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## Threshold Concepts in Entrepreneurship – the Entrepreneurs' Perspective

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**Title**

Threshold Concepts in Entrepreneurship – the Entrepreneurs’ Perspective

**Structured Abstract:**

**Purpose:** The purpose of this paper is to present research into the entrepreneurs’ perspective of concepts critical to thinking as an entrepreneur, in order to inform enterprise and entrepreneurship course design in higher education.

**Approach:** Taking a social constructivist approach, using a Delphi-style method, semi-structured interviews with entrepreneurs were conducted, transcribed, thematically coded and analysed, and a list of candidate threshold concepts drawn up. Two rounds of Delphi were conducted with the entrepreneur panel and consensus was reached on a final collection of threshold concepts in entrepreneurship.

**Findings:** The threshold concepts identified are “I can create value” (or self-efficacy), “I see opportunities” (or opportunity), “I can manage risk” (or risk), “I know what’s important” (or focus) and “I take action” (or impact).

**Implications:** Entrepreneurship is generally regarded as an important factor in economic growth, and higher education an appropriate place for the development of entrepreneurship. However, there is a lack of consensus regarding how best to educate students for entrepreneurship in higher education or indeed what educating students for entrepreneurship really means. Identifying threshold concepts in entrepreneurship using the lived experience of entrepreneurs is likely to open up new and more effective approaches to teaching this multidisciplinary subject area.

**Value:** This study contributes to the call for more research-grounded discussion on the quality of entrepreneurship education initiatives, particularly in relation to what makes pedagogical innovations effective by suggesting 5 entrepreneurship threshold concepts. These entrepreneurship threshold concepts can be used to set out a structure for the design and (re)development of enterprise and entrepreneurship curricula, as well as enabling more constructively aligned assessments.

## Introduction

Entrepreneurship is an important factor in economic growth according to the United Nations Conference on Trade and Development (Entrepreneurship Policy Framework and Implementation Guidance, 2012), and higher education is regarded by the UK government at least as an appropriate place for the development of entrepreneurship (QAA, 2012). Most higher education institutions now offer some sort entrepreneurship classes ranging from extracurricular activities, to specialised optional and modules, as well as entire degree programmes. However, there scant evidence of consensus regarding how best to educate students for entrepreneurship in higher education (Pittaway and Cope, 2007) or indeed what educating students for entrepreneurship really means. A general lack of research-grounded discussion on the quality of entrepreneurship education initiatives has also been highlighted (Béchar and Grégoire, 2007), particularly in relation to what makes pedagogical innovations effective.

This paper presents a study which was conducted to gather a consensus of expert opinion on the concepts critical to thinking as an entrepreneur, as part of a doctoral research project using transactional curriculum inquiry (Cousin, 2008) to enhance the quality of entrepreneurship education. The concepts which are critical to thinking as an entrepreneur, and consequently to entrepreneurship, may be termed threshold concepts (Meyer and Land, 2003, Meyer and Land, 2005).

Taking a social constructivist approach, using a Delphi-style method, semi-structured interviews with entrepreneurs were conducted, transcribed, thematically coded and analysed, and a list of candidate threshold concepts drawn up. Two further data sets were collected and consensus was reached on 5 entrepreneurship threshold concepts.

Applying threshold concept theory to entrepreneurship education is likely to suggest ways to improve the effectiveness of programmes and modules claiming this specialism. Further stages of this research will gather educator and student perspectives and ultimately findings will enable the recommendation of changes to curricula that are likely to have a positive impact on the quality and effectiveness of entrepreneurship programmes in higher education.

## Threshold Concepts

Threshold concepts may be described as ‘conceptual gateways’ or ‘portals’ that lead to previously inaccessible ways of thinking about something – particularly in the context of

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3 academic disciplines (Meyer and Land, 2005). These conceptual gateways may be  
4 recognised by their *transformative*, *irreversible* and *integrative* characteristics. In  
5 transforming the learner, they change the learner's perceptions, subjectivities and world-  
6 view. There is a 'repositioning of the self' (Meyer and Land, 2005); an ontological as well as  
7 a conceptual shift. This can often be uncomfortable and is sometimes resisted, so a threshold  
8 concept may also be characterised as troublesome. Mastery of a threshold concept  
9 simultaneously changes an individual's idea of what they know and who they are (Cousin,  
10 2009). Such changes are likely to be irreversible, and are unlikely to be forgotten or  
11 unlearned. They are integrative in that they expose how other things can be related to each  
12 other. When individuals master threshold concepts, they can see the relationships between  
13 other important concepts in the subject discipline. Examples of threshold concepts have  
14 included *precedent* in Law, *depreciation* in Accounting, *pain* in Physiology, *irony* in Literary  
15 Studies and *entropy* in Physics (Meyer and Land, 2005).

16  
17 A threshold concept is also likely to be *bounded* in that 'any conceptual space will have  
18 terminal frontiers, bordering with thresholds into new conceptual areas' (Meyer and Land,  
19 2006, p. 6). In recognising the threshold concepts in a subject area such as entrepreneurship,  
20 individuals appreciate how it is qualitatively different to other subjects areas and disciplines  
21 such as Management or Design (Donovan, 2017). A threshold concept can be a form of  
22 disciplinary property (Cousin, 2006) and offers a useful way of identifying and distinguishing  
23 a discipline, subject, profession or field of study. Land, Meyer & Smith (2008) suggest they  
24 may define the boundaries of academic territories. This study presents five entrepreneurship  
25 threshold concepts. Further work is indicated to find whether they are, separately or in  
26 combination, distinctive to the field and study of entrepreneurship.

### 27 **Entrepreneurship**

28 Theories of entrepreneurship are full of paradox and uncertainty and necessitate a level of  
29 improvisation (Schumpeter, 1934). To add to the complexity, "There are many  
30 entrepreneurships in terms of focus, definitions, scopes and paradigms" (Murphy *et al.*,  
31 2006). However, if entrepreneurship is to be taught and curricula are to be developed which  
32 enable students to understand what it means to think like an entrepreneur, then it would be  
33 useful, to say the least, to identify a knowledge base for entrepreneurship.

34 From an economic perspective, entrepreneurship has been conceptualised in terms of  
35 financial risk, serving to compensate for discrepancies between supply and demand by  
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3 buying something cheaply and selling it again at as high a price as possible (Schumpeter,  
4 1934). The entrepreneur obtains and distributes resources at his or her own risk, thereby  
5 bringing the economy into equilibrium (McClelland, 1967); a type of 'Del Boy Wheeler  
6 Dealer' [1] (BBC, 2014) scenario. Gartner (1988) refers to Knight in the 1900's who stated  
7 the function of the entrepreneur was to carry the inherent uncertainty within the economy on  
8 his shoulders.  
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12  
13 Entrepreneurship can also be regarded purely as an investment alternative, and a mechanism  
14 for growing capital. A distinction can be made between people who supply funds and people  
15 who create profit (Carland *et al.*, 1988). Pittaway (2005) argued that the entrepreneur in fact  
16 bears no risk, instead it is the venture capitalist who allocates the funds to the entrepreneur  
17 who bears the uncertainty and risk in the economy. Entrepreneurship therefore can be about  
18 the maximisation of return on investment.  
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23 Schumpeter also argued that entrepreneurship is a proactive and creative activity, generating  
24 new opportunities and organisations in the economy by combining existing things, and  
25 arguably acting as the main source of development in the economy (Schumpeter, 1934).  
26 Increasingly, concepts of entrepreneurship have become centred on innovation and the  
27 creation of value – where new venture creation is only one of many possible outputs.  
28 Entrepreneurship can be regarded as innovation (Schumpeter, 1934) and the act of value  
29 creation.  
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35 If an entrepreneur is someone who comes up with new ideas, recognises opportunities and  
36 translates these into added value for society by assuming the risk of starting a new business  
37 (Baron, 1998), then perhaps entrepreneurship can be regarded as anything that an  
38 entrepreneur does. However, many would argue that entrepreneurship is not only possible in  
39 the context of starting a new business.  
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44 A more holistic conceptualisation of entrepreneurship has also been extended to the human  
45 condition; "We are entrepreneurs of the self", (Lazzarato, 2012). Entrepreneurship has thus  
46 been used to describe behaviours within corporate contexts (Nielsen *et al.*, 2012) and  
47 therefore may not exclusively be about the creation of new and independent organisations.  
48 Entrepreneurship can be regarded as being about more than just starting an independent  
49 organisation, but a complex phenomenon that occurs in many different contexts, varying in  
50 terms of scope, process and output (Nielsen *et al.*, 2012). Entrepreneurship becomes possible  
51 for employees, and is thus transformed into the concept of 'intrapreneurship' (Pinchot, 1987).  
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3 However, others would argue against this conceptualisation as it neglects the extent of  
4 personal financial risk normally involved in new venture creation.  
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6 Entrepreneurship has been conceptualised in terms of specific personality traits such as  
7 creativity, opportunism and persuasiveness combined with an unusually low level of aversion  
8 to uncertainty. These traits may be inherent, developed, or a combination of the two.  
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10 Repeated research attempts have attempted to distinguish those who engage in  
11 entrepreneurship through having a particular psychological mentality (Autio, 2007).  
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15 However, the literature exploring the personality traits of successful entrepreneurs has been  
16 challenged on three main fronts. Firstly, the interdependency of traits and the influence of  
17 environmental factors has been largely ignored and is challenging or impossible to quantify.  
18  
19 Secondly, such a wide range of traits have been generated as to render the concept of the  
20 characterisation of ‘a successful entrepreneur’ meaningless, and finally, the identification of  
21 ‘the entrepreneurial personality’ has not yet been empirically possible (Kolb, 1984). More  
22 recently “EntreComp” (Bacigalupo *et al.*, 2016) has been published and is starting to gain  
23 traction. This framework sets out 3 competence areas, 15 competencies and 442 learning  
24 outcomes, but the extent to its contribution to entrepreneurship education it not yet clear.  
25  
26 Proponents of Ajzen’s (1991) Theory of Planned Behaviour (TPB) regard constructs such as  
27 traits and demographics as antecedents of intention, which is seen as a more immediate  
28 predictor of behaviour (Kautonen *et al.*, 2013), specifically the intention to start a business  
29 translating into actually starting a business.  
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37 If an entrepreneur is defined as anyone practicing entrepreneurship, and anyone practicing  
38 entrepreneurship is defined as an entrepreneur; the problem of definition and distinction of an  
39 entrepreneur and entrepreneurship is not progressed. This is the basis of the longstanding  
40 ‘structure–agency’ debate, and a separation of the individual and the process is indicated.  
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44 Shane (2000) explains entrepreneurship by considering the nexus of enterprising individuals  
45 and valuable opportunities and other researchers have attempted to address these issues by  
46 offering theoretical perspectives that combine structure and agency in some form of mutually  
47 constitutive duality. Bourdieu (1990) as cited by Mutch (2007), for example, overcomes what  
48 he sees as the false antimony between agency and structure, replacing this with a focus on  
49 practice. According to these researchers, structure is both the medium and outcome of social  
50 practices: instead of being in opposition, structure and agency presuppose each other and are  
51 mutually constitutive (Sewell Jr, 1992).  
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Whichever conceptualisation or combination of conceptualisations one chooses for entrepreneurship; the fact remains that none of them so far tell the whole story. None is sufficient on its own; many people with supposedly entrepreneurial traits have not set up new ventures, and many self-employed people or small business founders do not display an entrepreneurial approach.

### **Entrepreneurship in Higher Education**

Entrepreneurship education, the transformation of universities into entrepreneurial universities and the establishment of corresponding entrepreneurship education ecosystems (EEE), are widely seen as a primary facilitator and catalyst of university collaborations with industry and government, and the source of development frameworks supporting knowledge spillovers boosting startup activity (Belitski and Heron, 2017).

Intention and perceived behavioural control (PBC) can be significant predictors of entrepreneurial behaviour and an increased focus by entrepreneurship educators on developing PBC is gaining increasing ground (Kautonen *et al.*, 2013). More traditional short-term and subjective outcome measures of entrepreneurship education programmes are increasingly seen as insufficient, and there are calls for more novel impact indicators related to mind-set and emotion, such as those related to the intention-to-behaviour transition (Nabi *et al.*, 2017). The importance of theory-based capability development through practise is acknowledged and more research into entrepreneurship education deliver methods focusing on the development of entrepreneurship culture and skills is called for (Belitski and Heron, 2017).

Others highlight the confusion regarding what entrepreneurship education is and what it aims to accomplish and suggest part of the solution might be to make the design of such programmes more explicit and to contextualise the components of the associated outcomes, objectives, assessment and pedagogy (Maritz and Brown, 2013, Nabi *et al.*, 2017, Maritz, 2017).

Focusing on the distinctive ways in which entrepreneurs think and practice is particularly appealing in an educational context notwithstanding the many challenges this approach presents to the educator. Threshold concept theory offers a means of distilling the essence of entrepreneurship in a way that may be usefully applied in an educational context and is the focus of the research presented here.



## The Delphi Method

It is argued that a shared understanding of threshold concepts is critical and therefore a level of consensus, such as that achieved by the Delphi method, is invaluable to the identification of threshold concepts in any field or discipline (Barradell, 2013). The term “Delphi” has been extended over the years to cover a wide variety of types of group interaction (Linstone and Turoff, 1975). Most involve a group where the goal of the exercise is information (i.e. the exercise is an inquiry), the information being sought is uncertain the minds of the group and some pre-formulated systematic procedure is followed to obtaining a group output

A way of gathering expert opinion, it is a type of remote group interview or focus group where the participants are aware of the perspectives of each other but are not aware of which participant has which perspective. The intention is that participants are influenced by each other’s perspectives according to the content and not the author. Opinion is gathered over several rounds interspersed with controlled feedback until the results become stable or consensus is achieved. A number of studies concerned with entrepreneurship have used the Delphi method to collect research data (Amos and Pearse, 2008, Gartner, 1990, Morris *et al.*, 2013, Robles and Zárraga-Rodríguez, 2015).

The Delphi method typically uses one panel with a number of rounds (Amos and Pearse, 2008). The researcher alternates between discovering and interpreting the data with the aim of approaching a consensus of opinion which is more informed and sophisticated than any of the preceding constructions including that of the researcher (Guba and Lincoln, 1994).

The main advantage of the method is that it allows the heterogeneity of the participants to be preserved assuring greater validity of results, as the group is not open to domination by quantity or by strength of personality from any particular individual or group of individuals (Linstone and Turoff, 1975).

### The approach for this study

This research adopts a constructivist paradigm where many realities are constructed from social and experiential bases that are local and specific in nature. The aim of this inquiry, adapted from Guba and Lincoln (1994), therefore is to understand and reconstruct concepts that are critical to thinking as an entrepreneur regarding reality as relative and socially constructed.

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3 A three stage Delphi-inspired method was used to identify and obtain expert consensus on  
4 entrepreneurship threshold concepts. The first stage consisted of semi-structured  
5 interviews conducted with expert entrepreneurs. The aim of the interviews was to answer the  
6 overarching research question, “What does it mean to think as an entrepreneur?” 23  
7 individuals were approached to participate in the interview stage. 17 agreed to participate  
8 and interviews of around 40 minutes were conducted and transcribed (9 were conducted face  
9 to face and 8 over the telephone). 12 participated in the 2<sup>nd</sup> round and 10 contributed to the  
10 3<sup>rd</sup> and final consensus round. For additional context four other individuals with relevant  
11 experience (non-entrepreneurs) were also interviewed, including an expert in venture capital,  
12 two founders of smaller businesses and an expert in entrepreneurship education.  
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19 A purposive sample of entrepreneurs was identified from the membership records of the  
20 Entrepreneurs’ Forum (2017). The Entrepreneurs’ Forum is a members’ organisation in the  
21 North East of England dedicated to helping their members develop, create new opportunities  
22 and grow their businesses (2017). All members are owner/managers of businesses who work  
23 full-time on their business, which must have an annual turnover in excess of £250,000.  
24 Further participants were introduced by individuals in the initial participant set, in a snowball  
25 fashion. Two additional participants were known personally by the author and served to pilot  
26 the research communication and interview questions.  
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33 The criteria for the sample of expert entrepreneurs was adapted from research by Sarasvathy  
34 (2008) who defined an expert entrepreneur as “a person who, either individually or working  
35 as part of a team, had founded one or more companies, remained a full time  
36 founder/entrepreneur for 10 years or more, and participated in taking at least one company  
37 public”.  
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42 Target participants were chosen who satisfied the first two criteria and whose company had  
43 reached a significant turnover (over £2m) and employed over 20 people. Ultimately the third  
44 criterion of company floatation was not applied, as the consensus of the participating expert  
45 entrepreneurs was that floatation was not necessarily the only reliable indication of business  
46 success, and was not generally regarded as the ultimate goal for every business. The  
47 turnovers of the companies founded by the respondents ranged from £2.4m to £1.3bn and 5  
48 had publically floated the companies they had founded.  
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3 Many other people who do not comply with the criteria set out here may also be argued to be  
4 entrepreneurs, or even expert entrepreneurs, but it would be hard to argue that any individual  
5 complying with the criteria set out above was not an expert entrepreneur.  
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8 A list of nine candidate threshold concepts together with brief descriptors was developed  
9 from the interview data using NVIVO10 software. Thematic analysis was combined with  
10 grounded theory and a social constructivist approach. Interview data were treated as stories  
11 and narratives through which the interviewees described their world and not as “potentially  
12 ‘true’ pictures of ‘reality’” (Silverman, 2013). The aim was to generate threshold concepts  
13 that served as hypotheses theoretically describing the constructs in every sentence. The  
14 interview transcripts were coded according to particular themes, which emerged on reading  
15 and re-reading them, line by line. Coding and analysis were conducted hand in hand in a  
16 cyclical fashion, recognising that they are related but separate activities (Saldaña, 2009). The  
17 process of coding lead from the data to the idea and from the idea to all the data pertaining to  
18 the idea (Richards and Morse, 2007). A large number of themes were developed quickly at  
19 first, and then as more transcripts were coded, the number of themes plateaued, indicating  
20 that saturation had been reached. At the same time, the themes were also gradually grouped  
21 together in families from which the candidate threshold concepts emerged. For example,  
22 “Focus” included the themes of “persuasive”, “prioritisation”, “seeing the big picture”,  
23 “stubborn” and “vision”. Candidate threshold concepts were developed which highlighted  
24 patterns in the data and attempted to explain why the patterns were there in the first place.  
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36 Once the candidate threshold concepts had been developed, the panel was asked to rate each  
37 candidate threshold concept (and descriptor) according to *how important they felt it was to*  
38 *thinking as an entrepreneur*, using online survey software (Bristol Online Survey). They  
39 were also asked to rank the candidate threshold concepts according to their importance to  
40 thinking as an entrepreneur, and also according to how much they differentiated between  
41 thinking as an entrepreneur, and not thinking as an entrepreneur. Responses were analysed  
42 and slight modifications were made to the descriptors of two of the candidate threshold  
43 concepts as a result. At this rating stage, the online questionnaire was sent to 16 of the  
44 interviewees (the expert in entrepreneurship education was not invited to participate) asking  
45 them to rate each candidate threshold concept in terms of importance to thinking as an  
46 entrepreneur. 15 responded, 3 of which were excluded as the respondents did not strictly  
47 comply with the definition of expert entrepreneur being used here, to ensure an homogenous  
48 sample.  
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3 The third and final stage of the process was conducted via email. The collated perspective of  
4 the panel was shared from the second stage – however it seemed inappropriate to ask the  
5 panel to repeat the previous exercise, with the only difference being knowledge of the group  
6 response. Little comment has been made on the required levels of tolerance of a Delphi  
7 panel. Repeatedly being asked the same question, albeit with new information regarding how  
8 everybody else answered it last time could become tiresome, especially for respondents with  
9 strongly held opinions that are relatively fixed and not easily influenced by others, as was  
10 likely in this case. It was also difficult to see how any consensus could be claimed that was  
11 not in fact unanimity in participant ranking. Consequently, in the final round, the panel were  
12 asked to indicate if they thought each candidate threshold concept was critical to thinking as  
13 an entrepreneur. 10 responses were received at this final stage.

21 Consensus is generally regarded to be broad agreement, a collective opinion, a shared view.  
22 Keeney, Hasson & McKenna (2011) discuss a “level of consensus” in a Delphi, implying that  
23 unanimity is not required. They point out that the definition of an acceptable level of  
24 consensus is contentious and is often an arbitrary figure which is not stated at all in many  
25 studies. With this in mind participants were asked to vote on the candidate threshold concepts  
26 in the final round and consensus was defined as >80% agreement.

### 31 Findings

34 An initial set of nine candidate threshold concepts were developed from the 17 interviews  
35 conducted (Table 1).

37 *[Insert Table 1 here]*

40 16 participants were asked to rate these 9 concepts in terms of importance to thinking as an  
41 entrepreneur (Table 2), and rank them in terms of importance (Table 3) and also in terms of  
42 how well they differentiated thinking as an entrepreneur from not thinking as an entrepreneur  
43 (Table 4).

47 *[Insert Table 2 here]*

49 *[Insert Table 3 here]*

51 *[Insert Table 4 here]*

54 All 9 candidate threshold concepts were rated as at least ‘important’ to thinking as an  
55 entrepreneur by the majority of the participants, but it was difficult to judge whether or not  
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3 any consensus had been achieved. Agreement was even less apparent in the ranked  
4 responses. Consensus could be claimed for Focus being important to thinking as an  
5 entrepreneur (ranked in the top 4 by 10 of the 12 respondents) and Business Fundamentals  
6 being less important to thinking as an entrepreneur (ranked in the bottom 4 by 11 of the 12  
7 respondents.)  
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11 Little consensus was apparent when asked to distinguished between thinking as an  
12 entrepreneur from not thinking as an entrepreneur, with the exception of 11 of the 12  
13 respondents ranking Business Fundamentals in the bottom 4 for this property  
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17 In the final Delphi round, the panel was asked to indicate which of the 9 concepts were  
18 critical to thinking as an entrepreneur. 10 responses (from 12) were received (Table 5).  
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21 *[Insert Table 5 here]*  
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23 It was judged that consensus had been reached for five of the nine candidate threshold  
24 concepts, with at least 9 of the 10 respondents indicating these were critical to thinking as an  
25 entrepreneur. These were Self-Efficacy, Opportunity, Risk, Focus, and Impact. The  
26 following section illustrates these with interview quotes.  
27  
28

### 29 30 **Entrepreneurship Threshold Concepts**

31  
32 *Self-Efficacy – “I can create value”*  
33

34 The threshold concept of Self-efficacy is about being attracted to challenges and thinking “I  
35 can do this” whilst being highly self-aware, self-controlled and conscious of one’s own  
36 strengths and weaknesses. One respondent summarised it like this,  
37  
38

39  
40 *“...you don’t want an easy ride, because that would be boring.”*  
41

42  
43 *(Transcript 10)*  
44

45 Mistakes are regarded as an important way of learning, and par for the course.  
46

47 *“You’ve also got to grasp the concept, and this is where I would define a good*  
48 *entrepreneur is somebody who does not recognise failure. And what I mean by that is*  
49 *that you may not succeed, but you see that as something different. So my, what would*  
50 *seem to the world, say, at times my failures, I, I don’t see them as fail-, I may be, I*  
51 *may hurt at the time that they happen...and I feel all the pain of failure...but I quickly*  
52 *get engaged in a dialogue that says, “Well, that’s a learning experience.”*  
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(Transcript 7)

Self-efficacy is also concerned with self-confidence, almost to the point of arrogance and a level of self-knowledge that is deep enough to acknowledge important limitations, but not so deep as to inhibit risk taking.

*“I mean overwhelmingly we tend to look at everything and go “we could do that better” Doesn’t matter what it is actually!”*

(Transcript 14)

*Opportunity – “I see opportunities”*

The threshold concept of Opportunity is about seeing commercial potential where others do not.

*“You join dots. You know, you see connections. You see, you see your own pathways that other people just don’t see.”*

(Transcript 7)

Is also involves a strong desire to change the status quo.

*“There’s definitely that desire to change, to want to do things differently and to be the person that thinks they’re the ones that can do it. I think you also have to have a certain level of dissatisfaction about just the general status quo all the time, I guess it ties in to wanting to change things but I get irritated when...I think I mean I look for solutions to things all the time.”*

(Transcript 14)

*Risk – “I understand the risks”*

The threshold concept of Risk is about understanding risk as an inherent part of pursuing any potential opportunity, and something not to be avoided but perhaps even sought out.

*“So every spare penny we ever had, and in fact quite a lot of money we didn’t have, we used to put into growing and scaling up as quickly as possible.”*

(Transcript 14)

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3 *"I have a high propensity for risk, even to the point where, I'm uncomfortable when*  
4 *I'm comfortable."*

5  
6 (Transcript 7)  
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9 Risk also involves being discerning regarding potential opportunities, but also having faith in  
10 your own decisions, trusting your gut and not needing to have all the detail,  
11

12  
13 *"But I do think that a very sort of rigid approach and very analytical approach to, to*  
14 *things probably isn't the obvious characteristic of an entrepreneur because they will*  
15 *do, you know, those kind of people will do things logically, they'll do lots of analysis*  
16 *and, again, to use those dreadful phrases, you get paralysis by analysis. You need*  
17 *someone who says, "Yeah, yeah, I know all of that, but...""*  
18  
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21  
22 (Transcript 6)  
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26  
27 *Focus – "I know what's important"*  
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29 The threshold concept of Focus is about making choices and perhaps turning away from other  
30 attractive opportunities as explained here,  
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33 *"...you realise you know years on, that actually being very focussed and not straying*  
34 *is a key asset...there's always that desire to break out and try and do more, go off and*  
35 *do other things at the same time as running your business, your core business...And*  
36 *whilst you might think it's entrepreneurial to go and sort of try to do other things or,*  
37 *or tangential things along the way, actually - don't."*  
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40  
41 (Transcript 13)  
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44 In the context of Focus, it is important to have a clear vision and passionately, and perhaps  
45 stubbornly, drive towards it.  
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48 *"I think an entrepreneur is somebody who, as I said before, has a vision for*  
49 *something that can be, that they can do... and perhaps something that you see a real*  
50 *opportunity and you think, "I can do that better than somebody else. I can make a*  
51 *real success of that. I can gather a team of people around me to deliver that" and*  
52 *they've got the drive and determination to make it work because failure is not an*  
53 *option. You know, you have to succeed or, you know, the business will, will fold."*  
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(Transcript 9)

Effective prioritisation is also an important component of Focus,

*“I learned how to, you know, cut through the crap basically and sort of, you know, just sort of spend time on what was important.”*

(Transcript 15)

as well as the ability to quickly see the big picture:

*“One of the things a lot of entrepreneurs are very quick, they’re not as some people think, they’re not kind of salesmen or somebody trying to do a quick turn or a quick deal or do something very, very quick, you just do it. Most entrepreneurs that I know that are really successful are able to take in the whole world view whether that’s the environment that’s round and about you, the people that are working for you, the customers, quite a lot of different things, but just to be able to take that whole view into account very, very quickly, and they can see themselves and their business decisions in the context of the local economy, the place in which they work, the market place in which they work, the wider economy, other things going on around about in a different that may influence the consumer. They can see all those different things going on but they get that big world picture very, very quickly. I, I find that that’s something that I’ve got a, a knack of doing and not everybody else can...”*

(Transcript 8)

The final aspect of Focus is its all absorbing nature.

*“Just that incredible sort of consistency of dedication to the whole thing. You know, you just never let it drop, you never relax, you never, you know, you don’t ever stop doing what you’re trying to do really. It’s, it’s kind of, it’s what drives you, sort of thing.”*

(Transcript 5)

*Impact – “I take action”*

Finally, the threshold concept of Impact is about making things happen and taking action.

*“And I think an entrepreneur is someone who – really important – doesn’t think about the consequences because if you start to think about it too much, you don’t do it, and*



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3 *that is **the most**, for me, defining thing about an entrepreneur. And the second thing –*  
4 *it's strange to say it's second, but I think it's really important – is that you then do it.*  
5 *You don't delay by a day. You don't delay by a week. You just absolutely do it.”*  
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8 *(Transcript 10)*  
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11 To summarise, when an individual has understood the threshold concepts of Focus, Self-  
12 efficacy, Risk, Opportunity and Impact, they will also understand what it means to think like  
13 an entrepreneur.  
14

## 15 16 17 **Conclusions** 18

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20 In this paper, ways in which entrepreneurs think have been explored and, using thematic  
21 coding and a Delphi-style method with a panel of expert entrepreneurs; five threshold  
22 concepts have been identified that could be distinctive to entrepreneurship; Self-Efficacy,  
23 Opportunity, Risk, Focus, and Impact. It remains to be seen if they are bounded and distinct;  
24 and not simply a list of activities entrepreneurs (and others) may engage in, or competencies  
25 that entrepreneurs (and others) demonstrate.  
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30 Further research is indicated to explore the generalisability of these findings, and  
31 applicability to entrepreneurs in different countries, industries, etc. It is acknowledged in  
32 addition that there are many types of entrepreneurship where other or additional threshold  
33 concepts might be pertinent, for example in technological areas where turnover can be  
34 significantly affected by time lags.  
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39 Threshold concepts in any discipline or multidisciplinary subject area are important to  
40 educators and trainers in developing enterprising and pedagogical approaches, and it is hoped  
41 that those identified here will contribute to the process of clarifying what educating students  
42 for entrepreneurship really means. Entrepreneurship threshold concepts can be used to set  
43 out a structure for the design and (re)development of enterprise and entrepreneurship  
44 curricula, as well as enabling more constructively aligned assessments.  
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50 Conceptual and teaching and learning frameworks and models for EEP are becoming more  
51 widely adopted (Maritz, 2017, Nabi *et al.*, 2017) and mainstream approaches to  
52 entrepreneurship education are attracting increasing criticism for failures to evidence  
53 measurable and meaningful impact across contexts (Rae, 2004). There is significant potential  
54 for new and novel approaches that promote learner transformation, perceived behavioural  
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3 control, intention-behaviour transitions, entrepreneurial learning and identity formation.  
4 Consequently, the development of entrepreneurship threshold concepts to support the  
5 development of a holistic practice based theory of entrepreneurial learning is worthy of  
6 serious consideration.  
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10 [1] Only Fools and Horses is a British television situation comedy originally broadcast from 1981 to 1991. One  
11 of the lead characters is Derek "Del Boy" Trotter; a fast-talking, archetypal South London 'fly' trader, willing to  
12 sell anything to anyone to make money.  
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Education + Training

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Table 1. Initial set of nine candidate entrepreneurship threshold concepts drawn from interview data.

Self-Efficacy	Self-efficacy is about thinking "I can do this" whilst being highly self-aware, self-controlled and conscious of one's own strengths and weaknesses. It is about accepting mistakes as part of learning, and always being interested in knowing more.
Focus	Focus is about making choices, having a clear vision and passionately driving towards it. It implies effective prioritisation, appropriate delegation and never switching off. Focus means intense, single-minded determination.
Deviance	Deviance is about being unconsciously unconventional, able to resist the pressure to conform or do what family and society expect. It implies a degree of strong mindedness and can sometimes be perceived as being difficult or arrogant.
Risk	Risk is regarded as a sign of a potential opportunity, something to be understood - even sought out - rather than necessarily avoided. It implies quick wits, requires discernment and is not reckless.
Opportunity	Opportunity is about seeing commercial potential where others do not. It is associated with intuition, making patterns and connections. It implies future orientation and a focus on possibilities for improvement.
Impact	Impact is about making things happen and taking action on a grand scale combined with a sense of urgency and a desire to make a difference. It requires courage and implies a degree of compulsion.
Work	Work is not a distinct bounded set of activities, but integral to and indistinguishable from living and playing. It implies incredible effort invested by choice which is intrinsically motivated.
Team	An effective team is prerequisite to success. Team is about knowing that the team can do more than the collection of individuals combined, not feeling threatened by the capabilities of others, but seeking out others more able than you.
Business Fundamentals	Having fundamental knowledge in sale and marketing, finance and human resources.

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Table 2. Participant rating of initial set of 9 candidate entrepreneurship threshold concepts.

Importance to thinking as an entrepreneur	not related	little relevance	some relevance	important	critical
Focus				2	10
Risk				3	9
Opportunity				3	9
Self-Efficacy			1	3	8
Impact			1	4	7
Work			2	4	6
Team		1	1	4	6
Business Fundamentals		1	5	3	3
Deviance			5	5	2



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Table 3. Participant ranking of initial set of 9 candidate entrepreneurship threshold concepts in terms of importance to thinking as an entrepreneur.

	Top 4	Bottom 4
Self-Efficacy	7	4
Focus	10	0
Deviance	4	8
Risk	6	4
Opportunity	6	5
Impact	4	5
Work	4	7
Team	6	4
Business Fundamentals	1	11

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Table 4. Participant ranking of initial set of 9 candidate entrepreneurship threshold concepts in terms of how well they distinguish between thinking as an entrepreneur from not thinking as an entrepreneur.

	Top 4	Bottom 4
Self-Efficacy	7	4
Focus	8	2
Deviance	3	6
Risk	8	3
Opportunity	9	1
Impact	5	6
Work	5	6
Team	2	9
Business Fundamentals	1	11

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Table 5. Participant voting on initial set of 9 candidate entrepreneurship threshold concepts in terms whether they are critical or not to thinking as an entrepreneur.

<i>Critical to thinking as an entrepreneur</i>	YES	NO
Focus	10	0
Self-Efficacy	9	1
Risk	9	1
Opportunity	9	1
Impact	9	1
Deviance	7	3
Work	6	4
Team	6	4
Business Fundamentals	5	5

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