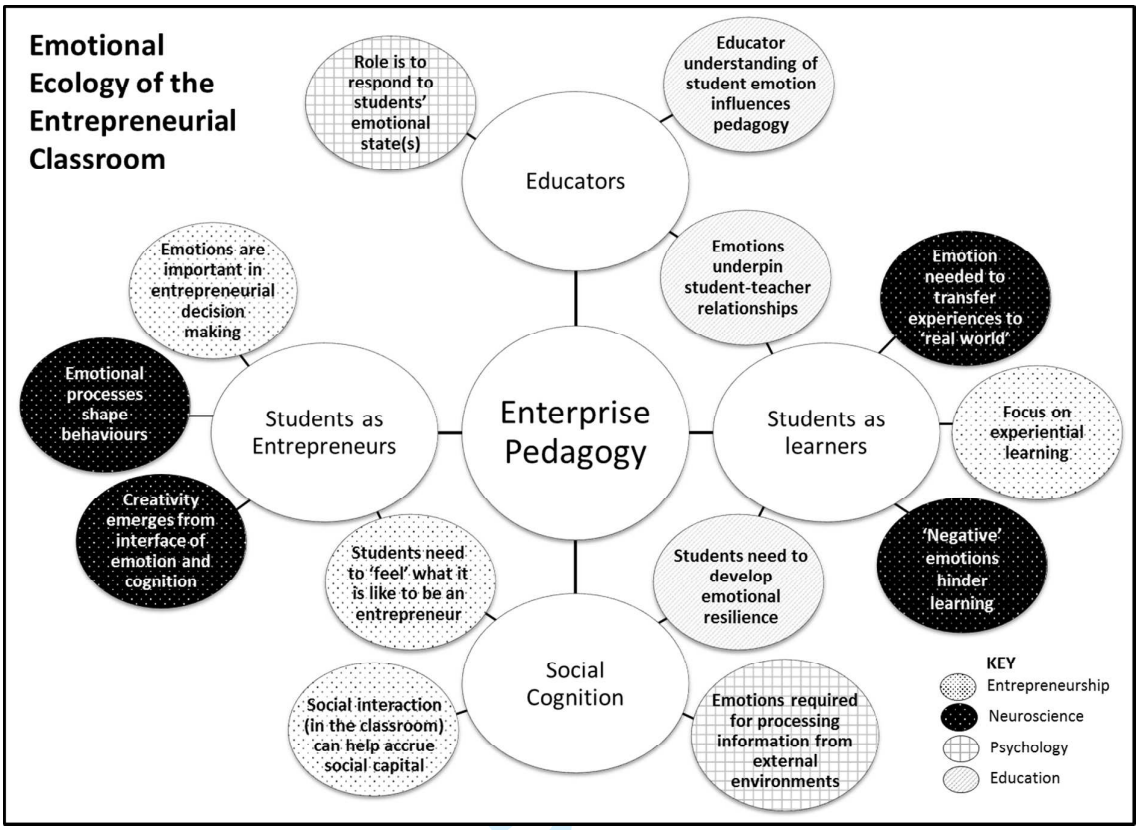

Figure 1: Established emotional tensions linked to entrepreneurship pedagogy design.