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From Fragmentation to Integration: an interpretive analysis of entrepreneurial learning during social engagement

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Abstract

Existing entrepreneurial learning literature is fragmented, with a divide between cognitive-, practice- and social-experiential approaches. Of these, social-experiential approaches have received the least attention. Despite a general agreement between scholars that social networks play an important part in entrepreneurship and entrepreneurial learning, the role of social interactions in entrepreneurial learning is underdeveloped. The aim of this research is to explore this gap and provide insights into the role of social interactions in entrepreneurial learning, how entrepreneurial learning during social engagement can be aided and/or impeded, the outcomes of entrepreneurial learning during social engagement, and how learning during social engagement benefits entrepreneurs. An interpretive approach, influenced by a social constructionist epistemology, underpinned the research, which comprised semi-structured qualitative interviews with 17 entrepreneurs across 15 companies. The data was analysed using thematic networks – a process which involved six steps across three levels of interpretation. This revealed three core principles: firstly, multiple, interwoven social interactions combine with other learning mechanisms and influencers for entrepreneurs to learn; secondly, learning during social engagement results in multi-layered and intertwined outcomes; and thirdly, learning during social engagement is contextually dependent and affected by various factors. These principles are interlinked; the first principle is foundational as it reflects how entrepreneurs learn (i.e. in a variety of learning sequences), with the other principles stemming from this to give a wider picture of entrepreneurial learning during social engagement. This thesis contributes to entrepreneurial learning literature by providing insight in three ways. Firstly, by demonstrating a need for integration rather than fragmentation within entrepreneurial learning. Secondly, by extending Bingham and Davis' (2012) framework of learning sequences. Finally, in the presentation of a new model of entrepreneurial learning during social engagement, developed to show the interlinkage of the three principles identified in this study.

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For Grandad Omar who said there would be a doctor in the family,
and Nana Alice who always believed it would be me.

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<u>Declaration</u>

I declare that thesis is my own work and has not been submitted or presented elsewhere before.

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Chapter One: Introduction

Entrepreneurship is of importance to economic development in modern society (Lockett et al. 2013; Lans et al. 2008; Cope et al. 2007) and is distinct from other organisational and management research. This distinction relates to the characteristics of the entrepreneurial context, and of small business start-ups, that are unique to entrepreneurship and owning/managing Small Medium Enterprises (SMEs). Such characteristics include, but are not limited to: uncertainty (Bergh et al. 2011); chaotic and rapid change (Holcomb et al. 2009; van Gelderen et al. 2005); complexity (van Gelderen et al. 2005); diversity and flexibility (Lans et al. 2008); and liabilities of newness, smallness and inexperience (Dada and Fogg 2016). These characteristics and the challenges they bring require entrepreneurs to not only be adaptable, but also requires them to engage in learning (Keith et al. 2016) which is unique to the context of entrepreneurship and its distinctive characteristics. Additionally, "owners need to learn because they are affected by technological developments, increased customer demands and growing competition" (Keith et al. 2016, p.521). Learning has been said to be "at the heart of entrepreneurial activity" (Lans et al. 2008, p.598), and "is an important variable in entrepreneurship, representing the acquisition or alteration of skills, knowledge, habits and attitudes necessary to deal with all aspects of running a business" (van Gelderen et al. 2005, p.98). The learning of entrepreneurs – herein after referred to as entrepreneurial learning – has become an accepted focus of scholarly research within the field of entrepreneurship (McKeown 2015; Wang and Chugh 2014; Tseng 2013; Lee and Jones 2008; Cope 2005; Rae 2005). This study aims to add to current understandings of entrepreneurial learning research by focusing upon the role of social interactions when entrepreneurs learn during social engagement with others.

Research Context

Before considering entrepreneurial learning and the particulars of this research, it is important to be clear about what is meant by the term 'entrepreneurship' and be explicit about the definition used within this piece of research (Welter et al. 2017). This is of importance because, despite the significance of entrepreneurship to the economy, various definitions have been used for the term (Packard 2017) both in everyday society and in scholarly work. In scholarly work, this could be due to the variety of disciplines

that have researched entrepreneurs and entrepreneurship, from economics to psychology, sociology to history, business management and more (Peneder 2009; Sibley Butler 2004). Thus, there is a lack of agreement and consistency in its use (Berglund and Johansson 2007) and entrepreneurship has come to mean different things to different people (Audretsch et al. 2015; Anderson and Starnawska 2008; Sharma and Chrisman 1999). The term "implies different things: innovation, ideas, creativity, new venture development, discovery and economic growth, just to name a few" (Audretsch et al. 2015, p.704). A consequence of the multiplicity of definitions and understandings of entrepreneurship is the lack of a consistent theoretical framework across entrepreneurship research (Packard 2017).

The terms entrepreneur and entrepreneurship have a long history in society and are often dated as far back as the 1700s (Carland et al. 1984). Cantillon is credited with being one of the first to define entrepreneurship (Carland et al. 1984), with the definition of "bearing the risk of buying at certain prices and selling at uncertain prices" (Stevenson and Jarillo 1990, p.18). Another scholar credited with an early definition of entrepreneurship is Say, who "described the entrepreneur as the person who shifts economic resources out of an area of lower and into an area of higher productivity and greater yield" (Rispas 1998, p.105). Other prominent scholars which have a strong presence in entrepreneurship include Schumpeter and Kirzner who have contrasting views of the entrepreneur (Kirzner 1999; Herbert and Link 1989). Schumpeter defines entrepreneurs as those who create disequilibrium within economic markets, while Kirzner argues that entrepreneurs are the ones who restore equilibrium (Kirzner 1999; Herbert and Link 1989). Such definitions illustrate an economic perspective of entrepreneurship, which places emphasis on "what happens when entrepreneurs act" (Stevenson and Jarillo 1990, p.18).

Other definitions can be seen to fit within a more behavioural perspective, where emphasis is placed on "how they act" (Stevenson and Jarillo 1990, p.18). Stevenson and Sahlman (1989, p.104) stated that "entrepreneurship is most fruitfully defined as the relentless pursuit of opportunity without regard to resources currently controlled". Similarly, one of the most cited definitions is the identification, evaluation and exploitation of opportunities by certain enterprising individuals (Shane and Venkataraman 2000). While many behavioural definitions consider entrepreneurship to

involve the pursuit of opportunity, some define entrepreneurship as the creation of new ventures (Gartner 1988). These two behavioural definitions have remained prominent in the entrepreneurship literature. This is reflected in the journal Entrepreneurship Theory and Practice, where these are the two explicit definitions used over the past five years. Of these, new venture creation has been used the most.

Within this research study, entrepreneurship is defined as the creation and development of new business ventures. Development is specified to illustrate that entrepreneurship does not cease once the venture has been established. This is of importance because "by defining entrepreneurship in terms of new venture creation...the ability of entrepreneurs to learn and adapt *once the business is established* is largely overlooked" (Cope 2005, p.375). By extending the definition to include the further development and growth of a venture, the researcher is acknowledging that neither entrepreneurship nor learning stop once the venture has been established. It is important to note that this definition does not discount the role of identifying and acting upon opportunities in entrepreneurship but considers this to be only one aspect of entrepreneurship.

Research Purpose

Entrepreneurial learning is now established as an integral part of entrepreneurship research (McKeown 2015; Tseng 2013). Existing research illustrates that entrepreneurial learning is an experiential process (Scarmozzino et al. 2017; Bagheri and Pihie 2010; Pittaway and Cope 2007; Cope 2005), which has been researched from a variety of approaches (Zheng et al. 2017). These can be categorised as cognitive-experiential, practice-experiential and social-experiential. Cognitive- and practice-experiential approaches tend to support the myth of the lone entrepreneur with an individualistic focus (McKeown 2015). Moving away from this, entrepreneurship is increasingly seen as a social process (Gordon and Jack 2010; Cope et al. 2007; Anderson et al. 2007), which involves engagement in a wide variety of networks (Cope et al. 2007). A shift towards social understandings of entrepreneurship has paved the way for social-experiential approaches towards entrepreneurial learning. Despite this, the area remains relatively underexplored, particularly in terms of the process involved in learning during social engagement with others. One study which provides some insight into social learning processes of entrepreneurs is by Zhang and Hamilton (2009).

Their research considered formalised peer networks and found reflection to be a core mechanism of entrepreneurial learning in that context. However, with attention on a specific, formalised context Zhang and Hamilton's (2009) study provides only a limited understanding of how entrepreneurs learn when engaging with their networks.

Both entrepreneurial learning (Lefebvre et al. 2015) and entrepreneurial education literature (Pittaway et al. 2015) point to the role of social interactions in learning, though there is little consideration of the precise ways different social interactions contribute. In addition, the learning within these studies is focused upon formalised learning contexts, and therefore provides limited insight into how entrepreneurs learn during social engagement. However, they point to a potentially important role for social interactions in entrepreneurial learning which is currently underdeveloped as an area of understanding. This research study is designed to address this lack of understanding in existing research and aims to explore the role of social interactions in entrepreneurial learning during social engagement. To achieve this, semi-structured interviews were conducted with seventeen entrepreneurs across fifteen companies. The research aims to address the following questions:

1. How do social interactions contribute to entrepreneurial learning?
2. How can entrepreneurial learning during social engagement be aided and/or impeded?
3. What are the outcomes of learning during social engagement?
4. How does entrepreneurial learning during social engagement benefit entrepreneurs?

Thesis Structure

Following this introductory chapter is Chapter Two: Literature Review of Entrepreneurial Learning. Chapter two considers existing understandings of learning within the entrepreneurship context. It is structured around an experiential entrepreneurial learning continuum which is introduced to distinguish between the different experiential approaches taken to entrepreneurial learning (cognitive-experiential, practice-experiential, bridging, and social-experiential approaches). The literature review outlines that many current understandings of entrepreneurial learning are based upon an individualistic assumption of entrepreneurship and that relatively little emphasis has been placed on how entrepreneurs learn during social engagement

with others. This indicates the gap upon which this research study is based. The literature review chapter ends with a justification of the research focus and the questions the study proposed to address.

Chapter three provides an overview and rationale of the research methodology used in this study. The Methodology chapter outlines the underlying assumptions of the research – an interpretivist philosophy underpinned by a social constructionist epistemology – and the method of data collection – qualitative, semi-structured interviews. It shows that participants were selected through a combination of purposive and snowball sampling and provides details of the research participants. The methodology chapter also explores the ethical considerations undertaken in designing and conducting the research. Further, Chapter Three explains the method of analysis selected; thematic networks based upon the work of Attride-Stirling (2001) which involves three levels of interpretation across six steps of analysis. Finally, the chapter closes on a personal reflection of the research process which demonstrates the value of reflexivity.

The fourth chapter, Exploration of the Research Findings, combines steps three, four and five of the analysis process by illustrating the thematic networks and describing and summarising the themes and patterns found. Four thematic networks are explored in the Findings chapter. These are built around the global themes:

1. Multiple, interwoven social interactions contribute to entrepreneurial learning
2. Learning during social engagement results in multi-layered and intertwined outcomes
3. The conditions that are conducive or barriers to entrepreneurial learning can be contradictory
4. Tensions are visible between the benefits and drawbacks of entrepreneurial learning during social engagement

From the analysis of these networks, three key findings – termed core principles – emerged which are presented at the end of chapter four. Firstly, multiple, interwoven social interactions combine with other learning mechanisms and influencers for entrepreneurs to learn. Secondly, learning during social engagement results in multi-layered and intertwined outcomes. Finally, learning during social engagement is contextually dependent and affected by various factors.

Chapter Five is the Discussion chapter and represents step six of the analysis process. In this chapter, the findings of the research are compared and contrasted to existing literature. It is structured around the core principles presented in Chapter Four. In discussing the first principle, the framework of learning sequences (Bingham and Davis 2012) is applied as a theoretical lens to further interpret how entrepreneurs learn during social engagement. This demonstrates the need for integration rather than fragmentation in entrepreneurial learning. In its application, the framework is expanded and an extended model is presented. In discussing the second principle, Cope's (2005) learning tasks and St-Jean et al's (2018) mentoring outcomes are drawn upon to interpret what entrepreneurs learn; identifying cognitive, affective and relational outcomes. Entrepreneurial identity theory (Bell et al. 2018; Leitch and Harrison 2016; Navis and Glynn 2011) is used to explain why the outcomes of the entrepreneurs are multi-layered and intertwined. Finally, in the discussion of the third principle, elements of micro and macro context (van Gelderen et al. 2012) are considered alongside the main contradictions identified.

The final chapter, Chapter Six: Conclusion, concludes the thesis by bringing together the study. In this chapter, the research questions are answered and the contributions to theory are outlined. The first contribution of this study is in the development of three core principles that demonstrate how entrepreneurial learning is an integrated rather than fragmented process which impacts on multiple entrepreneurial levels and is influenced by a variety of factors. The second contribution is an expansion of extant theory. This study expands Bingham and Davis' (2012) model of learning sequences as additional learning processes and additional learning sequences are presented. The third significant contribution of this study is in the introduction of a model developed around the three core principles. Practical implications of this study are also outlined, illustrating how this study can inform the availability, content and design of entrepreneurial learning programmes. Following this, the chapter acknowledges the limitations of this study and suggests areas for future research. The conclusion chapter stresses the importance of future entrepreneurial learning research taking an integrated rather than fragmented approach to understand the complexity of entrepreneurial learning and how the different learning mechanisms interplay.

Chapter Two: Literature Review of Entrepreneurial Learning

This chapter provides a review of the existing literature within the field of entrepreneurial learning, illustrating the key understandings of the field. Alongside an introduction and conclusion, the chapter is split into four sections based upon a continuum of entrepreneurial learning devised by the author as a heuristic device. These sections are entitled: cognitive-experiential approaches, practice-experiential approaches, bridging approaches, and social-experiential approaches. Each of these sections will show the core arguments of the approach, with emphasis on the suggested process of entrepreneurial learning. The chapter will also highlight the gaps within the literature and outline the research questions that this research project addresses.

Introduction

There has been a dramatic increase in the scholarly interest of learning in entrepreneurship over the past decade (Soetanto 2017; Jones et al. 2014; Wang and Chugh 2014), moving entrepreneurial learning from one of the most neglected areas of study (Harrison and Leitch 2005) to an accepted and integral aspect of entrepreneurship (McKeown 2015; Tseng 2013). This not only illustrates a positive response to calls for greater understandings of learning in entrepreneurship, but also indicates a recognition within entrepreneurship research that effective learning has a considerable positive effect on the success and achievement of entrepreneurs (Soetanto 2017; Keith et al. 2016; Wing Yan Man 2012; Rae and Carswell 2001). It also adds credence to the prevalent observation "entrepreneurship is a process of learning, and a theory of entrepreneurship requires a theory of learning" (Minniti and Bygrave 2001, p.7). Increased attention to entrepreneurial learning has contributed to a shift "from a static perspective, i.e. a trait-based approach, to a dynamic view, i.e. a learning-based approach" (Secundo et al. 2017, p.367) of entrepreneurship. The static, trait-based approach to entrepreneurship proclaims entrepreneurs have fixed personality traits and characteristics which enable them to be entrepreneurial, while a learning approach enables a dynamic view of the entrepreneur which affirms that entrepreneurs are developmental rather than fixed (Secundo et al. 2017). This means that entrepreneurs

develop their entrepreneurial knowledge, skills and capabilities over time through learning, and thus the entrepreneur is portrayed as dynamic and ever-changing (Secundo et al. 2017).

Despite an increase in the focus on entrepreneurial learning, the research in this area has been described as diverse and fragmented (Wang and Chugh 2014; Warren 2004), most likely due to the variety of definitions and understandings of entrepreneurial learning (Soetanto 2017). While it can generally be understood as "learning in the entrepreneurial process (Holcomb et al, 2009; Politis, 2005; Ravasi and Turati, 2005)" (Wang and Chugh 2014, p.25), such a definition does not give any indication as to what learning is. A common definition of learning used in the entrepreneurial learning literature is the creation, acquisition and/or development of knowledge (Cope 2005; Harrison and Leitch 2005; Politis 2005; Minniti and Bygrave 2001; Rae and Carswell 2000). Learning has also been defined as the combination of "acquiring and structuring knowledge, making meaning from experience and generating new solutions from existing knowledge" (Rae and Carswell 2000, p.152; Soetanto 2017, p.549). This definition is based upon cognitive (acquiring and structuring knowledge) and experiential (making meaning from experience) understandings of learning, which suggests that entrepreneurial learning involves both individual cognition and direct experiences. This is problematic as the definition is prescriptive of the process of learning; implying that cognition and making meaning from experience are the only ways in which entrepreneurs learn and potentially negating the role of social aspects of learning (such as social interactions and observations of other's experiences). Whilst this definition is more comprehensive than the previous, both limit our understanding of learning because of the emphasis they place on knowledge acquisition. The development and enhancement of skills and capabilities are also integral aspects of learning (Gibb 1997).

Other definitions directly relate learning with entrepreneurship. For example, Hamilton (2011, p.9) defines entrepreneurial learning as "the acquisition and development of the propensity, skills and abilities to found, to join or to grow a venture", and van Gelderen et al (2005, p.98) use the definition "the acquisition or alteration of skills, knowledge, habits and attitudes necessary to deal with all aspects of running a business". Both of these definitions are less prescriptive, with no limitation placed on the process of

learning and with learning encompassing more than the acquisition of knowledge. The definition provided by van Gelderen et al (2005) is used within this research study as it is considered to be the most comprehensive and appropriate for researching entrepreneurial learning without being prescriptive of the entrepreneurial learning process.

Moving away from the definition of entrepreneurial learning, the literature also illustrates the nature of entrepreneurial learning. Entrepreneurs are action-oriented (Pittaway et al. 2015; Morris et al. 2012; Cope 2005), and because of this their learning is thought to be primarily unintentional and accidental (Cope and Watts 2000), occurring in their everyday work practices. This view points to two separate aspects of the nature of entrepreneurial learning; the informality of entrepreneurial learning (Coetzer et al. 2017; Keith et al. 2016; Brett et al. 2012) and the importance of experiential learning processes to entrepreneurship (Pittaway et al. 2015; Jones et al. 2014; Agbim et al. 2013; Wing Yan Man 2012; Cope 2011; Zhang and Hamilton 2009; Corbett 2005; Politis 2005; Rae and Carswell 2001; Deakins and Freel 1998). Each of these aspects are expanded upon in the following paragraphs.

In terms of the first aspect, informality, literature is drawn from the field of education to provide insight into entrepreneurial learning. The education literature shows that there are varying degrees of formality to learning (Coetzer et al. 2017; Eraut 2004; Eraut 2000; Marsick and Watkins 2001; Marsick and Volpe 1999; Marsick and Watkins 1990) depending upon the context and design of the learning. Formal learning involves instruction and training; it occurs within an official programme (context) and is highly structured (design) (Marsick and Watkins 1990). Formal learning can be advantageous in that its structure provides learners with pre-planned learning outcomes, meaning learning is purposeful and can help in solving pre-defined problems. In contrast, informal learning tends to be learner directed; it is likely to occur in everyday situations (context) with little or no structure (design) (Marsick and Watkins 1990). Such learning can be advantageous as it happens as and when learning is required, meaning the learner does not have to wait for a formalised programme to be available. Informal learning can then be further separated by the level of intention of the learner. While some informal learning has a high level of intention where the learner chooses to engage in informal learning, incidental learning tends to have a very low level of intention and is seen as a

by-product of other activity (Coetzer et al. 2017; Marsick and Watkins 1990). Eraut (2000) places learning on a continuum of intent ranging from implicit (no intention to learn) to reactive (varying levels of intent) to deliberative (high level of intention to learn). Entrepreneurs are said to have a preference for informal learning (Coetzer et al. 2017) as they "typically do not have the financial resources or the time to engage in much formalised training" (Keith et al. 2016, p.516). Brett et al (2012, p.126) support this view, commenting that an entrepreneur's priority is on "the day-to-day running of the actual business" and that time constraints mean entrepreneurs rely on their own experiences. This learning is also suggested to be incidental rather than intentional (Cope and Watts 2000). However, this does not mean that all entrepreneurial learning is informal as entrepreneurs may also engage in formal learning programmes.

The second aspect relates to the importance of experiential learning. Despite being considered from a variety of approaches, existing understandings of entrepreneurial learning are underpinned by experiential learning (Zheng et al. 2017). Experiential learning is appropriate for entrepreneurship not only because entrepreneurs are action-oriented (Pittaway et al. 2015; Morris et al. 2012), but also because entrepreneurship itself is a temporal experience involving a variety of transitory events that comprise the venture creation process (Morris et al. 2012). Morris et al (2012) "define 'experience' as a lived-through event where the individual is 'in the moment'" (p.13) and reason that entrepreneurship is a series of such events where the entrepreneur is an active participant who brings their past experiences with them while being engaged in "real-time experiencing of events as a venture unfolds" (p.12). There is a common understanding that entrepreneurs learn from this engagement with experience; thus, learning is considered experiential in nature.

Despite this agreed assumption, different approaches have been taken to studying experiential entrepreneurial learning. Zheng et al (2017) identify three approaches; cognitive, social and practicing. This identification is developed here, where the three approaches are placed on a continuum of experiential learning approaches to entrepreneurial learning (Figure 1). At one end of the continuum are the cognitive-experiential approaches; these are the approaches which consider the cognitive processes and mental models of the individual entrepreneur, and accounts for the differences in learning for individuals. At the other are the social-experiential

approaches; these consider learning to be a social process, involving multiple actors. In the middle lies practice-experiential approaches. These approaches are more centrally aligned with experiential learning as emphasis is on the action and practice that contribute to learning rather than either the individual's cognition or the role of other actors. Though the figure shows these three categories along the continuum in boxes, this is purely for illustrative purposes. Not all approaches to the study of entrepreneurial learning fit neatly within these categories, but most can be differentiated in this way. The figure also illustrates that there are two bridging approaches – termed as such because they bridge two of the categories and cannot be distinctly placed in one or the other.

Experiential Learning Continuum

Cognitive

Authors such as:
Minniti & Bygrave (2001)
Corbett (2005)
Dimov (2007)
Holcomb et al (2009)
Petkova (2009)
Sardana & Scott-Kemmis (2010)

Practice-based

Authors such as:
Deakins & Freel (1998)
Cope & Watts (2000)
Cope (2003; 2005; 2011)
Politis (2005)
Politis and Gabrielson (2009)
Deakins & Wyper (2010)
Saunders et al (2014)

Action Learning

Authors such as:
Clarke et al (2006)
Jones et al (2014)

Vicarious Learning

Authors such as:
Hoover & Giambatista (2009)
Hoover et al (2012)

Social

Authors such as:
Taylor & Thorpe (2004)
Zhang & Hamilton (2009)
Lefebvre et al (2015)
Pittaway et al (2015)

Figure 1: Experiential Learning Continuum of Entrepreneurial Learning
(Based upon Zheng et al. 2017)

The continuum of experiential learning shows the disproportion of scholarly attention across the three approaches. Both the cognitive-experiential and practice-experiential approaches have been more utilised by entrepreneurial learning researchers when attempting to develop our understandings. Social-experiential approaches to entrepreneurial learning have been used to a lesser extent, illustrating a gap for the development of further understandings using this approach (Cope 2005). This research study takes a social-experiential approach to understanding how established entrepreneurs learn during the creation and development of their businesses. Within this social-experiential approach, emphasis is placed on the role of social interactions during social engagement in entrepreneurial learning.

From this research, a social-experiential theory of entrepreneurial learning is proposed. This theory enhances our understanding of how entrepreneurs learn during social engagement with other people. Where existing social-experiential approaches to entrepreneurial learning (such as peer networks and mentoring) illuminate the value of learning during formalised social engagement, the theory developed in this study reveals that social engagement contributes to learning in a number of contexts (both formal and informal) and through a range of social interactions. It reveals the diversity and overlap in the use of social interactions as a mechanism for learning. This social-experiential theory may also have value to wider social theoretical approaches such as situated learning (Lave and Wenger 1991; Wenger 2000). This is because the social interactions found to contribute to learning in this study come from a variety of sources (including one-off interactions with strangers), not just those bound in an entrepreneur's community of practice. Of further significance, what stands this social-experiential theory of entrepreneurial learning apart from the existing approaches is the way it brings together a variety of learning mechanisms (where mechanisms are the learning processes engaged in for learning to occur) in different ways. In doing so, it integrates understandings from all the experiential entrepreneurial learning approaches shown on the continuum (Figure 1); combining elements of social-experiential approaches with those from cognitive-experiential, practice-experiential and bridging approaches. Furthermore, the development of a social-experiential theory of entrepreneurial learning opens up the possibility for research to provide deeper insight into the connections between the types of experiential learning entrepreneurs engage in and could also consider whether there are particular contributors (or at least strength of ties) which are more suited to adding to learning of certain types of problems entrepreneurs face.

The continuum is used to structure this literature review chapter which is split into five sections. The first section considers the cognitive-experiential approach to entrepreneurial learning. This approach is divided into two streams; the process of entrepreneurial learning and the variance in entrepreneurial learning. The second section reviews the practice-experiential approach, with emphasis upon *how* entrepreneurs learn through their practical experience of engaging in entrepreneurship. Thirdly, bridging approaches are considered. These are action learning and vicarious learning; demonstrating a formal and informal example from this approach. The fourth section is focused upon social-experiential approaches, with the literature primarily

highlighting the role an entrepreneur's networks play in their learning. The cognitive-experiential, practice-experiential and social-experiential sections all demonstrate different applications of Kolb's Experiential Learning Theory (1984) to entrepreneurial learning. The chapter closes with a conclusion section, where the gaps found within the existing literature are highlighted and the research questions are introduced.

Section 1: Cognitive-Experiential Approaches to Entrepreneurial Learning

Cognitive-experiential approaches to entrepreneurial learning place emphasis on the way individuals cognitively process their experiences for learning. Such approaches consider entrepreneurial learning in two ways; firstly, in terms of the process of entrepreneurial learning, and secondly as a way to understand the differences in entrepreneurial learning and capability. The first part of this section – cognitive-experiential processes of entrepreneurial learning – illustrates that even when stemming from the same perspective, there are still differences in the conceptualisation of entrepreneurial learning. Two examples of cognitive-experiential approaches are used to highlight such differences; Minniti and Bygrave's (2001) iterated choice problem and Petkova's (2009) model of error detection and correction. These examples are not the only cognitive-experiential approaches to entrepreneurial learning that theorise the process of entrepreneurial learning; the selection and focus of these particular approaches is purposeful. Firstly, both models are well detailed and developed, meaning they are clear examples of the cognitive-experiential processes of entrepreneurial learning. Secondly, Minniti and Bygrave's (2001) algorithm of entrepreneurial learning has been considered as it is well cited within the entrepreneurial learning field and has prompted development within the field. Petkova's (2009) model, though from the same theoretical approach, proposes a contrasting process and was selected to highlight the variety of understandings that stem from the same continuum positioning.

Cognitive-experiential Processes

One cognitive-experiential approach to entrepreneurial learning that considers the process of learning has been proposed by Minniti and Bygrave (2001). Minniti and Bygrave (2001, p.5) assert that entrepreneurial learning is "a calibrated algorithm of an iterated choice problem" which involves acquiring knowledge and adding this to an

existing 'stock of knowledge' from past experiences. This knowledge, which is continually updated through experiences, is used to make decisions; repeating choices which have previously been successful and rejecting those which were unsuccessful. This resonates with the work of Kirzner (1997), as he stated that some actions are profitable and some are not, and those actions that are not profitable can be seen as 'entrepreneurial errors' which are eliminated from future action by an entrepreneur. According to Minniti and Bygrave (2001, p.6), both positive and negative experiences are said to contribute to an entrepreneur's "learning-by-doing". Learning is described to be a routinized process "involving repetition and experimentation" (Minniti and Bygrave 2001, p.8), where "learning takes place by filtering signals obtained by experimenting with different competing hypotheses, where actions are reinforced and others weakened as new evidence is obtained" (p.15). The terms 'learning-by-doing', 'repetition', 'experimentation' and 'experiences' illustrate the experiential nature of the learning they describe, while 'filtering signals' and 'competing hypotheses' illustrate that the learning is also cognitive. Unlike practice-experiential approaches which place emphasis on the active engagement in experiences as a process of learning, this understanding of learning has more emphasis on how the individual entrepreneur cognitively uses those experiences to make decisions. The more successful a decision, the more likely it is to be chosen again. The more experiences an entrepreneur has, the greater their 'stock' of knowledge becomes and the more confidence they gain. Knowledge stocks allow an entrepreneur to follow routines and decision procedures, illustrating that they cognitively address experiences and stocks of knowledge to learn and make decisions.

Minniti and Bygrave's (2001) model of entrepreneurial learning can be critiqued for adopting a static rather than dynamic perspective to entrepreneurial learning, with emphasis on "the causal relationship between entrepreneurs' previous experiences and the performances of subsequent ventures" (Karataş-Özkan 2011, p.878). Additionally, Minniti & Bygrave's (2001) proposed understanding of entrepreneurial learning can be aligned with adaptive learning (Chiva et al. 2010), lower-level learning (Fiol and Lyles 1985) and single-loop learning (Argyris and Schön 1978; Argyris 1976) which may not be suitable for entrepreneurial learning. These types of learning are synonymous terms used for learning which is characteristically repetitive and routinized; hence Minniti and Bygrave's (2001) understandings of entrepreneurial learning being aligned with these

concepts. Learning in this way associates certain behaviours with certain outcomes (Fiol and Lyles 1985) with no changes made to an individual's underlying assumptions, values and knowledge (Argyris 1976). This type of learning can be costly and take a long time, with no guarantee that the best action will ever be taken (Agbim et al. 2013). Learning that involves routines and repetition goes against the nature of entrepreneurship as entrepreneurship is filled with ambiguity and novel situations (Ravasi and Turati 2005) where "few business situations are identical" (Frankish et al. 2013, p.78). Therefore, Minniti and Bygrave's (2001) proposal may not be entirely appropriate and may not reflect entrepreneurship and how entrepreneurs learn. In contrast, generative, higher-level, double loop learning may be more appropriate in entrepreneurship. Such terms are used interchangeably for learning which involves questioning and challenging situations, outcomes and norms (Chiva et al. 2010). Ravasi and Turati (2005) point to a need for balance between adaptive and generative learning in entrepreneurship, though they themselves place emphasis upon generative learning.

A second example of a cognitive-experiential approach to the process of entrepreneurial learning is Petkova's (2009) error-based learning model. Petkova (2009) suggests that routinized models of learning such as the one put forward by Minniti and Bygrave (2001) are not the most suitable for understanding entrepreneurial learning as they are best suited to repetitive tasks which are not characteristic of entrepreneurship. Instead, she argues for error-based learning to be considered as a method of entrepreneurial learning. As entrepreneurs have to act fast, and often with limited information, in unpredictable environments they are likely to make errors and face variations between their expectations and outcomes (Petkova 2009). Such performance errors are a source of learning for entrepreneurs which is currently under-studied.

In her paper, Petkova (2009) places emphasis on the role of cognitive functions in error detection and correction and how cognitive biases impact learning. This illustrates why this error-based learning is categorised as a cognitive-experiential approach; though the learning stems from the experience of errors, cognition is shown to be the learning mechanism. Petkova (2009) stresses that entrepreneurial learning is more than learning by doing, as evidenced by the number of entrepreneurs who succeed with their first venture and then fail with their second. She argues that entrepreneurs learn more from errors and failure than success, largely because learning from errors can push an

entrepreneur to challenge their assumptions, beliefs, actions and knowledge. In contrast, success reinforces actions and can lead to an entrepreneur over-exploiting a certain action and avoid exploring alternatives. This therefore suggests that error-based learning is a generative rather than adaptive form of learning which directly opposes the suggestions put forward by Minniti and Bygrave (2001).

Petkova (2009) proposes a model of entrepreneurial learning based upon psychology, a field which is highly cognitive in nature, and purports that negative outcomes are triggers for entrepreneurial learning. Within the model, processes of error detection and error correction are proposed. Error detection is an important part of the model as only identified errors lead to learning; otherwise they are either accepted or not identified as a discrepancy meaning that no analysis or challenge takes place and thereby there is no learning (Petkova 2009). "The process of error detection involves three steps: observing and interpreting the outcomes, comparing the outcomes to the expectations, and detecting an error" (Petkova 2009, p.355). The process of error detection is a subjective process that is influenced by individual cognition in the form of knowledge structures. It is argued by Petkova (2009) that positive discrepancies in expectations and outcome tend to be accepted, while negative are treated as errors. This partially explains why entrepreneurs learn from failures rather than successes; most of the time failures are questioned and challenged while successes are simply accepted. Prior knowledge affects an entrepreneur's ability to detect errors through evaluating the outcomes of action, with specialised knowledge being more useful than general knowledge in this process. Once an error has been detected, the entrepreneur takes steps to correct the error. "Error correction consists of three cognitive processes: blame assignment, attribution of bad outcomes, and revision of faulty knowledge structures" (Petkova 2009, p.359). Entrepreneurs begin by identifying which action is the cause of the error and assigning blame either to themselves or an external source. The assignment of blame is highly impacted by an individual's attributional style. Individuals with an internal attributional style are likely to assign blame to their own decisions and/or actions, while those with an external attributional style are likely to assign blame to "external factors outside of their control" (Petkova 2009, p.359). Once blame is assigned, the entrepreneur is likely to consider whether the error was a result of an application of knowledge which is too generalised, or from an incorrect application of specialised knowledge. Knowledge structures are then changed; specialisation is used

to revise knowledge structures when the applied knowledge was too generalised and inapplicable or irrelevant components of specialised knowledge are discarded when specialised knowledge is incorrectly applied. Change in knowledge structure illustrates that learning has occurred.

This model of entrepreneurial learning is more suited to the context of entrepreneurship than the previously considered model put forward by Minniti and Bygrave (2001) as it is more closely aligned with the nature and characteristics of entrepreneurship. However, both of these cognitive-experiential approaches to entrepreneurial learning can be critiqued for being "limited by using the concept of individual information processing to understand the human mind and the ability to learn" (Rae 2005, p.324). According to Rae (2005), cognitive approaches neglect social and behavioural conceptualisations of how people learn. Therefore, he argues for an understanding of entrepreneurial learning that combines action, social participation and cognition rather than placing emphasis solely on the role of cognition.

COGNITIVE-EXPERIENTIAL DIFFERENCES

The other stream of cognitive-experiential approaches considers the differences in entrepreneurial learning, rather than the way entrepreneurial learning occurs. These are categorised here as cognitive-experiential approaches as they are underpinned by the assumption that learning is experiential in nature but place emphasis on the cognitive differences between individuals. For some, the differences are a result of using heuristics (e.g. Holcomb et al. 2009), while others suggest that differing learning styles and preferences are the reason (e.g. Dimov 2007; Corbett 2005).

Heuristics

Heuristics are simplifying strategies used and relied on by entrepreneurs to deal with uncertainty (Breslin 2015; Breslin and Jones 2012) when information is limited (Holcomb et al. 2009). Entrepreneurs are said to rely on heuristics more than managers in large organisations (Alvarez and Busenitz 2001). In entrepreneurship, heuristics are largely researched in terms of their influence on decision-making, though Holcomb et al (2009) illustrate the connection between the use of heuristics and entrepreneurial learning. They declare that heuristics "systematically influence the accumulation of knowledge" (Holcomb et al. 2009, p.168); arguing that heuristics have an impact on the

way individuals assimilate their prior stocks of knowledge with newly acquired knowledge. They explicitly state that knowledge can be acquired in three ways; by engagement in direct experience, vicariously through observation, and through tangible sources such as books and papers.

Holcomb et al (2009) suggest three heuristics which are used by entrepreneurs; the availability heuristic, the representativeness heuristic and the anchoring and adjustment heuristic. Firstly, the availability heuristic refers to the entrepreneur's perception of the likelihood of something happening; because an entrepreneur has experienced or observed something, it is in their memory and they consider it more likely to happen (Holcomb et al. 2009). This can make decision making quicker as they draw on their memory and act accordingly. However, it can mean that they are viewing situations wearing metaphorical blinkers and, consequently, (either intentionally or unintentionally) do not see other objective cues which may have influenced their decision. The availability heuristic can place limitations on learning as entrepreneurs rely on salient information rather than making deeper connections between new information/experiences and existing knowledge in memory (Holcomb et al. 2009). It can also create bias of action, with entrepreneurs relying on the availability heuristic having certain actions and outcomes more salient in their memory and therefore more likely to repeat said actions with an expectation of the same outcome. Secondly, the representativeness heuristic is associated with vicarious, observational learning. Holcomb et al (2009) put forward that entrepreneurs believe their observations to be representative and so make simplified relationships between what is likely to happen and what does happen. These simplifications occur as the entrepreneur has not experienced the full complexity of a situation and there are high levels of causal ambiguity and uncertainty. This influences learning as relationship judgements are generalised and it can be challenging to integrate such judgements with new knowledge structures. Lastly, the anchoring and adjustment heuristic refers to the entrepreneur making predictions based on their previous or observed experiences. The predictions are considered anchors, which are then adjusted through additional experience or information, and could be considered learning. However, "adjustments are typically insufficient" (Holcomb et al. 2009, p.180) as they "tend to be small" (p.181). Entrepreneurs are said to "overestimate the probabilities of success and underestimate the probabilities of failure" (Holcomb et al. 2009, p.181). The authors also state that as

entrepreneurs gain more experience and learn, they tend to be less dependent on the anchoring and adjustment heuristic.

Heuristics appear to have a somewhat positive impact on learning as they aid in knowledge retention (Holcomb et al. 2009) and, thereby, help an individual maintain their prior stock of knowledge. Knowledge retention also allows for an individual to create new knowledge by freeing "scarce cognitive resources" (Breslin and Jones 2012, p.299). Using heuristics can mean an entrepreneur is able to learn faster and "more quickly make sense out of uncertain and complex situations" (Alvarez and Busenitz 2001, p.759), as well as develop more innovative ideas, and is therefore portrayed as a form of competitive advantage (Alvarez and Busenitz 2001). In contrast, heuristics also appear to have a somewhat negative impact on entrepreneurial learning, with Holcomb et al (2009) declaring that a reliance on heuristics can cause knowledge bias and inefficient learning for an individual. In addition, Aldrich and Yang (2014, p.63) comment that the use of heuristics means that individuals "do not make use of available information and sometimes lead people to use unwisely the information they do collect".

Kolb's Learning Styles

Differences in learning style, as well as heuristics, have been shown to account for variances in entrepreneurial learning (Dimov 2007; Corbett 2005). Learning styles "refer to consistent individual differences in how individuals perceive, think, solve problems, learn, take decisions and relate to others" (Armstrong et al. 2012, p.238) and are therefore cognitive in nature. Corbett (2005) argues that the different learning styles put forward by Kolb (1984) in his foundational experiential learning theory have relevance to the different stages of entrepreneurial opportunity recognition and suggests that an entrepreneur's preference for a certain learning style accounts for variances in both entrepreneurial learning and opportunity identification and exploitation. He states that Kolb's Experiential Learning Theory provides "the opportunity to uncover why some individuals acquire and transform information in different manners, how they combine it with existing knowledge stocks and why these behaviours result in different opportunity recognition and exploitation abilities" (Corbett 2005, p.474). While the understanding of learning is clearly experiential, Corbett (2005) can be seen to apply a cognitive lens to experiential entrepreneurial learning as his work considers the

cognitive differences of individuals in experiential learning. Therefore, it has been categorised as a cognitive-experiential approach.

In order to understand Corbett's argument, Kolb's Experiential Learning Theory (1984) is first outlined. Kolb's theory, which built upon the work of Dewey, Lewin and Piaget (Kolb 1984), was developed in the context of education and learning. The theory was a radical departure from other understandings of learning within the education and learning literature at that time as Kolb (1984, p.41) explicitly defined learning as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping experience and transforming it", illustrating its main premise that learning occurs through experience rather than instruction.

Kolb's Experiential Learning Theory is a four-stage cycle of concrete experience, reflective observation, abstract conceptualisation and active experimentation. An individual begins the learning process by engaging in an experience. Observations and reflections are then made about that experience, leading to the formation of concepts, ideas, generalisations and understandings. Finally, these formations are tested in new situations before the cycle begins again. "In this model, concrete experience/abstract conceptualisation and active experimentation/reflective observation are two distinct dimensions, each representing two dialectically opposed adaptive orientations" (Kolb 1984, pp.40–1). The concrete experience/abstract conceptualisation dimension shows the way experience can be grasped by the dialectic of 'prehension' - apprehension or comprehension. Apprehension refers to the feelings, emotions and sensory perceptions of direct, concrete experiences, while comprehension refers to the interpretation of symbolic representations and recreation of experiences (Kolb 1984). The active experimentation/reflective observation dimension shows the way experience can be transformed into knowledge through the dialectic of 'transformation' – intention or extension. Intention refers to reflecting internally on experiences and previously acquired knowledge, while extension involves moving outside the self to test ideas and experiences through interaction with the external environment (Kolb 1984; Figure 2).
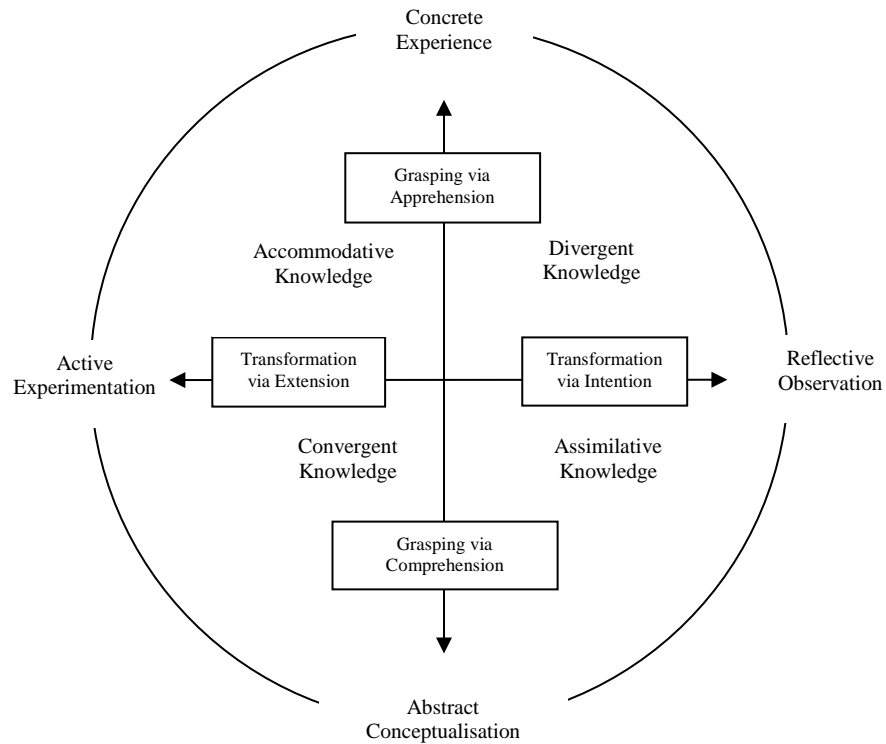
Figure 2: Kolb's Cycle of Experiential Learning

(Source: Kolb 1984, p.42)

The cycle (Figure 2) also shows four types of knowledge that are generated through experiential learning: divergent knowledge, assimilative knowledge, convergent knowledge and accommodative knowledge. "Experience grasped through apprehension and transformed through intention results in what will be called *divergent knowledge*. Experience grasped through comprehension and transformed through intention results in *assimilative knowledge*. When experience is grasped through comprehension and transformed through extension, the result is *convergent knowledge*. And finally, when experience is grasped by apprehension and transformed by extension, *accommodative knowledge* is the result" (Kolb 1984, p.42). Individuals have an orientation to a particular learning style (Kolb 1984) and type of knowledge. Those with a divergent learning style have an orientation towards observation rather than action, and are able to use their "imaginative ability and awareness of meaning and values" (Kolb 1984, p.77) to generate ideas. An assimilative learning style shows an orientation towards logical and inductive reasoning and the creation of theoretical models. An orientation towards a convergent learning style shows a preference for solving problems, technical tasks and hypothetical-deductive reasoning. Finally, those with an accommodative learning style are orientated towards "doing things, in carrying out plans and tasks and

getting involved in new experiences" (Kolb 1984, p.78) and adapting to new situations and circumstances. These learning styles are preferences rather than fixed traits, meaning that any individual can use any style at any time but tend to prefer one of the four.

In the application to entrepreneurship by Corbett (2005), Kolb's learning styles are combined with Lumpkin et al's (2004) opportunity recognition model. Lumpkin et al's (2004) model of opportunity recognition is a creative process model based upon the work of Csikszentmihalyi and Shane and Venkataraman. The model illustrates that opportunity recognition is a five-stage process that occurs in two phases; discovery and formation. "Discovery consists of preparation, incubation, and insight; formation involves evaluation and elaboration" (Lumpkin et al. 2004, p.75) as illustrated in Figure 3.
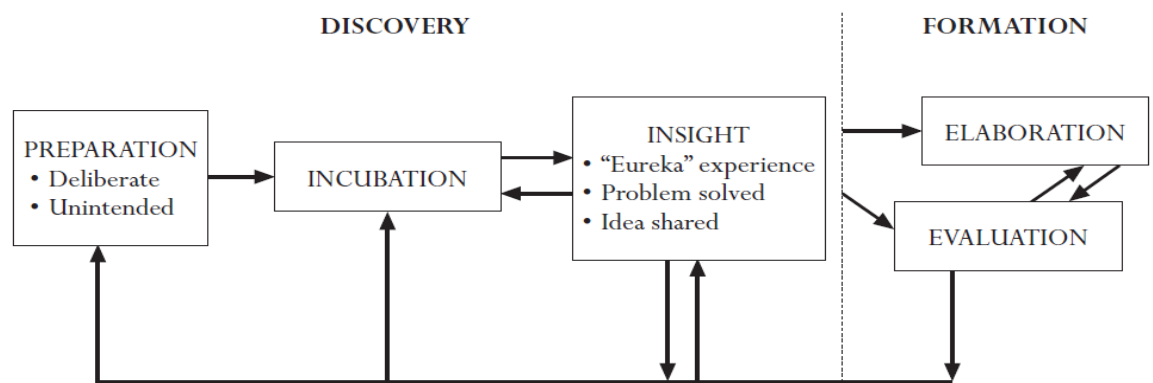
Figure 3: Creativity Based Model of Opportunity Recognition
(Source: Lumpkin et al. 2004, p.75)

Corbett (2005) claims that different learning styles are most appropriate at different stages of the opportunity recognition process, putting forward the following four propositions:

1. Convergent learning is most appropriate for the preparation stage:
   "Individuals who tend toward a convergent learning preference will be more likely to develop an initial solution or idea" (Corbett 2005, p.484)
2. Assimilative learning is most appropriate for the incubation stage:
   "Individuals who tend towards an assimilative learning preference will be more likely to develop more options or opportunities for products from a platform of initial ideas" (Corbett 2005, p.485)

3. Divergent learning is most appropriate for the evaluation stage:

   "Working from a number of different options, individuals who tend toward a divergent learning preference will be more likely to develop a workable business prototype" (Corbett 2005, p.484)

4. Accommodative learning is most appropriate for the elaboration stage:

   "Individuals who tend toward an accommodative learning preference will be more likely to successfully exploit working prototypes" (Corbett 2005, p.486)

These propositions suggest that the different processes of opportunity identification and exploitation are most suited to different learning styles, meaning that an entrepreneur will excel at only one of the processes and goes some way in explaining why entrepreneurs identify and exploit different opportunities in different ways. It also suggests the need for an entrepreneur to cycle through all four stages of Kolb's Experiential Learning Theory in order to identify and exploit opportunities, which provides indication of the process of entrepreneurial learning despite not being a focus of the paper.

One scholar who supports Corbett's (2005) approach is Dimov (2007), who portrays opportunity development as a learning process because the conversion of experience into knowledge (i.e. experiential learning) is essential in identifying and exploiting opportunities. The focus of the article is on opportunity intention and argues that prior knowledge promotes intention in demand-driven contexts through divergent learning styles, and in supply-driven contexts through convergent learning styles (Dimov 2007). Dimov (2007) explicitly supports the proposition in Corbett's (2005) work by asserting that there are learning asymmetries as a result of differing programmed learning style tendencies and reasons that an entrepreneur's learning style and their insight need to match in order to exploit the opportunity they have identified. Insights are categorised as convergent (logic-driven) or divergent (outside the box), and Dimov (2007) draws on the work of Kolb (1984) for two matching learning styles. Table 1 illustrates the relationship between the two.

Insight	Convergent insight	Divergent insight
Definition/Characteristics	Process: making sense of apparently disconnected facts Orientation: Situation specific	Process: generating possibilities that one might not ordinarily consider Orientation: high level of abstraction
Example	*Based on observation or awareness of traffic and demographic patterns, opening a coffee shop at a particular location.*	*Based on hearing personal complaints about the hectic nature of mornings at home, offering a morning coffee/breakfast together with the newspaper delivery.*
Learning Style	Convergent—higher reliance on **convergent knowledge**	Divergent—higher reliance on **divergent knowledge**
Definition/Characteristics	Grasping by: **abstract conceptualization** Focus on: • Using logic, ideas, and concepts • Building general theories Transformation by: **active experimentation** Focus on: • Actively changing situations • Practical application	Grasping by: **concrete experience** Focus on: • Being involved in experiences • Appreciating uniqueness and complexity Transformation by: **reflective observation** Focus on: • Understanding ideas and situations • Possibilities—what is true; how things happen

Table 1: The Correspondence Between Type of Insight and Convergent vs. Divergent
Learning
(Source: Dimov 2007, p.569)

Unlike Corbett (2005), Dimov (2007) only considers the two aforementioned learning styles in his work. He considers these to be dialectically opposing learning styles as they contrast in terms of both the grasping and transformation of experience into knowledge. It is unclear whether the other two forms of learning style (assimilative and accommodative) have a role in entrepreneurial intention and opportunity identification and exploitation. This indicates an important limitation of how elements of Kolb's experiential learning theory have been applied to the study of entrepreneurship.

One limitation of Dimov's (2007) research is the assumption that opportunities are objective and exist to be discovered, ignoring the concept that opportunities may emerge or be created (Short et al. 2010). Alvarez and Barney (2007, pp.11–12) argue that "rather than searching for a clear opportunity to be exploited, entrepreneurs creating opportunities might engage in an iterative learning process that ultimately could lead to the formation of an opportunity". This suggests that rather than learning in order to identify and exploit opportunities, entrepreneurs engage in learning as part of the opportunity creation process. Actions which are successful in discovery-based entrepreneurship may not be successful in creation-based entrepreneurship (Alvarez

and Barney 2007), and therefore the assumption of opportunities being discovered rather than created is likely to have an impact on the theory of entrepreneurial learning.

This section has illustrated that cognitive-experiential approaches have proposed both processes of learning and reasons for learning differences in entrepreneurship. It has shown that emphasis in these approaches is on the role of individual cognition in experiential entrepreneurial learning. Cognitive-experiential approaches to the process of entrepreneurial learning have been critiqued for placing too much emphasis on cognition and not enough on action and social participation. In contrast to this, cognitive-experiential approaches which explain variances in entrepreneurial learning do consider such elements in the process of how entrepreneurs learn, but not in the reasoning for differences which is solely cognitive.

Section 2: Practice-Experiential Approaches to Entrepreneurial Learning

On the whole, the majority of entrepreneurial learning research fits within the practice-experiential approach with much literature emphasising that entrepreneurial learning tends to be experiential in nature (Scarmozzino et al. 2017; Bagheri and Pihie 2010; Pittaway and Cope 2007; Cope 2005). The main premise of this approach is that entrepreneurs learn by engaging in the action of everyday practices (Löbler 2006). Contrary to the understanding of learning by doing put forward by Minniti and Bygrave (2001) (as outlined in the previous section), some scholars believe that "learning from experience is more than simply repeating what has been done successfully in the past by oneself and by others and avoiding failures" (Wing Yan Man 2012, p.550). Rather, experiential learning is a process of learning that involves reflecting on and making sense of experiences (Wing Yan Man 2012; Löbler 2006). Such learning is aligned with higher-level learning (Fiol and Lyles 1985), double-loop learning (Argyris and Schön 1978; Argyris 1976) and generative learning (Chiva et al. 2010) from the organisational learning field. Such learning involves evaluating and understanding why a behaviour has led to a particular outcome, creating "new cognitive frameworks within which to make decisions" (Fiol and Lyles 1985, p.808). "Therefore, in successful entrepreneurial learning, an active interpretation of experience by the entrepreneurs is essential, and it

can be seen as a process whereby concepts are derived from and continuously modified by experience" (Wing Yan Man 2012, p.550) and reflection. Reflection is an active, intentional and purposeful process of thinking, interpreting and evaluating in order to make sense of experiences (Boud et al. 2013; Reynolds 2011; Gray 2007; Reynolds 1998). Without reflection, experiences do not have meaning (Cope 2005). Reflection is a process that adds depth to learning and makes learning transferable across different situations (Ram and Trehan 2010).

A long-withstanding tradition in entrepreneurship has been to research with an individual focus (Cope et al. 2007) as underlying much entrepreneurship research is the inherent assumption that the entrepreneur is a solo entity battling to succeed by themselves. This has been perpetuated by the myth of the entrepreneur as a lone hero (Harper 2008; Reich 1987) in Western societies. The myth has been reinforced throughout American fiction (Cooney 2005; Reich 1987), showing the entrepreneur as a distinct individual character and as an 'ideal' (Reich 1987), and becoming a part of American culture with value placed on individualistic achievements (Cooney 2005). In addition, the myth has also had an influence on UK policy. During the 1980s, government economic policy re-focused on small firms and the self-employed in order to encourage an 'enterprise culture' of new firm formation based on the belief that the entrepreneur was an economic hero who created new organisations and developed the economy (Cowling and Mitchell 1997). This myth has had a considerable influence on the entrepreneurship discipline, maintaining its highly individualistic nature. Such a view of entrepreneurship has been said to be easier to comprehend and has become a habit within the field (Drakopoulou Dodd and Anderson 2007). This is reflected in the entrepreneurial learning literature, particularly the literature from a practice-experiential approach where the focus is upon the learning of an individual through their own personal experiences and practice as an entrepreneur.

This section is split into two subsections. Firstly, the application of Kolb's experiential learning theory from a practice-experiential approach to entrepreneurial learning is discussed. Secondly, critical events as triggers for entrepreneurial learning are considered. The section closes with a brief summary that ties together practice-experiential understandings of entrepreneurial learning and highlights the limitations of work conducted from this perspective.

A Practice-experiential Application of Kolb's Experiential Learning Theory

Some scholars who take a practice-experiential approach to entrepreneurial learning draw on Kolb's Experiential Learning Theory (1984). Primarily, Politis (2005) uses Kolb's theory to inform her conceptual paper. Unlike Corbett (2005) and Dimov (2007) who take a cognitive-experiential approach, Politis (2005) can be categorised as taking a practice-experiential approach to entrepreneurial learning as emphasis is placed on learning by engaging in the practice and experience of entrepreneurship.

Politis (2005) supported the understanding of learning put forward by Kolb (1984) – that experiences can be grasped and transformed into knowledge – and critiqued early experiential understandings of entrepreneurial learning, stating that experiencing does not automatically equate to learning. She stated that "Based on Kolb's ideas, entrepreneurial learning can be regarded as an experiential process in which entrepreneurs develop knowledge through four distinct learning abilities: experiences, reflecting, thinking and acting" (Politis 2005, p.407). However, she also critiqued Kolb's Experiential Learning Theory and its application to entrepreneurial learning, commenting that one of the main general criticisms of Kolb's theory is that it "decontextualizes the learning process and provides only a limited account of the many factors that influence learning" (Politis 2005, p.407). Politis (2005) furthered this by connecting it to entrepreneurship and arguing that the theory is insufficient in considering the complexities and uncertainties faced by entrepreneurs during their entrepreneurial endeavour. This goes against one of the arguments put forward by Reynolds and Vince (2007), who argue that the unreliability and instability of experiential learning "mirrors the complexities and uncertainties of being in the role of manager" (Reynolds and Vince 2007, p.3). Though they write in a different context, management and entrepreneurship are interrelated (Kuratko 2005) with entrepreneurs enacting 'management behaviours' to run their business (Stevenson and Jarillo 1990). If the theory is able to mirror complexities and uncertainties within the context of management, it is likely to be able to do the same within entrepreneurship.

A number of other criticisms of Kolb's (1984) experiential learning theory are put forward in the organisational learning literature. Illeris (2015) argued that the theory

has two fundamental flaws; firstly, it views all learning as experiential learning, and secondly, it suggests that all learning follows a particular cycle represented in the simple and specific model illustrated in Figure 2 (page 14). Rather, Illeris (2015, p.34) argues that "human learning is not as uniform and cannot be described in such specific models and sequences". Alongside the first flaw provided by Illeris (2015), Vince (1998) acknowledged that not all things should be learned from experience, referring to negative experiences such as harassment. Instead, the experiences of others should also be a part of learning and experiential learning alone is not necessarily enough. Additionally, Vince (1998) criticises the theory for assuming that all individuals are always comfortable with reflection when in reality people can be defensive against reflection, especially if they are reflecting upon failure or a negative experience. Some experiences may be too painful, embarrassing or emotional for an individual to feel comfortable reflecting upon. As this experiential learning theory is seen as an intentional process of learning where the individual actively engages in each stage in turn, the individual must opt to engage in reflection – something they may not be willing to do if it makes them uncomfortable. They may also not have the skills, tools or techniques to engage in reflection. Being unsure of how to reflect could stop an individual from reflecting constructively.

Further to this, Vince (1998) argues that Kolb's Experiential Learning Theory places too much emphasis on past experiences rather than what is occurring in the 'here and now' in his critique. He suggests that when engaging in this learning cycle, individuals are using their memories to "prompt future action" (Vince 1998, p.308). Whilst this may be of value at times, he argues that this can be a way for managers to avoid their current situation and issues, and the theory does not take into consideration the "immediate and social context for past experiences" (Vince 1998, p.308). This means that the past experiences that are reflected on are not always relevant to the current context, and it has been noted that "in any learning situation some of our experiences are more appropriate than others and we do not automatically select the most appropriate experience" (Zepke and Leach 2002, p.207). Therefore, a consideration of the immediate and social context is of importance when engaging in experiential learning, something that Kolb has neglected to include in his theory. Furthermore, there is a potential issue that drawing on memories can distort an experience. An individual may focus too much on certain elements of an experience and exclude others or their

memories may not be accurate. Additionally, the subjectivity of memory may mean the influence of elements such as power dynamics are not taken into account. This is connected to the criticisms of other authors who argue that Kolb's Experiential Learning Theory ignores social and contextual aspects of learning (Stead and Elliott 2013; Merriam et al. 2007; Kayes 2002). It has been suggested that the theory assumes "individuals experience events that are separate from them, and which they can reflect on objectively" (Stead and Elliott 2013, p.3), suggesting that experiential learning is apolitical. These critiques point to learning less as an objective and more as a subjective process. They acknowledge that our versions and recollections of experiences change based upon the purpose of telling or thinking about those experiences (Zepke and Leach 2002). Experiences change when they are reflected upon and can change dependent upon who they are shared with and who has shaped the action on which reflection is occurring. This perspective assumes the importance of the social, historical and cultural position of the learner and acknowledges that considering the learner separate to these factors decontextualizes the learning process.

CRITICAL EVENTS AS LEARNING TRIGGERS

Other scholars who take a practice-experiential approach to entrepreneurial learning have identified that entrepreneurs tend to learn from critical learning events (Cope 2005; Cope and Watts 2000), including business crises and failure (Saunders et al. 2014), during their entrepreneurial endeavours. This view of experiential learning considers experiences beyond the everyday activities entrepreneurs partake in and focuses on the challenging and difficult experiences (crises) faced by entrepreneurs during the business life cycle or their failures at business survival.

One author who takes a practice-experiential approach is Cope (2005; 2003). He indicates that critical learning events are significant for entrepreneurs and their learning (Cope 2003) and produced conceptual work which developed the current understandings of 'learning by doing' and the growing theorising of learning 'events' (Cope 2005). According to Cope (2005), entrepreneurial learning occurs in two temporal phases – firstly prior to start up and then during the entrepreneurship process, each of which are considered in turn in the following paragraphs.

Prior to start-up, entrepreneurs develop 'entrepreneurial preparedness' which is a somewhat proactive process of developing personal and business skills and attributes whilst considering their wider environment (Cope 2005). Learning prior to start up is important for the learning during the entrepreneurship process because "the way in which individuals perceive new situations and thereby 'experience' learning during the entrepreneurial process is inextricably linked to prior learning and is a product of one's evolving 'learning history'" (Cope 2005, p.378). This point is fundamental across the different experiential approaches, as evidenced – for example – by Minniti & Bygrave (2001) who comment that learning is cumulative in their cognitive-experiential model of entrepreneurial learning. This illustrates that across different approaches to entrepreneurial learning, there is still agreement on some of the fundamental principles of learning.

It is in the second temporal phase – during the entrepreneurship process – where Cope (2005; 2003) asserts critical learning events occur for entrepreneurs. During this phase, entrepreneurs are faced with five learning tasks. These are: learning about oneself; learning about the business; learning about the environment and entrepreneurial networks; learning about small business management; learning about the nature and management of relationships (Cope 2005). Conversely, Deakins and Wyper (2010, p.44) found insufficient evidence to support the existence of the five learning tasks and argued that they do not "capture the full dynamic nature of entrepreneurial learning over time". Nonetheless, learning tasks illustrate the 'what' of entrepreneurial learning – what entrepreneurs learn. Though he highlighted these learning tasks, Cope (2005) placed more emphasis on the 'how' of entrepreneurial learning – how entrepreneurs learn. In terms of the process of entrepreneurial learning, Cope (2005) points to critical learning events. To describe the process of learning from such critical events, Cope (2005) draws on wider learning literature with emphasis on transformational learning. He states "that when individuals face such nonroutine situations, their learned responses and habitual ways of behaving prove ineffectual (Marsick & Watkins, 1990). Such unusual circumstances require heightened attention and experimentation, forcing individuals to question their taken-for-granted beliefs and assumptions and reframe their appreciation of the situation at hand" (Cope 2005, p.382). As such learning is a result of non-routine experiences, this theorisation of entrepreneurial learning is in direct contrast of the model put forward by Minniti & Bygrave (2001). Consequently,

it may be seen to be more suitable for entrepreneurial learning as it better aligns with the nature of entrepreneurship. However, while Cope (2003, p.431) asserts that such higher-level learning is prominent for entrepreneurs, he also stresses that entrepreneurs are "constantly learning and developing as they manage their business", meaning they do not learn from only critical learning events.

Alongside critical learning events, Cope (2005) also indicates that social engagement contributes to learning. In particular, he points to social conflict. He states "more empirical work is clearly required to identify the distinctive forms of learning that arise from the entrepreneur's engagement in social relationships, both inside and outside the venture" (Cope 2005, p.389). This could suggest that emphasis on practice has negated attention from social contributions to entrepreneurial learning but that it is an area worthy and in need of further study.

Cope is not the only scholar to accentuate the role of critical events. For example, Deakins and Wyper (2010) also developed a framework of entrepreneurial learning where critical events are a core element. They state "that the entrepreneur is forced to reflect upon existing practice or strategy to consider alternative strategies and ultimately to change behaviour" (Deakins and Wyper 2010, p.40). Deakins and Wyper (2010) advocate reflection as a mechanism for entrepreneurial learning and suggest that – compared to other forms of entrepreneurial learning – the reflective learning from critical events allows entrepreneurs to engage in deeper, higher-level learning. Consequently, they are better able to adapt and develop their entrepreneurial venture on a strategic level (Deakins and Wyper 2010). Their framework is illustrated in Figure 4, and is a cycle from a trigger event, to reflection, to an assessment of resources and finally the implementation of new knowledge before the cycle begins again. The framework is limited as "further research is required on how entrepreneurs are able to transform the information acquired and successfully reflect on this cyclical process" (Deakins and Wyper 2010, p.46).
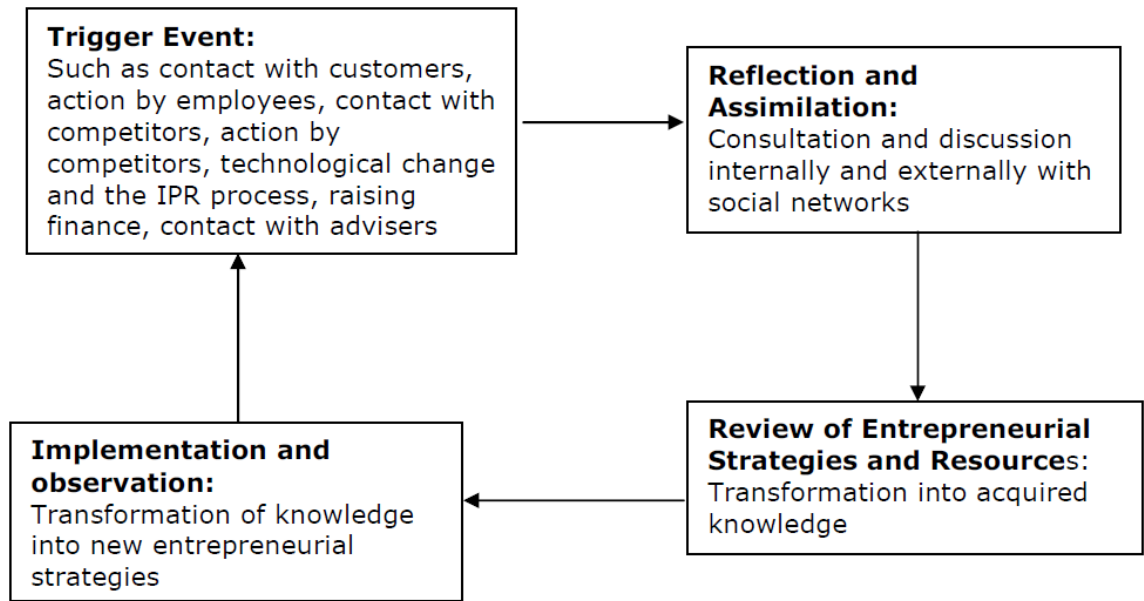
Figure 4: Framework of Entrepreneurial Learning
(Source: Deakins and Wyper 2010, p.45)

In addition to learning from critical learning events through reflection, Deakins and Wyper (2010) also illustrate the importance of networks in learning for areas where an entrepreneur has limited personal experience. This demonstrates the way approaches can overlap multiple categories on the continuum. However, with self-proclaimed emphasis upon critical events as triggers for learning by the authors, this framework is categorised more centrally as a practice-experiential approach.

Other authors support the importance of critical events, arguing that entrepreneurs "must adapt and change" in order to grow (Cope and Watts 2000, p.108) and it is during the growth of their ventures that entrepreneurs face development difficulties (Saunders et al. 2014; Cope and Watts 2000) that can be considered crises. Experiencing, reflecting on and overcoming such developmental crises has been said to result in higher-level learning (Cope and Watts 2000) and increased self-awareness (Saunders et al. 2014); though this is dependent upon the individual propensity of the entrepreneur to engage in double loop reflection (Saunders et al. 2014).

The biggest crisis faced by some entrepreneurs is failure. Not all businesses are able to succeed. Businesses that are terminated for failing to meet their goals (largely in a financial capacity) are considered failures (Cope 2011). The experience of business

failure is emotional and painful for an entrepreneur and tends to be viewed negatively as "failure is not an inherently desirable outcome of entrepreneurial activity" (Cope 2011, p.606). While not all failures contribute to learning, such an experience can have a positive effect on cognition (Ellis et al. 2006). It has been proposed that learning from failure increases an entrepreneur's chances of making a success of future entrepreneurial endeavours (Cope 2011). Learning in this way involves reflecting and making sense of the failure, and can be a timely and difficult process (Cope 2011). Cope (2011) provides a three-step process of recovery and learning from failure. First, the entrepreneur takes a 'hiatus' from the failure to heal on a psychological level. Next, the entrepreneur actively engages in 'critical reflection' to "attempt to make sense of the failure" (Cope 2011, p.615). Finally, the entrepreneur takes reflective action to move forward from the failure. "These components are interrelated because the hiatus allows the entrepreneur the emotional space and energy to then critically evaluate the failure, whilst reflective action is enabled by the initial healing and the subsequent learning provided through reflection" (Cope 2011, p.615). He also contributes to the literature by outlining what entrepreneurs learn from failure. His "findings highlight that the learning outcomes from failure fall into four broad themes – learning about oneself, the venture (and its demise), networks/relationships and venture management" (Cope 2011, p.615). These four outcomes connect to the learning tasks Cope identified in his earlier work.

Politis and Gabrielson (2009) also recognised the role of failure in entrepreneurial learning. In contrast to other scholars who study failure, Politis and Gabrielson (2009, p.366) provide a broader definition of failure that involves any "deviation from expected and desired results including avoidable errors as well as unavoidable negative outcomes of experiments and risk taking". Failure is considered by these authors as an inevitable part of engaging in entrepreneurship due to the novel situations and high uncertainty entrepreneurs face. Nonetheless, they, like Cope (2011), stress that failure is emotional and argue that in order to learn from failure, entrepreneurs must have "a positive attitude towards the act of failing" and "the willingness to learn" (Politis and Gabrielsson 2009, p.365). Combined with Cope's (2011) proposals, learning from entrepreneurial failure is proactive and purposeful. This contrasts with the common view of entrepreneurial learning as incidental and unintentional.

A commonality across the different practice-experiential approaches is that they all exclusively consider informal learning. This supports the argument that entrepreneurial learning occurs in everyday practice. Underpinning the various practice-experiential approaches to entrepreneurial learning is a belief that practice and experience are triggers for learning with reflection as the core learning mechanism. This aligns with work by Ellis et al (2006) who write outside the entrepreneurship context, but posit that experience is a prerequisite for learning rather than a method. This demonstrates a consistency between understandings of entrepreneurial learning and learning in a wider context.

Practice-experiential approaches are limited as they lack a consistently applied and explicit process of learning. In addition, learning in these ways is context-laden, meaning that it can be difficult for an entrepreneur to transfer the learning from one situation and experience to another (Holcomb et al. 2009; Cope 2005). With entrepreneurial situations characterised by uncertainty and ambiguity, learning and action are not necessarily best conducted in the frame of past experiences (Löbler 2006). Moreover, if learning is transferred to another situation it is not necessarily as applicable as it seems or beneficial to entrepreneurial effectiveness (Cope 2005). Further, practice-experiential approaches indicate that social relationships are likely to have a role in entrepreneurial learning (Cope 2005), though it is an area that is underdeveloped and requires further research.

Section 3: Bridging Approaches

Bridging approaches to entrepreneurial learning are those which span two of the approach categories. Rather than lying between them on the continuum, they bridge two categories. Two examples of bridging approaches are discussed within this section; one formal bridging approach (action learning) and one informal (vicarious learning). These examples bridge practice-experiential and social-experiential approaches to entrepreneurial learning.

Action learning bridges practice-experiential approaches and social-experiential approaches as it is a method of learning that involves both engagement in practice and engagement with others. Action learning is, as its name suggests, action oriented in nature and an individual has to actively engage in problem solving (Revans 2011a). The method involves a consideration and reinterpretation of past experiences for an individual to learn (Revans 2011a), illustrating the importance of practical experience. The method can also be seen as social as action learning takes place in small groups referred to as 'sets'. These collaborative sets enable the individual members engaging in action learning to learn with and from each other as part of a social process (Revans 2011b) including dialogue as well as action and reflection (Ram and Trehan 2010).

Action learning, advanced by Revans, is a method generated within the organisational rather than classroom context to help managers overcome work-based problems (Revans 2011a; Ram and Trehan 2010). "Action learning is based on the pedagogical notion that people learn most effectively when working on real-time problems occurring in their own work setting" (Cho and Marshall Egan 2009, p.434). The fundamental principle of action learning lies in the learning equation 'L=P+Q', where L is learning, P is programmed knowledge and Q is questioning insight. Programmed knowledge comes from traditional forms of learning and is a product of instruction and training. Questioning insight, on the other hand, is a process of reflective inquiry (Waddill et al. 2010) that is at the centre of action learning as "asking questions invigorates thinking, learning, action and results" (Adams 2010, p.119), whether those questions are asked internally (to oneself) or externally (to others). Revans (2011a) illustrates the difference between solving puzzles and resolving problems. Puzzles have a definite answer/solution that can be prepared for with 'P', while problems may be resolved in numerous ways depending upon the people trying to overcome them (Revans 2011a). 'P' may be useful for problems to a certain extent, but Revans places more value on 'Q' as the resolution involves judgements and values that 'P' cannot take into account. Another element of Revans' action learning is Systems Alpha, Beta and Gamma. These show three systems of thought based around particular questioning (Adams 2010). "In System Alpha, people continually ask themselves and others 'what is happening? What ought to be happening? How can it be made to happen?' In System Beta, people ask

questions about 'facts' and assumptions, using whatever is revealed in pursuit of new avenues of inquiry and better solutions. System Gamma requires focusing questions on oneself" (Adams 2010, pp.121–2).

Within organisational learning literature, four different 'schools' of action learning have been identified; Scientific, Experiential, Critical Reflection and Tacit (Marsick and O'Neil 1999). These schools are not explicitly discussed in relation to entrepreneurship. The first three of these schools consider action learning an intentional learning programme that requires a learning strategy and some form of facilitator or learning coach. Revans can be seen to fit within the scientific school of action learning. Within the experiential school action learning can be seen to enable all four processes of Kolb's Experiential Learning Theory – experiencing, reflecting, thinking and acting. The critical reflection school of action learning build upon this further, arguing that "the kind of reflection found in the experiential school is useful, but not sufficient. They believe that participants also need to reflect on the assumptions and beliefs that shape practice" (Marsick and O'Neil 1999, p.163). In contrast to these schools of thought, the tacit school considers action learning to be an incidental process of working on problems during every day work (Marsick and O'Neil 1999). This highlights that the main difference is in the formality of learning. In entrepreneurship, there does not appear to be an explicit consideration of the school of thought from which action learning is researched. This could suggest that outside of organisational learning there is not conformance to particular schools of thought. Alternatively, it could demonstrate that entrepreneurial action learning research recognises that action learning can be different in design depending upon the context and facilitator (Pittaway et al. 2009). Therefore, the school of thought from which research is conducted is of less importance than how action learning is conducted.

Action learning has been said to be advantageous for managers (Morris 2011), and these arguments could be extended to include entrepreneurs as owner-managers. One advantage is that action learning enables managers to engage in learning whilst tackling challenges that they face (Morris 2011). This means that it is always of relevance to those engaging (Zuber-Skerritt 2002) and places "focus on learning for the sake of problem solving" (Cho and Marshall Egan 2009, p.435). Action learning is also a flexible method (Morris 2011; Zuber-Skerritt 2002), another advantage for busy

practitioners. Additionally, as action learning is a way of exploring potential solutions, "it creates the conditions where people can learn the best way to achieve results within the constraints which are imposed. In doing so, each person discovers and tests out his strengths and develops new ones" (Pearce 2011, p.94).

Nonetheless, action learning is not always appropriate. Action learning is not of value "when answers are straightforward, already known, or can be found more simply, cheaply and quickly" (Zuber-Skerritt 2002, p.115). Therefore, an issue with action learning is that it requires waiting until faced with a problem, as it is only of value when there is no known solution to a complex issue or situation. Action learning does not create opportunities to identify potential issues and create avenues to avoid them, it is only of use once a problem has already occurred. This can be both costly and time consuming. Therefore, it could be argued that action learning needs to be used in conjunction with other forms of learning, rather than as the sole method for managers and entrepreneurs.

Additionally, action learning has been criticised for ignoring emotions, power and diversity (Stead 2014; Ram and Trehan 2009; Vince 2008; Rigg and Trehan 2004). This has led to the development of and growing interest in 'critical action learning' (Ram and Trehan 2009). Critical action learning considers "the tensions, contractions, emotions and power dynamics that inevitably exist both within a group and in individual managers' lives" (Rigg and Trehan 2004, p.150). One of the main aspects of action learning which neglects a consideration for political dynamics is the commencement of an action learning set which is often depicted as "a largely procedural and unproblematic process" (Ram and Trehan 2009, p.311). Vince (2008, p.96) argues that "in critical action learning, the problem or issue addressed in action learning sets is not seen as belonging solely to the individual within an organization, but also concerns the ways in which individuals organize and how this might restrict as well as offer individuals opportunities for learning".

Despite the critiques of action learning, the learning method is suitable for entrepreneurs due to its action-oriented nature (Clarke et al. 2006; Taylor et al. 2004) and because it combines action, reflection and social influence (Clarke et al. 2006). Further to this, Ram and Trehan (2010, p.419) portray action learning as most useful for situations

"characterised by uniqueness, uncertainty, instability and complexity"; all characteristics which are said to epitomise entrepreneurship. Within the entrepreneurial context, action learning provides opportunities for entrepreneurs to engage with their peers and tends to have sets comprised of various owner-managers. This is very beneficial to entrepreneurs as they often feel isolated; action learning connects them with their peers, overcoming their isolation and providing them with support (Jones et al. 2014). Such interaction within their action learning set can also provide a variety of alternative opinions, views and arguments regarding a situation, problem or opportunity (Clarke et al. 2006). The entrepreneurs are likely to find this interaction useful as they are sharing the experience with people who are facing, or have faced, a similar issue (Taylor et al. 2004). Action learning sets provide a 'safe environment' for entrepreneurs to explore the issues or opportunities that they face, enabling them to "discover new perspectives and formulate ideas" (Taylor et al. 2004, p.231). It is not classed as a 'safe environment' because opinions, arguments and views will not be challenged, but because they will be challenged in a constructive manner in a context where competition is not of relevance. The action learning sets are not a place to gain advice, but are a place of support to (1) increase understanding of a particular problem/opportunity and (2) be challenged in order to reflect and act (Taylor et al. 2004). It has been argued that removing an entrepreneur from their natural and operational environment can be beneficial to them (Clarke et al. 2006). Placing them in a different environment removes distractions and heightens an entrepreneur's focus on strategy and what they are facing (Clarke et al. 2006).

There are some drawbacks to an action learning method in entrepreneurial learning. Action learning can be resource intensive, and in particular is highly time consuming (Jones et al. 2014). Entrepreneurs, particularly at the start of their venture, may struggle to take time away from the day-to-day operations of the business to engage in an action learning set. As they tend to be part of a formalised learning programme, engagement in action learning can have a high financial cost, and entrepreneurs may not necessarily be aware of or have access to such programmes. Action learning sets also rely on an effective facilitator. The role of the facilitator is to lead discussions and encourage questioning. Poor facilitation can lose the essence of action learning and reduce the set to a support group (Jones et al. 2014). Positive group dynamics are also of importance. Action learning sets require a positive, supportive nature and high level of trust between

group members due to the sensitive nature of problem sharing and self-awareness (Jones et al. 2014). There are no guarantees that an action learning set will have positive group dynamics and elements such as trust between participants may take time to develop, lengthening the process. Despite these drawbacks, Jones et al (2014) argue that action learning is worth the risk and effort as entrepreneurs are able to identify, examine, understand and address the problems and opportunities that they face in a constructive, action oriented way within a safe and interactional context.

VICARIOUS LEARNING

Within entrepreneurial learning, understandings of vicarious learning are largely influenced by Social Learning Theory, which can be traced back to the 1970s, and is a term that was used by Bandura (1977) (Scholz et al. 2014) as a critical response to behaviourist views of learning that focused solely upon the individual. For Bandura (1977), social learning theory involves learning vicariously by observing other people. Though not stated explicitly, there is an implicit assumption that such observational learning occurs informally in everyday situations. Vicarious learning is social as it involves learning from the experiences of others, meaning that other people play a role in an individual's learning whether or not there is direct social interaction between them. This form of learning can be seen as suitable for entrepreneurs as "research shows that vicarious learning is particularly valuable in new industries and when uncertainty is high" (Bingham and Davis 2012, p.613), characteristics which are closely linked to entrepreneurship. In engaging with vicarious learning, entrepreneurs selectively imitate the behaviours of others and can replace learning from direct, personal experiences (Hoover et al. 2012; Hoover and Giambatista 2009).

Vicarious learning is said to be advantageous over direct experience as it is less cognitively demanding (Hoover et al. 2012) because the engagement is not in acting and learning simultaneously and it has been said that reflecting while engaged in action can be difficult (Pittaway et al. 2015). Additionally, they have more selectivity in the experiences and task aspects they learn from (Hoover et al. 2012). However, this can be disadvantageous as vicarious learning allows an entrepreneur to focus only on positive experiences, limiting the depth and breadth of the experiences they learn from (Hoover and Giambatista 2009). When engaging in direct experiential learning, there is no escape from the negative experiences, and learning comes from both positive and

negative experiences. To combine the advantages of both vicarious and direct experiential learning, Hoover et al (2012) illustrate that social, vicarious learning may be engaged in as a precursor to individual, direct experiential learning suggesting a form of sequence to learning.

In a similar vein, Bingham and Davis (2012, p.612) propose entrepreneurs engage in learning sequences which are defined as "an ordered use of learning processes". In their research of entrepreneurial organisations, Bingham and Davis (2012) consider the ways direct and indirect learning processes combine in learning sequences. Direct learning processes are those which involve active engagement in first-hand experience, while indirect learning processes involve learning from the experiences of others. Bingham and Davis (2012) identified three direct learning processes – trial and error, experimentation and improvisation. In contrast, only one indirect learning process – vicarious learning – was identified by the authors within sequences of learning. The two learning sequences they identify are 'seeding' and 'soloing'. Seeding is a sequence of indirect learning processes followed by direct learning processes, whereas soloing is direct learning processes followed by further direct learning processes (Bingham and Davis 2012). Seeding is named as such as the indirect learning process is seen to 'seed' the direct learning and is used when there is less prior experience to draw on (Bingham and Davis 2012). The seeding sequence is aligned with and supports the proposal of Hoover et al (2012) where vicarious learning can be used in advance of, and complementary to, direct personal experience. Alongside identifying the two sequences, Bingham and Davis (2012) also illustrated the difference in their impact. Their research found that soloing has a higher short-term impact than seeding and, conversely, seeding has a higher long-term impact than soloing. They also recognised that sequences change over time.

Previous to Bingham and Davis' (2012) research on learning sequences, direct and indirect learning processes were researched separately. A key contribution of their work is viewing direct and indirect learning processes as interconnected in learning sequences. They stress the importance of their study in addressing this gap in the research. They state: "This gap is critical. From a practical perspective, if a particular order of learning processes leads to better performance outcomes than another order, there are immediate applications for managers. From a theoretical perspective, not

understanding about learning sequences in process research on learning is problematic, since the concept of sequences is central in much organizational process research" (Bingham and Davis 2012, p.614).

<u>SUMMARY OF BRIDGING APPROACHES</u>

The two bridging approaches of entrepreneurial learning discussed are different despite spanning both practice-experiential and social-experiential categories. While action learning provides a formal method for engagement in entrepreneurial learning, vicarious learning occurs informally yet intentionally. There is also a difference in the way entrepreneurs engage socially for learning to occur. In action learning, social interactions are a key part of the learning process as they are means for sharing experiences, asking questions and prompting reflection. In contrast, vicarious learning occurs through observation, meaning the social engagement does not necessarily involve interactions.

Section 4: Social-Experiential Approaches to Entrepreneurial Learning

While vicarious learning bridges into social-experiential approaches of entrepreneurial learning, social understandings of entrepreneurial learning are not restricted to Bandura's observational view of learning. Rather, learning is seen as an interactive process (Wing Yan Man 2012) of co-participation (Taylor and Thorpe 2004). Gibb (1997, p.16) has argued that "the small firm's learning can be located in the context of external relationships of the firms; and in the context of sharing and developing the collective and individual knowledge in the company". Smilor states "effective entrepreneurs are exceptional learners. They learn from employees and associates. They learn from other entrepreneurs" (Smilor 1997, p.344). Similarly, Ravasi and Turati (2005) highlight that entrepreneurs develop ideas with the help of other people, particularly if the knowledge and skills of the entrepreneur and respective actors are complementary. This section considers two specific avenues of social-experiential learning (peer networks and mentoring) alongside a social-experiential application of Kolb's experiential learning theory.

Understanding the role of peer and network learning is important for entrepreneurial learning research as "up to 90% of the firm's learning will occur through transactional and relationship processes" (Gibb 2009, p.215) with their networks. According to Jack (2005, p.1235), "a social network can be thought of as the actual set of links of all kinds amongst a set of individuals". Networks can include friends, family, customers, suppliers, and even competitors. The different networks have different relational strengths and qualities, termed 'ties'. Granovetter (1973) is credited with the strong and weak tie concept to differentiate types of networks. Networks with strong ties have a close relationship characterised by frequent interaction; family, friends and business partners are examples of networks with strong ties. Networks with weak ties, such as those with customers and suppliers, have less frequent interaction and a more distant relationship. Networks of weak ties provide diverse resources and market information, while strong ties may produce redundant information due to the homogeneity of the network (Jack 2005). Due to the provision of diverse resources and information from weak ties, it is often weak tie networks that are seen to be more effective and conducive to entrepreneurship (Jack 2005).

In terms of entrepreneurial learning, networks of both strong and weak ties have been said to be beneficial (Zhang and Hamilton 2009). The work of Rae and Carswell (2001, p.156) found that entrepreneurs learn both knowledge and skills from a variety of people, listing "parents, business owners and managers, employees and non-executive directors". While much research has identified that social networks play a role in entrepreneurial learning, there is little research that discusses the process in which this learning occurs (Zhang and Hamilton 2009). It is often identified that entrepreneurs learn through engaging and interacting with their networks, but the type of engagement and interaction and the way in which the entrepreneur actively engages in learning is often neglected, leaving our understanding of entrepreneurial learning incomplete.

One study which does consider the process of entrepreneurial learning in networks is the work of Zhang and Hamilton (2009). Their research considered peer networks on a management development programme at a Higher Education Institution – the LEAD programme at Lancaster University. The LEAD programme involves various learning methods including Action learning and observation, but the emphasis of Zhang and

Hamilton's (2009) study is on the role of peer networks. Their study illustrates that learning from peer networks can be effective for entrepreneurs as they prefer to learn from others who have been, or currently are, in the same situation as themselves (Zhang and Hamilton 2009). Figure 5 shows their model of entrepreneurial learning in peer networks, indicating the process of such learning. The key findings also indicate the process of learning within peer networks.
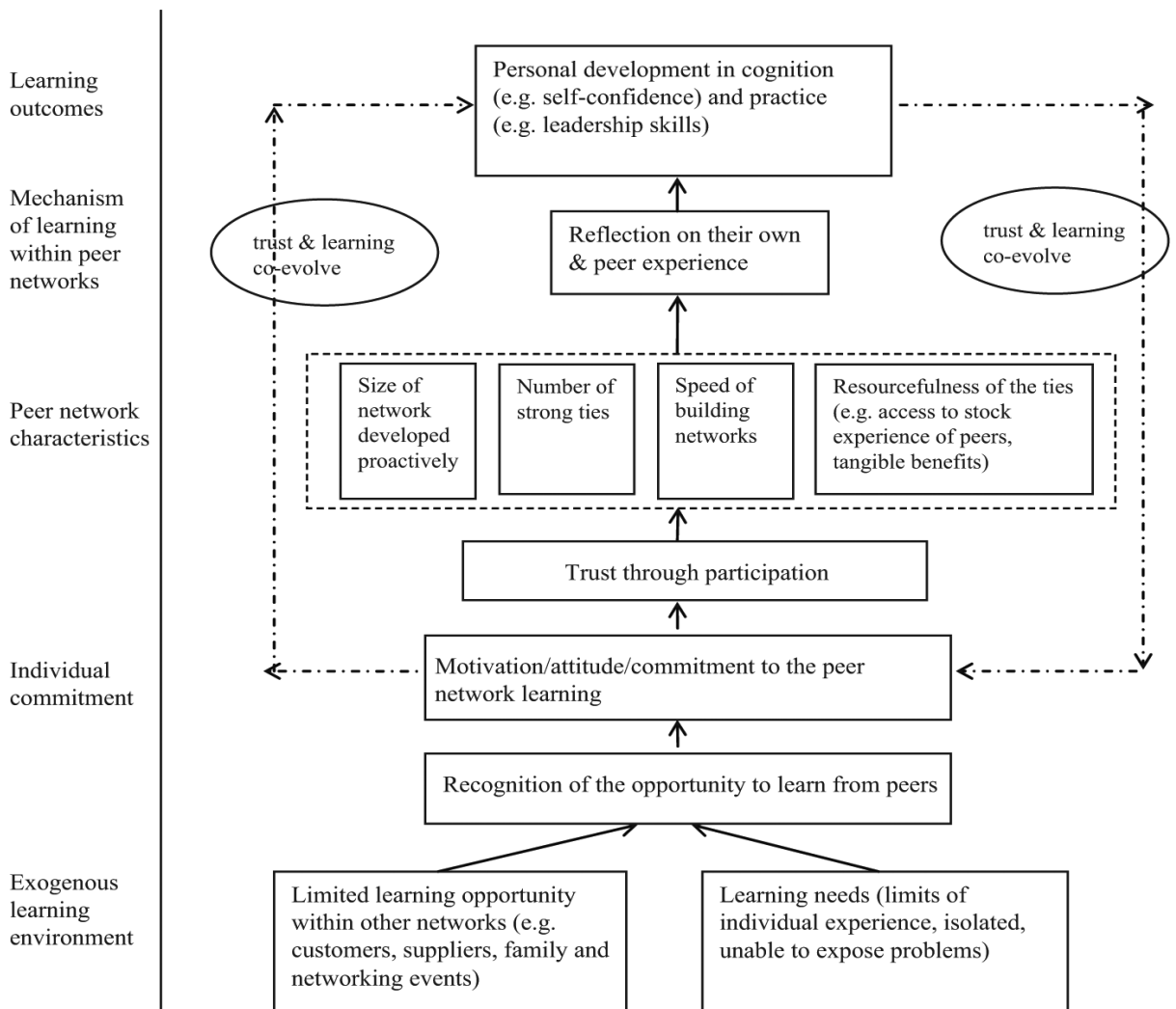
Figure 5: A Process Model of Small Business Owner-Managers' Learning in Peer Networks
(Source: Zhang and Hamilton 2009, p.608)

The five main findings of Zhang and Hamilton's (2009) research are as follows:
1. Entrepreneurs often feel isolated and lonely, which – alongside a lack of opportunity to engage in learning with other members of other types of networks – created a desire to engage in peer network learning with those on the programme.

2. The features and learning of a peer network are based upon the level of commitment an individual entrepreneur puts into building and maintaining their peer networks.

3. The networks created on the programme were of varying size and benefit, despite there being equal potential and opportunity for all members. Trust between members evolved over the course of the programme.

4. Reflection was a key mechanism in the peer learning of the entrepreneurs.

5. All respondents found engagement with the programme, and engaging with learning in peer networks in particular, to be beneficial. One outcome for the entrepreneurs was an increase in self-confidence.

These findings and the model above illustrate that, within peer networks, reflection is an instrumental mechanism of entrepreneurial learning. The entrepreneur first needs to share their business experiences and problems, which then facilitates reflection and learning as the entrepreneur questions their own existing understanding and behaviours (Zhang and Hamilton 2009). Building on this, the authors comment that "questioning and disagreement among peers, compared with consensus, have stronger impacts on learning, in that they provoke the owner-managers to challenge their existing values and perceptions" (Zhang and Hamilton 2009, p.618). As it has been suggested that entrepreneurs are not effective at reflection (Zhang and Hamilton 2009), the provocation and prompts from these interactions with peers are important to entrepreneurial learning and reflection. However, there is little consideration of the specific interactions and the ways in which they contribute to reflection and learning which suggests that supplementary research could further these findings.

The research findings illustrate the value of peer networks in entrepreneurial learning. It is important to note, however, that the findings relate to a very particular context. As the research was focused on the networking and learning on the LEAD programme, it illustrates a formal context with a pre-determined agenda of learning activities. Therefore, the results provide only a limited understanding of entrepreneurial learning in networks as not all networks meet in formal learning contexts.

Lefebvre et al (2015) also considered the role of peer networks in a formal learning programme. They argue "formal entrepreneurial networks are therefore socialisation

systems designed to create favourable social interaction conditions for helping entrepreneurs to become better practitioners" (Lefebvre et al. 2015, p.502). Learning in such formal peer networks is explicitly considered as a direct outcome of social interactions, though little is known about the processes of social interactions and how they link to processes and outcomes of learning (Lefebvre et al. 2015).

Lefebvre et al's (2015) findings illustrate that networks evolve over time, resulting in a community of practice, to suit entrepreneur learning needs. The evolution is described in three phases. The first phase sees network formation, where entrepreneurs spend time getting to know each other and building their relationships and trust in each other. In this phase there is a need for 'mutual recognition' of similarities to build a learning community; otherwise, the network is just a gathering of entrepreneurs (Lefebvre et al. 2015). "The learning processes that largely characterized this first phase were knowledge sharing during meetings, along with questioning, listening and providing feedback" (Lefebvre et al. 2015, p.509) and result in cognitive outcomes. Moving on to the second stage, entrepreneurs in the network then became more focused upon business issues than relationship building; though there was clear evidence of strong rapport and gained confidence in others. The authors highlighted that in the second stage it became apparent entrepreneurs have a need for external participation (Lefebvre et al. 2015). In terms of learning, "a significant increase in the amount of explanation, advice and guidance amongst members, more encouragement and emotional support within the network, along with learning processes that already started to surface during the previous formation phase (knowledge sharing, questioning, listening and providing feedback)" (Lefebvre et al. 2015, p.512). Learning outcomes at this stage are both cognitive and affective. The final phase showed that networks divide into smaller groups that function as communities of practice. The authors stated "The Club progressively became a learning community with strong ties linking a relatively small group of members who were engaged and passionate about sharing ideas, experience and spending time together both inside and outside the Club, and a periphery of more occasional and opportunistic participants who came to meetings only when the topic was of interest or when they wanted to ask for advice and support" (Lefebvre et al. 2015, p.513). Additional learning processes that were identified during this phase include role modelling and working with others as well learning from putting their own experiences into narratives (Lefebvre et al. 2015).

The research by Lefebvre et al (2015) highlights both the importance of social interactions in entrepreneurial learning and the way formal peer networks evolve over time into communities of practice. While their research has an important contribution to the field of entrepreneurial learning, it's emphasis on formal peer networks leaves a gap for considerations of social interactions and evolving learning relationships in informal contexts.

<u>MENTORING</u>

Research within the social-experiential approach to entrepreneurial learning also considers the role of mentoring. Mentoring is an alternative to traditional training for entrepreneurs (El Hallam and St-Jean 2016) where an experienced entrepreneur (the mentor) supports a novice entrepreneur's (the mentee) personal development with advice (St-Jean and Mathieu 2015; St-Jean and Audet 2012). Mentoring can either be a formal arrangement or happen informally and unintentionally (Eby et al. 2013). Using mentors, whether formally or informally, provides entrepreneurs the opportunity to learn from those who have been in a similar situation before and "research suggests that mentoring is sufficiently personalised to help a novice entrepreneur develop business management skills" (St-Jean and Audet 2012, p.120). As they are likely to have been in similar situations before, a mentor is able to "warn of the problems on the horizon, help craft solutions to problems, and be a sounding board" (Cull 2006, p.9). Mentoring is associated with transformative (Radu Lefebvre and Redien-Collot 2013) and deep (Bisk 2002) learning as part of a mentor's role is facilitate reflection (Sullivan 2000) which encourages higher levels of entrepreneurial learning that can lead to modified behaviours and future actions.

Though research has shown that mentoring has both cognitive and affective outcomes of learning, "there is limited knowledge of how mentoring relationships produce these outcomes" (St-Jean et al. 2018, p.2). The main emphasis in the study of entrepreneurial mentoring is on mentor-mentee similarity of values, opinions and personality (St-Jean et al. 2018; El Hallam and St-Jean 2016). It is also portrayed in the literature as optimal that the mentor has experience in the same industry as the mentee (El Hallam and St-Jean 2016). Further to this, the research also stresses the importance of trust in the mentor-mentee relationship (El Hallam and St-Jean 2016). According to the authors, "trust involves three components: predictability, dependability and faith. The first

component illustrates the predictability of the future partner's behaviour, the second focuses on reliability, and the third component gives a sense of security, which allows the individual to believe that their partner will be responsive and caring no matter what happens in the future." (El Hallam and St-Jean 2016, p.5). While El Hallam and St-Jean's (2016) findings support the argument that perceived similarity between mentor and mentee and a relationship of trust have a positive impact upon the mentee's learning, their findings regarding experience in the same industry were inconclusive and therefore unable to support existing literature.

A Social-experiential Application of Kolb's Experiential Learning Theory
Another study which takes a social-experiential approach is that of Pittaway et al (2015), who researched student clubs and whether they simulate entrepreneurial learning. This demonstrates research within the context of formalised entrepreneurial education, an area which has seen a large advance in interest (Ahsan et al. 2018). Experiential learning is core to entrepreneurial education and developing students into entrepreneurs (Radu Lefebvre and Redien-Collot 2013), showing consistency between the learning of prospective entrepreneurs and those who are actively engaged in the entrepreneurial process. Drawing on this context of entrepreneurial learning, a social-experiential application of Kolb's experiential learning theory to entrepreneurship is provided.

In the conceptual part of their paper, Pittaway et al (2015) build on Kolb's experiential learning cycle by showing the importance of social relationships in entrepreneurial learning. This suggests entrepreneurial learning is a process of both experience and social engagement. Pittaway et al (2015) associate social engagement with two of the four learning styles given by Kolb (1984); assimilating and converging. Assimilating involves grasping experience through abstract conceptualisation and transforming experience through reflective observation. In this type of learning, social engagement plays a role as "entrepreneurs test ideas on spouses and discuss decisions with employees as a way to think and reflect about the business before engaging in actions" (Pittaway et al. 2015, p.134). Converging involves grasping experience through abstract conceptualisation and transforming experience through active experimentation. Social engagement of entrepreneurs plays a role in this type of learning when they "reach out to mentors to gain experience vicariously and learn from other's experience, mistakes

and failures so that they may avoid them…In so doing…they are talking to others to think about decisions before acting" (Pittaway et al. 2015, p.134). Both assimilating and converging learning approaches are said to play a role in the learning cycle of entrepreneurs as illustrated in Figure 6, which is the conceptual framework Pittaway et al (2015) base their research on.
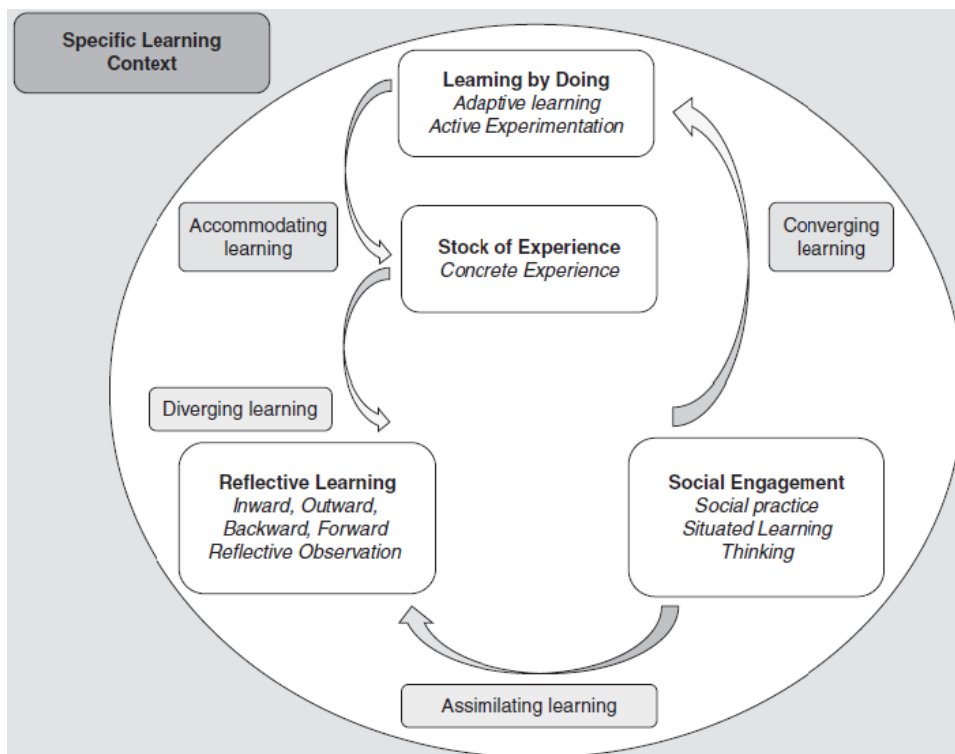
Figure 6: Conceptual Framework
(Source: Pittaway et al. 2015, p.135)

An interesting, and somewhat limiting, element of this cycle in comparison to Kolb's (1984) original is that there is no fluid cycle here as the arrows only come out of social engagement. In terms of learning, this suggests that social engagement occurs only in advance of either learning by doing or reflective learning; it does not occur after other aspects of learning. This could relate to Bingham and Davis (2012) learning sequences of seeding and soloing. Assimilating and converging learning can be seen as seeding, while accommodating and diverging learning can be seen as soloing. Thus, these models suggest that social engagement is an important precursor to practice-experiential forms of learning for entrepreneurs and students of entrepreneurship.

Social-experiential approaches place emphasis on social engagement as a context for entrepreneurial learning. They demonstrate the value of engaging with peers and mentors, showing different ways second-hand experience can be used for learning and development. This goes some way in reducing risk when learning as they can learn before taking action (Pittaway et al. 2015), whereas practice-experiential learning often comes from a negative experience. The learning researched from this approach is mainly part of a formalised learning programme. This is limiting to developing social-experiential approaches to entrepreneurial learning as not all entrepreneurs engage with formalised programmes, and entrepreneurs are understood to have a preference for informal learning (Coetzer et al. 2017). However, it is of value to the field as it shifts focus away from the entrepreneur as an individual.

Whether part of a formal or informal context, social interactions are an important element of social learning (Scholz et al. 2014) but have received little attention within the entrepreneurial learning literature. Social understandings of entrepreneurial learning do not consider the types and nature of social interactions and the way in which they can contribute to learning (Lefebvre et al. 2015). This reveals an interesting gap within the entrepreneurial literature as exploration of social forms of entrepreneurial learning have grown in recent years, but there is a lack of research regarding a fundamental aspect of engaging with others: social interactions. This research aims to explore this gap.

Conclusion

This chapter shows that in entrepreneurial learning research, there is a common and accepted understanding that entrepreneurs learn from the experience of entrepreneurship and their engagement in it. Although understandings all fit within the meta-theory of experiential learning, entrepreneurial learning as a field is fragmented and understandings can be broadly categorised into three approaches. As identified by Zheng et al (2017) and developed in this study on an experiential learning continuum, the three approaches are cognitive-experiential, practice-experiential and social-experiential. Studies do not necessarily fit neatly within these categories and there may be overlap (with some theories being classed here as bridging approaches), but the

categorisation goes some way in illustrating the different streams of thought and research. Of the three approaches, emphasis in the entrepreneurial learning literature is on practice-experiential. This category of approaches focuses upon the active participation and practice of entrepreneurship. The literature review above shows that the main understanding of learning within this stream is that critical events trigger higher-level learning.

Literature in both cognitive-experiential and practice-experiential approaches discusses how entrepreneurs learn, i.e. the process of entrepreneurial learning. Processes include: experimentation, trial and error, choosing to repeat or avoid past actions, detecting and correcting errors, reflecting upon events/actions, following the stages of Kolb's learning cycle and overcoming failure. In both of these streams, the context of the learning researched is informal. Conversely, the processes discussed within the social-experiential stream are more limited and only represent those within formal contexts of learning such as entrepreneurial education, peer network programmes and mentorships. This demonstrates one area in which social-experiential approaches to learning are underdeveloped.

Across the three experiential learning streams there is a commonality that reflection is a core learning mechanism. Interestingly, social-experiential approaches to entrepreneurial learning place more emphasis on the role of reflection than social interactions. Consequently, how social interactions contribute to the entrepreneurial learning process has received little attention and leaves a gap in the existing research for a wider understanding of social-experiential processes of entrepreneurial learning, particularly in informal contexts. This research project aims to address this gap with a focus on the role of social interactions in entrepreneurial learning during social engagement.

Existing literature illustrates that there are particular factors which can aid entrepreneurial learning during social engagement. The primary factors identified are trust and a perceived similarity between the entrepreneurs and the person/people they engage with. This indicates that when considering entrepreneurial learning during social engagement, it is important to consider what other contributing factors may be at play and in what way they impact the social engagement and learning. Outcomes of learning

have been highlighted by Cope (2005) in the form of learning tasks entrepreneurs should engage in during the entrepreneurship process. St-Jean et al (2018) also highlighted cognitive and affective outcomes of engaging in mentoring, and Lefebvre et al (2015) indicated cognitive, affective and relational outcomes in formal peer networks. Therefore, it is of interest to consider what the outcomes of learning during social engagement may be for a fuller picture of entrepreneurial learning. Alongside outcomes, potential benefits are also questioned. With so much emphasis on practice-experiential approaches to learning, a consideration of perceived benefits may be influential in moving the field of entrepreneurship forward with regard to social-experiential entrepreneurial learning as it would develop understanding. Whilst this will not establish causality of benefits, the perceived benefits to the entrepreneurs in this study may illuminate the value of learning during social engagement.

This research study aims to address these identified areas, develop understandings of entrepreneurial learning during social engagement and build upon existing social-experiential approaches. To do this, four research questions are asked:
    (1) How do social interactions contribute to entrepreneurial learning?
    (2) How can entrepreneurial learning during social engagement be aided and/or impeded?
    (3) What are the outcomes of learning during social engagement?
    (4) How does entrepreneurial learning during social engagement benefit entrepreneurs

Chapter Three: Methodology

This chapter provides explanations and justifications of the research and analysis process used within this study. It is split into five sections. The first section explains the design of the research including the philosophical underpinnings, data collection method, participant selection, and the role of the researcher. The second details the research participants. The third section outlines the ethical considerations of the research study. In the fourth section, the process of analysis used to interpret the data collected is outlined and how the themes have been developed is illustrated. The fifth section provides a reflective account of the research process from the researcher's personal perspective.

Section One: Research Design

RESEARCH AIM AND QUESTIONS

The overall aim of this research is to develop understandings of how entrepreneurs learn during their social engagement with others. To achieve this aim, the research attempts to answer the following four research questions:

(1) How do social interactions contribute to entrepreneurial learning?

(2) How can entrepreneurial learning during social engagement be aided and/or impeded?

(3) What are the outcomes of learning during social engagement?

(4) How does entrepreneurial learning during social engagement benefit entrepreneurs?

RESEARCH PHILOSOPHY

The first element of consideration in research design is that of research philosophy as this informs the underlying assumptions of epistemology and ontology that provide the foundations of the research. "Epistemology is the systematic consideration, in philosophy and elsewhere, of knowing: when knowledge is valid, what counts as valid and so on. Ontology is the consideration of being: what is, what exists, what it means for something – or somebody – to be" (Packer and Goicoechea 2000, p.227). Our epistemological assumptions influence our research and research approach as they "provide us with criteria for distinguishing between reliable and unreliable knowledge"

(Johnson and Duberley 2000, p.5). Ontological assumptions consider the nature of reality, which influences our research and research approach because the way we view reality and the world influences the assumptions we hold about valid knowledge and effects the ways in which we go about understanding the social world. Thus, ontology and epistemology are inter-connected assumptions that underpin research.

When considering the underlying assumptions of existing entrepreneurship research, three research philosophies can be identified – positivism, critical realism and interpretivism (Packard 2017). These three philosophies hold contrasting underlying assumptions. Positivism assumes that reality is independent of our knowledge of it (Edwards and Holland 2013; Easterby-Smith et al. 2008; Garrick 1999), is ontologically objective (Hlady-Rispal and Jouison-Laffitte 2014; Easterby-Smith et al. 2008; Delanty and Strydom 2003) and empirically observable (Stratos Ramoglou and Tsang 2016; Easterby-Smith et al. 2008; Blaikie 2007; Krauss 2005; Kolakowski 1993). It also assumes that reality is independent of people (Holden and Lynch 2004), which means that the world exists regardless of whether people are conscious of it or not, with reality as a concrete structure that can be understood by different people in similar ways (Hlady-Rispal and Jouison-Laffitte 2014; Tatli et al. 2014; Seymour 2006). Positivism distinguishes between value judgments and normative statements, with only normative statements, considered 'truths' or 'facts', equating to knowledge (Blaikie 2007; Kolakowski 1993). This philosophy places emphasis on explanation (Yanow 2006), using deductive reasoning (Krauss 2005) to determine general laws (Blaikie 2007).

In contrast, interpretivism assumes that reality is inherently social (Diaz Andrade 2009; Blaikie 2007; Holstein and Gubrium 2005), shaped by the experiences of those within that reality (Blaikie 2007; Yanow 2006). Therefore, multiple realities exist as people's perceptions play a role in how they experience and view reality and there is no way to view the world objectively (Diaz Andrade 2009). For interpretivists, value is placed on meaning, sensemaking and "understanding the lifeworld of the actor in the situation(s) being studied" (Yanow 2006, p.23). Additionally, emphasis is placed on description (Henwood and Pidgeon 1993) and understanding (Yanow 2006) rather than explanation. Knowledge is produced "through the situated context of the 'knower' producing it" (Yanow 2006, p.10), with emphasis on "the emergence of concepts from

data rather than their imposition in terms of a priori theory" (Henwood and Pidgeon 1993, p.16).

The philosophical assumptions of critical realism bridge those of positivism and interpretivism, with elements of both being reflected (Edwards and Holland 2013; Krauss 2005). Critical realists "retain an ontological realism (there is a real world that exists independently of our perceptions, theories and constructions) while accepting a form of epistemological constructivism and relativism (our understanding of the world is inevitably a construction from our own perspective and standpoint)" (Maxwell 2012, p.5). Thus, there is the assumption of a single reality (reflecting positivism), however, this reality has multiple subjective perceptions (reflecting interpretivism) (Edwards and Holland 2013; Krauss 2005). In critical realism, there cannot be an objective view of the world as "all theories about the world are seen as grounded in a particular perspective" (Maxwell 2012, p.3), resulting in various valid perceptions.

With its origins in economics, entrepreneurship has been traditionally researched in line with the assumptions of positivism (Leitch et al. 2010; Rae 2000). This philosophical approach remained dominant into the early 2000s (Karatas-Ozkan et al. 2014) before calls for non-positivist research opened pathways for new approaches. One of the problems with a positivist philosophical underpinning in entrepreneurship research is the need for a precise definition and boundaries (Anderson and Starnawska 2008). Understandings of entrepreneurship maintain that entrepreneurship means different things to different people (Audretsch et al. 2015; Anderson and Starnawska 2008; Sharma and Chrisman 1999) and a distinct definition is yet to be used consistently (Packard 2017; Berglund and Johansson 2007). Consequently, entrepreneurship research remains fragmented (Anderson and Starnawska 2008). Positivism is also problematic for researching entrepreneurship as it aims to discover the objective and natural rules of phenomena (Anderson and Starnawska 2008), searching for causal determinacy (Packard 2017). However, entrepreneurship is unconventional and unexpected (Anderson and Starnawska 2008), influenced by individual goals, intentions and expectations (Packard 2017). Therefore, positivist research does not align with the nature of entrepreneurship (Leitch et al. 2010; Anderson and Starnawska 2008) and cannot fully explain the phenomena of entrepreneurship.

In a move away from positivism, some entrepreneurship scholars have argued for a critical realist philosophical underpinning. For example, Blundel (2007, p.58) argues that a critical realist perspective could both "promote the much-needed contextualization of entrepreneurial phenomena" and "facilitate greater theoretical integration between disciplines and across multiple levels of analysis". However, there has been recent debate concerning the nature of realist research and its application to the field of entrepreneurship (see for example Ramoglou 2013; Alvarez et al. 2014; S. Ramoglou and Tsang 2016). Consequently, the appropriateness of using a realist philosophy in entrepreneurship research is being challenged and goes beyond the scope of this study.

This study is built upon an interpretivist philosophical foundation. Interpretivism is appropriate for entrepreneurship research because of its subjective nature. Entrepreneurship is a social process of human activity and interactions which is enacted by a variety of individuals and characterised by diversity, personal experience and feelings (Gamage and Wickramasiughe 2014). Therefore, it is best understood from the actor's own point of view (Gamage and Wickramasiughe 2014). The subjective nature of interpretivism allows for the generation of understanding and explanations of the social world which are grounded in people's self-understandings (Edwards and Holland 2013; Leitch et al. 2010; Yanow 2006; Henwood and Pidgeon 1993).

In this study, the ontological assumption is that people perceive the reality of the social world in their own way, dependent upon their understandings, experiences and culture, creating multiple social realities. Epistemologically, this research is influenced by social constructionism. A key tenet of social constructionism is the belief that knowledge creation and making sense of the world is a shared experience which is created through social interactions, negotiated within communities and influenced by cultural and historical factors (Easterby-Smith et al. 2008; Prawat and Floden 1994). Social constructionists view valid and reliable knowledge as that which is understood within its social, historical and cultural context. The social constructionist perspective challenges the positivist notion that knowledge can be 'objective' as one of its key principles is that all knowledge has some level of a personal frame of reference and is contextually based (Morgan and Smircich 1980). This means that, to social constructionists, knowledge is subjective and is based upon judgements rather than facts

or truths and can be co-constructed and given meaning between people (Easterby-Smith et al. 2008).

Interpretivism influenced by a social constructionist epistemology is appropriate for this study because it is concerned with how entrepreneurs personally experience entrepreneurship (Morris et al. 2012) and the social-experiential learning that occurs within their entrepreneurial activity. Therefore, a subjective approach is most appropriate. Additionally, the learning being explored in this study occurs during social engagement which aligns with the epistemological position of social constructionism.

Due to the philosophical approach, this study engages in qualitative research. Qualitative research methods enable the researcher to gain rich understanding of personal experiences and reflections (Jackson et al. 2007). The aim of qualitative research is to gain deep understandings and meanings through detail (Daft 1983). Though qualitative research has been critiqued for being lower quality than quantitative research (Morse et al. 2002), measures can be taken to ensure quality is highly maintained. Two measures include methodological congruence and procedural precision (Birks 2014). Methodological congruence refers to consistency and alignment between the philosophical position underpinning the research, the stated research aims, and the methodological approach (Birks 2014). "Procedural precision refers to deliberate, planned and consistent application of methodological strategies in the conduct of research" (Birks 2014, p.226). Demonstrating procedural precision involves providing an audit trail, appropriate management of data and resources, and "demonstrating procedural logic" (Birks 2014, p.226). This chapter illustrates methodological congruence by clarifying the philosophical assumptions and showing their appropriateness to the research aims and method. Procedural precision is upheld through research transparency, which provides an audit trail, shows how data has been both managed and interpreted, and illustrates the logical procedures of the research.

RESEARCH METHOD

This research employs a qualitative method suitable for use in an interpretive study; semi-structured interviews. Interpretive research interviews are appropriate as they are suited to studies which aim to gain individual's perceptions of the meanings and processes of particular phenomena (Robson 2002); in this research, the phenomena

being explored is entrepreneurial learning during social engagement. They allow individuals to describe their experiences during a guided conversation which elicits depth and detail (Rubin and Rubin 2005), "exploring the stories and perspectives of informants" (Arksey and Knight 1999, p.34). Semi-structured interviews are a flexible qualitative interview design (DiCicco-Bloom and Crabtree 2006) where questions can be adapted, dismissed or added to as appropriate in each interview (Robson 2002), making each interview unique (Rubin and Rubin 2005). Semi-structured interviews are designed around main questions which are carefully prepared in advance to encourage the participant to talk about a particular topic and allow the researcher to examine the research puzzle thoroughly (Rubin and Rubin 2005). Alongside the main questions, researchers use probes as additional questions. "Probes ask the interviewee to keep talking on the matter at hand, to complete an idea, fill in a missing piece, or request clarification of what was said. Other probes ask for examples or evidence for particular points. Probes elicit more details without changing the focus" (Rubin and Rubin 2005, p.137) of the conversation. Follow up questions are often also used during semi-structured interviews. Such questions are specific to the conversation, asked when the researcher hears something of interest they would like to explore further (Rubin and Rubin 2005). Follow up questions cannot be prepared in advance; they are prepared while the researcher is listening to the participant.

The following questions were prepared in advance as an interview guide and suggested areas for discussion during the interview. They demonstrate both the main questions (MQ) and potential probes (P) (Rubin and Rubin 2005).

- Tell me about your background and how you created this business.
- Tell me how you think you learn best – can you give me an example?
- Tell me about the ways in which interacting and working with other people has advanced your knowledge and skills for managing your business (MQ) – can you give me any examples? (P)
- Tell me about any obstacles you have had to overcome in the creation and development of your business (MQ) - was anyone else involved in helping you to overcome them? (P) What have you gained from overcoming those obstacles? (P) How has that influenced your business? (P)

- Tell me about any other ways in which you feel interacting and working with people has helped you in the creation and development of your business (MQ)

The first question was intended to settle the participants into the interview and gain background information about them and their business, which has been said to be the quickest way to build a relationship between interviewer and interviewee (Easterby-Smith et al. 2002). The purpose of the second question is to turn the focus to learning and to try and understand how the participants think they learn most effectively – the question is not specific to learning within their business and is open to the participants' interpretation. Though the interviews are semi-structured, these two initial questions were posed to all of the participants as the first two questions to set up the interview and to create a flow in the discussion. After these two questions, the guide was used to aid the researcher in maintaining focus to the research aims but also hold the interview in a conversational manner, adding both probes and follow-up questions wherever the researcher felt that more information would be relevant and useful (Rubin and Rubin 2005). Probes asked things such as who else was involved, what types of interaction occurred, how often interactions occurred and how those interactions made the interviewee think or act differently. The purpose of the additional probing questions was to gain more details about the situation, interactions and outcomes discussed by the entrepreneur. The level of detail given by the interviewee influenced the need for additional questioning – the more detail given, the less probing the researcher needed to do, and vice versa.

In terms of the wording of the questions, the researcher aimed not to place too much emphasis on the word learning, and instead used terms such as 'the advancement of knowledge and skills' to indirectly ask about learning. This was done purposefully as people do not always recognise their own learning; therefore, it can be useful to ask about learning outcomes rather than about learning directly. The questions on the guide are very open to help the researcher in maintaining an open flow of conversation where the participant can lead the conversation in a number of ways. It was important for the researcher to ask for examples if they are not given by the participant to gain context for the learning situations and interactions. This connects the entrepreneur to their situations and contexts, as well as other people, which reflects an important part of interpretive study (Leitch et al. 2010; Yanow 2006).

ROLE OF THE RESEARCHER

The researcher has taken an active role in this research (Holstein and Gubrium 2004). As the researcher was actively involved in the conversations of the interview, they were a part of the interaction that was catalyst for the knowledge and meaning creation that is the interview data (Edwards and Holland 2013; Holstein and Gubrium 2004). This highlights the social nature of interviews, where both conversational partners are actively engaged in interaction. It illustrates the interview as more than a vehicle of pre-determined knowledge, thoughts and perceptions, and places importance on the context of the conversation (Holstein and Gubrium 2004). The interviews are likely to lead to the research participant reflecting upon their past, and the conversation with the researcher can create a place for learning to occur (Edwards and Holland 2013). This reinforces the social constructionist epistemology of the research, where knowledge is co-constructed (Easterby-Smith et al. 2008).

A key part of the active role of the researcher is listening, and it is important for the interviewer to listen and engage in the conversation of the interview without imparting their own viewpoints or leading participants (Easterby-Smith et al. 2002). It is the researcher's role during the interview process to determine what is relevant and what is not, which avenues should be explored in more detail and which should not (Rubin and Rubin 2005). This is part of the subjective nature of qualitative interviews and is likely to be influenced by the researcher's own experiences, understandings and interpretations. While this means that the research cannot be either replicated or generalised (two important factors in positivist, quantitative research), it enables the co-creation of knowledge and understanding (Petty et al. 2012). It is important for the researcher to check their interpretations throughout the research process so that the interpretations closely reflect the meanings of the interviewee.

PARTICIPANT SELECTION

The interviews were either individual or in pairs depending upon the number of partners within the business and which of those were able and willing to participate in the study. Participants were selected for this study using a combination of purposive and snowball sampling techniques.

Purposive sampling allows for research participants to be selected by the researcher as information-rich cases in terms of the overall research purpose (Patton 1990; Jupp 2006; Etikan 2016). There are a number of types of purposive sampling, with criterion sampling being the sampling method selected for this research. Criterion sampling involves using pre-determined criteria to form the sample (Patton 1990). This form of sampling is advantageous as it ensures that the participants are selected based upon their likeliness to provide information-rich data that is relevant to the research question (Jupp 2006). In addition, the criteria for selection does not have to be fully pre-determined, and can be developed as part of an iterative research process (Morse 2004). The disadvantage of this form of sampling is that there is potential bias due to the researcher's subjectivity in selecting who is suitable (Jupp 2006). To avoid this, it is important for the researcher to be clear about the selection criteria and to ensure that all participants fit with the stated criteria.

The criteria for selection in this study was that the participant had to be an owner-manager of a small-medium business that they had created and developed, and that had been running as a business for a minimum of one year. The criteria fit with the definition of entrepreneurship taken within this study: entrepreneurship is the creation and development of new business ventures, making the owner-managers who have actively created and developed their ventures the intended participants of this research. The criteria included that the business had been running for a minimum of one year in order to select entrepreneurs developing, rather than creating, their business. This meant that the entrepreneurs had potentially experienced learning during their entrepreneurial endeavour. Small-medium businesses can be defined as any business with up to 250 employees (Ward and Rhodes 2014), and were the focus of this research as small-medium businesses have distinct characteristics which suggest the learning encountered may be different to the learning within larger organisations.

Both individual entrepreneurs and entrepreneurs who created businesses as part of a partnership were included in the selection criteria. In instances where the entrepreneur was one of multiple business owners, there were further selection criteria in place. Where one or more entrepreneurs had been involved in the creation and development of the business, all were invited to participant in the research. However, due to work and travel commitments, not all business partners who were invited to participate were

available for interview. Where one or more business partners have entered the business since its creation, only the creators of the business were invited to participate in the first instance, and other business partners were only invited to participate to gain additional information or an additional perspective. The additional criteria were put in place to ensure that the focus remained on entrepreneurs as defined above, and business partners who were not involved in the creation of the business do not correspond with such a definition of entrepreneurship.

Snowball sampling was also used for participant selection. In snowball sampling, research participants are asked to suggest other potential research participants until sufficient data has been collected (Jupp 2006) and is useful for locating information-rich participants (Patton 1990). This form of sampling enables the researcher to benefit from the social networks of participants (Atkinson and Flint 2004), which is especially helpful for those with few connections in their area of research interest. As the researcher had few established connections, this sampling method was invaluable in gaining access.

Section Two: Participant Information

Table 2 (overleaf) provides participant information for the study. It includes the assigned company letter, the pseudonyms of the participants, the number of owners, number of employees, and the type of company that they own (information relevant at the time of interview). The pseudonyms within the table with strikethrough indicate partners of the business who were unable/unwilling to participate in the research. Following the table are participant profiles that provide a description of the participants and their businesses.

Company	Pseudonyms of Participants	No. of Owners	Approximate No. of Employees	Business Type
A	Maggie John	2	0	Educational Resources
B	Ian ~~Greg~~ ~~Greg~~	3	0 + 20 agents	Simulation Software
C	Steve	1	8	Public Relations
D	Matt Geoff	2	60 permanent + 25 associates	Software Testing Consultancy
E	Joshua ~~Marcus~~	2	2	Technology Development
F	Kirsty	1	0	Furniture Painting
G	Thomas	1	4 + 4 self-employed	Cleaning Services
H	Alison	1	2	Wedding Planning, Decorating & Dresses
I	Stuart	1	7	Application, Website & Software Development
J	Christopher	1	40-50	Chemical Regulatory Management
K	George	1	15	Design & Technology
L	Keith	1	25	Recruitment
M	Matt Ivy (MD)	1	50	Manufacturing
N	Shaun ~~Arash~~	2	20	Computer Generated Imagery and Animation
O	David	1	6	E-commerce Web Design & Development

Table 2: Research Participant Information

Company A

Company A is a partnership within the Education industry. The company was started in 2008 by two friends, Maggie and John, who studied economics together at University. After graduating, they both became secondary school teachers and were part of exam boards. While teaching they noticed a gap in the market and decided to start their business together. Their business provides educational resources to students, teachers and schools as they identified that many teachers do not have the time to prepare all the resources they require throughout the year. It also ensures consistency between student revision materials and the material they are taught throughout the year in class.

The company had no employees at the time of the interview, with Maggie and John covering all bases of the business. John still works part time as a teacher, with Maggie working full time in the company. Maggie and John feel that John's continued teaching gives them a USP as it allows them to continually test their resources on students as well as having a clear understanding of any changes/adaptations made by exam boards or wider education authorities.

Both Maggie and John were interviewed for this research study in a joint interview.

Company B

Company B began as a partnership between two brothers, Ian and Dave. Ian had experience in creating and developing businesses already and, during his time giving sessions about entrepreneurship at university, Ian felt business simulation software would be the most useful tool for prospective entrepreneurs to learn about the creation and development of businesses. Ian asked brother Dave to create the software as he had experience in programming. In 2005, Dave had developed the software and the business was created. The other Dave was later brought into the business as a third partner to help run the business.

The three partners of Company B each work from their own home offices, with no joint premises. As there are no premises, there are no employees as such however there are around 20 agents across the world who work for the company to aid in international sales and distribution. The majority of the communication within the business occurs

virtually rather than in person, and the two brothers are likely to only work together in the same office once a year.

Only Ian was available to be interviewed for the study; the other two partners did not participate.

Company C

Company C is a public relations company that was created by Steve in 1999 and has grown organically since. Steve worked in public relations for 10 years prior to opening his own business. He had worked within a family business and it became clear that there were limited progression opportunities for him. The original plan was for him to create a company with a colleague at the family business but this did not work out and Steve started Company C by himself. The company (at the time of interview) had eight employees, all of which work from the company site in the North West.

Alongside owning and managing Company C, Steve also works closely with other entrepreneurs by facilitating courses at the university and with the Lancashire Forum. These are mainly courses that Steve has been on himself at some point during the creation and development of his business and he sees a lot of value in these for the learning of entrepreneurs.

Steve was interviewed individually as the sole owner-manager of Company C.

Company D

Company D is a software testing consultancy partnership. The two partners are complementary; Matt is a computer scientist while Geoff has experience in sales and marketing. The two business partners worked together in another company before choosing to leave and start their own. During their time at the other company, they were involved in its growth and development from a small, new business to a larger business that was acquired and became corporate. Neither Matt nor Geoff enjoyed working within the corporate environment after some time, and Matt especially had entrepreneurial spirit from being involved in the growth of the business, so they decided to start out on their own.

Company D had approximately 60 permanent employees and around 20 to 25 associates, at the time of interview. For a time, there was a third partner in the business but this partner is no longer involved and was not involved during the first stages of creation and development.

Both Matt and Geoff were interviewed for this research study in a joint interview.

Company E

Company E is another partnership. This partnership is involved in technology development. The two owners, Joshua and Terry, attended university together and formed their business to commercialise their doctoral research. It was founded in 2014 after securing a large grant, with the business becoming fully operational in January 2015. The company (at the time of interview) had four employees who are engineers, and also has a board of trustees.

Joshua was interviewed for this research study in an individual interview. Terry was unable to be interviewed for the study and did not participate.

Company F

At the time of the interview, Kirsty - the owner of Company F - was operating as a sole trader and going through the process of becoming a limited company. The company started early in 2015 and though Kirsty was a sole trader at the time of interview, the company was run and advertised as a family business as she had help from her father, husband and daughter. Kirsty now has a small number of employees and now has her own workshop space rather than running her business from her home, showing growth and development since the interview took place.

Kirsty had a successful career in sales and marketing before starting her business but became tired of the travelling and stress it involved and wished to spend more time with her family. She had painted some furniture as a hobby for herself and decided to leave her job to try painting furniture full time.

Kirsty was interviewed individually for the research study as the sole owner of Company F.

Company G

Company G is a cleaning company run by Thomas. Thomas had a career in mining before starting his own cleaning company. Company G originally was run part time alongside mining and then alongside a job at the post office until the business grew to a significant enough size that additional income was no longer required. Thomas attended a training course in Manchester before starting out to learn the basics of carpet and upholstery cleaning and how to use the machine he had purchased for his business. Thomas had no previous experience in either managing or owning a business. Company G had 4 employees and also contracted work to 4 self-employed cleaners at the time of interview.

Thomas was interviewed for this research study in an individual interview as the sole owner of Company G.

Company H

Company H is a wedding business owned and managed by Alison who offers wedding planning and decorations and sells wedding dresses from her shop in West Yorkshire. Though the business technically belongs to both Alison and her husband, it was made clear outside of the interview that her husband does not have an active role as an owner in the business, and it is run as Alison's business and her husband has a full-time job outside of Company H. The business has two employees, Alison's Auntie and Alison's best friend, but other family members are known to help out where necessary.

Alison was interviewed with her Auntie as she was very nervous about the process despite wanting to participate. The focus of the interview remained on Alison as the owner-manager of Company H.

Company I

Stuart started Company I in 2008 after a number of years working in the video games industry. The company develops applications, websites and software and was originally created while attempting to embark on an opportunity with Sony Games. Though this opportunity was not successful, Company I has been. Stuart ran the company alone for approximately 18months before being joined by two directors and a programmer. Over

the couple of years prior to the time of the interview, the company had grown to approximately 8 plus freelancers.

Stuart was interviewed as the sole owner of Company I.

Company J

Company J is a chemical regulatory management company that was created by three business partners in 2007. The company undertakes chemical risk assessments for a variety of businesses, including government-based organisations. Company J had between 40 and 50 employees at the time of the interview. Christopher now runs the company on his own, with one of his business partners retiring and relinquishing his shareholding, while the other is still a shareholder but has relinquished his directorship due to a conflict of interest as he now works with a regulatory body.

As the current sole owner-manager of Company J, Christopher was interviewed for this research study in an individual interview.

Company K

George has created and developed a Design and Technology company in the North West of England that designs both hardware and software. Before creating the business, George spent a number of years working in the human rights sector. Company K has a focus on improving people's health and lives through innovative technology and applications. At the time of interview, the company employed 15 people.

George was interviewed as the sole owner-manager of Company K in an individual interview for this research project.

Company L

Company L is a recruitment company that was created and developed by Keith. Keith began his working life on graduate schemes, then went on to be a general manager for a logistics company before moving on to another company where he set up their logistics recruitment. Working in other companies gave Keith the realisation that he preferred to work for himself so he began his own recruitment company. The company has grown from just Keith to now having 25 employees (at the time of interview).

For this research study, an individual interview was conducted with Keith as the sole owner of Company L.

Company M

Company M is a manufacturing company that was created by Matt in 2005 and is now run by both Matt and wife Ivy. Matt started as a van driver, then became a salesman before being made redundant and starting his own company. Ivy spent 30 years in the education sector and was working full time when the business was created. This didn't stop her from being involved in the business – she oversaw the HR and accounts in her spare time. Ivy joined the business full time in 2010 and at the time of the interview was MD, soon to become Director of Community and Learning.

Matt was interviewed in an individual interview as the sole owner-manager of Company M, and a secondary interview was conducted with Ivy based on the responses given in the initial interview with Matt.

Company N

Shaun created Company N in 2001. He studied Business Studies at Huddersfield University and began his career working for a recruitment agency when looking for a sales or marketing role. After around 4 years of working for that company, Shaun decided it was time to move on and find an opportunity to create his own business. His business idea was initially an IT recruitment business, specialising in overseas recruitment. However, after the September 11th attack in America, there was a lot of hesitancy with overseas recruitment so Shaun decided it would be more fruitful to engage in IT work rather than in recruitment. With his brother joining him, Company N became specialists in architectural CGI and 3D imagery.

Shaun was interviewed on an individual basis for this research study. His brother, the other owner and director of the company, was unavailable for interview and did not participate in the research.

<u>Company O</u>

David is the sole owner-manager of Company O. Company O is an e-commerce web design business that was started in 2002 and at the time of interview had 6 employees. David's background is in computer programming, and he was a contract developer before starting his own business.

David was interviewed on an individual basis as the sole owner-manager of Company O.

Section Three: Ethical Considerations

All social science research has ethical considerations to ensure that research participants are treated fairly and not significantly harmed while the research is undertaken (Hammersley and Traianou 2012). Although this research is considered to be low-risk for participants (as it is not directly asking about sensitive issues, does not involve any vulnerable parties, and should not harm participants in any way) there are certain ethical elements that have been considered.

Informed consent is a "central concept in ethical research practice" (Wiles 2014, p.25). Gaining informed consent is an important way of respecting the participants autonomy (Hammersley and Traianou 2012) by providing them with clear information about the research project and what their participation will mean (Wiles 2014). It ensures that participants are willing to share their experiences (Orb et al. 2001) and know their rights to withdraw from the study if they later decide not to participate (Wiles 2014). Informed consent was obtained in this research by providing each participant with an information sheet (see Appendix 1), ensuring participants had the opportunity to ask any questions about the research before it began, and requiring a signed consent form (see Appendix 2) prior to the interviews. The information sheet outlines the purpose of the research, explains why the participant has been chosen to participate, describes the research process and what participating will involve, explains how to withdraw and when data will be removed from the study, and provides the necessary contact details should any issues or questions arise; all of which are important areas of information for the participants (Wiles 2014). The consent form was used to gain permission to conduct and record the interviews. Participants were informed that they could withdraw at any

time, and data would be removed and destroyed if they withdrew within four weeks of data collection.

Another key ethical consideration is of confidentiality and anonymity (Wiles 2014; Hammersley and Traianou 2012). "In the research context, confidentiality is taken to mean that identifiable information about individuals collected during the process of research will not be disclosed and the identity of research participants will be protected through various processes to anonymise them" (Wiles 2014, p.42). Confidentiality was maintained in this study by giving participants and their companies pseudonyms (Wiles 2014) in the form of alternative names and company codes. All data was saved according to the company code, and the pseudonyms are used throughout the research so that no participants are identifiable. All data was saved in password protected files in an attempt to restrict accidental breaches of confidentiality. Participants were reassured of the confidentiality and anonymity procedure of this study on the information sheet.

Section Four: Method of Analysis

The data collected within this study have been analysed using thematic analysis through the framework of thematic networks (Attride-Stirling 2001). Thematic analysis involves identifying and interpreting patterns, known as 'themes', within data (Braun and Clarke 2006; Fereday and Muir-Cochrane 2006; Vaismoradi et al. 2013; Spencer et al. 2014). This form of analysis is widely used (Braun and Clarke 2006) and is not limited to a particular discipline or theoretical perspective (Spencer et al. 2014). One of the main benefits of this method of analysis is that there is a lot of flexibility, particularly in terms of ways in which the researcher can identify themes and determine their importance and prevalence (Braun and Clarke 2006). In the social sciences, thematic analysis has been considered as "an independent and reliable qualitative approach to analysis" (Vaismoradi et al. 2013, p.400).

Thematic analysis is often confused with content analysis, and in some cases the two terms are used synonymously (Vaismoradi et al. 2013) despite their differences. While the two methods of analysis are similar, there are core differences between the two. Content analysis is a way of quantitatively describing qualitative data by counting the

frequencies of codes, themes and/or words in a particular data source (Silverman 2014; Vaismoradi et al. 2013). Thematic analysis, on the other hand, is purely qualitative, and the frequency of themes does not necessarily illustrate their importance to the overall interpretation of the data (Braun and Clarke 2006). It is thematic analysis, not content analysis, which is used within this study as a qualitative analysis is a more appropriate fit. Additionally, thematic analysis can be seen as an appropriate fit for constructionist (Braun and Clarke 2006; Vaismoradi et al. 2013) and interpretivist research as it can be used to explore experiences, meanings and realities and their connections with society and sociocultural contexts (Braun and Clarke 2006). This indicates that thematic analysis is an appropriate fit for this study where a social constructionist epistemology within an interpretivist perspective is taken, and the research aims to explore the learning experiences of owner-managers from their own perspectives and with their own meanings attached.

Regardless of the choice of framework used to conduct a thematic analysis, different approaches can be taken and the decisions made about those approaches affect both the suitability to the research project and the outcomes of the analysis. Thematic analysis can be either inductive or theoretical, and semantic or latent. Inductive thematic analysis is data-driven, whereas theoretical thematic analysis is theory- or analyst-driven in that the analysis is "driven by the researcher's theoretical or analytic interest in the area" (Braun and Clarke 2006, p.84). For Boyatzis (1998), an inductive approach has an enhanced appreciation of the data and enables salient perspectives and issues to be recognised. It also provides a greater opportunity to gain insights as the researcher is unsure of the destination the analysis will arrive at (Boyatzis 1998). However, inductive analysis is also more time consuming than theoretical analysis, and it cannot be used to test theory (Boyatzis 1998). Additionally, there is more uncertainty and ambiguity which can cause discomfort for researchers (Boyatzis 1998). Semantic thematic analysis looks at the themes on the surface of the data, those that are made explicit by the research participant, and does not look beyond what has been said; conversely, latent thematic analysis looks at the underlying themes that reflect the meanings and assumptions beyond what is explicitly said by a research participant (Braun and Clarke 2006). Semantic thematic analysis is therefore more descriptive, while latent requires more interpretation by the researcher.

The approach taken in this research study is inductive and latent. An inductive approach is taken as the research is not attempting to use theory that has already been developed in order to create a coding framework and analyse the data. Instead, the themes will come from the data itself, and a coding framework will be developed as the data is analysed. This approach is suitable to an interpretivist approach as the perspectives and experiences of the participants are the focus, rather than existing theories and research (Henwood and Pidgeon 1993). However, it is important to note that the researcher's prior knowledge and philosophical commitments cannot be ignored during analysis and should be acknowledged as potentially influential to the process despite not being a focus (Braun and Clarke 2006). One measure put in place by the researcher to deal with this is to clearly state their philosophical assumptions and be transparent in the interpretation of the data, showing clearly the reasons for those interpretations. Another measure utilised by the researcher is to use the terminology used by the participants wherever possible to avoid assigning the codes and themes to theories before the analysis of the data has been completed. A final measure that has been put in place to avoid the influence of prior knowledge is the use of memos on the coding software. During the analysis, the researcher has used memos to track thoughts that connect the prior knowledge to the data. This is helpful as it acknowledges those thoughts and interpretations without allowing them to directly influence the coding and analysis of the data. The analysis approach in this research is also latent, enabling the researcher to go beyond description of what the research participants say and interpret the implicit as well as explicit. Taking this approach fits with the social constructionist epistemology that shapes this research study as latent thematic analysis "tends to come from a constructionist paradigm" (Braun and Clarke 2006, p.84).

The thematic analysis was conducted using the framework of thematic networks (Attride-Stirling 2001). Thematic networks are "web-like illustrations (networks) that summarise the main themes" (Attride-Stirling 2001, p.387). This framework was used to aid the iterative process of making sense of the qualitative data collected (Smith and Firth 2011). The framework of thematic networks provides an explicit and systematic approach (Smith and Firth 2011) which guides the researcher in identifying the connections and relationships between themes (Attride-Stirling 2001).

The key difference between other thematic analysis methods and the method of thematic networks is in the creation of networks based on the themes identified within the data. Thematic networks are built on three types of themes: basic themes, organising themes and global themes. Basic themes are the lowest level of themes which "are simple premises characteristic of the data, and on their own they say very little about the text" (Attride-Stirling 2001). Organising themes are the next step up, and they pull together basic themes of similar issues into groups. The highest level of themes are global themes which bring together organising themes and give a clearer picture of the data as a whole. There may be one global theme or multiple, but each global theme will have its own thematic network around it of organising and basic themes. A web-like format is used to remove the illusion of hierarchy between themes (Attride-Stirling 2001).

Thematic analysis has been critiqued as a descriptive analytic method with low levels of interpretive analysis (Braun and Clarke 2006; Vaismoradi et al. 2013). While this is an understandable critique of thematic analysis to a certain extent, in that codes and themes do describe the data and the patterns within it, the approach taken in this study has a three-stage process of analysis (shown in Figure 7) that produces an in-depth interpretive analysis and covers multiple levels of abstraction.
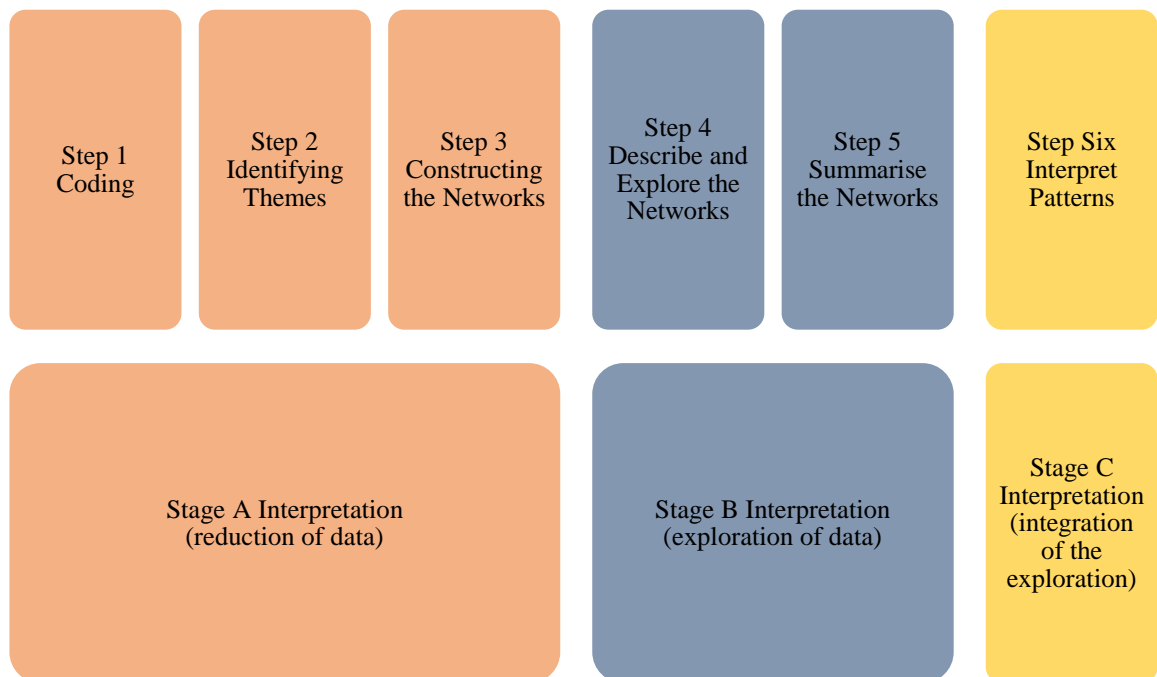
Figure 7: Stages of Interpretation

(Illustrative summary of Attride-Stirling 2001)

As illustrated in Figure 7, the analysis approach adopted in this study consists of six steps across three stages of interpretation and analysis. Each of the stages indicates a deeper, more abstract level of interpretation. The first stage of analysis (Stage A Interpretation), which sees the data reduced into codes and themes, is low-level analysis that describes the data and the most basic patterns that have started to emerge. The second stage (Stage B Interpretation) is an exploration of the data that goes beyond simple description. At this stage, the researcher is looking to further identify the patterns of the thematic networks and is required to interpret not just the themes they have identified, but also the meanings behind those themes and the patterns they discover. By the end of this stage, the researcher should be able to summarise the thematic networks and explain the patterns that they have discovered and that they interpret to characterise the data. The final stage of analysis (Stage C Interpretation) goes beyond the data. At this stage, the interpretations that have been made so far are connected to the research questions and extant literature and the researcher should be able to make their argument of the insights gained, which will be grounded in their identified patterns and interpretations.

Stage A Interpretation comprises three steps: Step One – Coding, Step Two – Identifying Themes, and Step Three – Constructing the Networks. Stage B Interpretation is made up of two steps: Step Four – Describing and Exploring the Networks, and Step Five – Summarise the Networks. These two steps can be seen in the 'Findings' chapter. Finally, Stage C Interpretation is made up of only one step; Step Six – Interpret Patterns. This can be seen in the 'Discussion' chapter, as the patterns are interpreted alongside the existing literature and theories as well as the research questions that this research study is aiming to answer. The following sections discuss each step in detail.

Step 1: Coding

Step one of the analysis process involves reducing the data into 'codes' that represent sections of the text. These codes form a coding framework that is used to dissect the data. As already discussed, there are different ways to code data (i) theoretically based upon research questions and (ii) inductively based on the issues within the data. Attirde-Stirling (2001) observes that codes can be created by a combination of theoretical and inductive based codes. Within this research analysis, codes were created inductively

and are data-driven. The interviews from the various different participants were all coded together as one hermeneutic unit, with some codes appearing in just one interview, some in a couple of interviews and other codes appearing across all of the interviews. The various interviews were treated as one hermeneutic unit in order to discover and explore the patterns across the different participants, not for the owner-managers in each separate interview. To aid in the coding process, Atlas.ti was used by the researcher to assign codes to data segments and manage documents. The computer programme did not assign codes or produce the analysis for the researcher; it was a tool to aid in the analysis.

The coding process involved the researcher reading through the data, assigning codes to insightful and relevant sections of the text and creating a coding framework (Appendix 3) of codes that represent what has been discussed in the data. Those sections can range from one word, to a quote, to a paragraph depending on the code, the data and the criteria for analysis. The codes within this analysis represented different types of social interaction, contexts of learning, who the entrepreneurs learn with, factors which impact their learning and learning style. All codes were given a definition to ensure that there were explicit boundaries and no overlap or interchangeability between codes, as good codes are "limited in scope and focus explicitly on the object of analysis, in order to avoid coding every single sentence in the original text" (Attride-Stirling 2001, p.391). An example of a code in this research is 'External Learning Contributor (ELC)' which is defined as 'Additional actor involved in the entrepreneur's learning who is external to the business and its operations'. Some codes were split into additional categories throughout the analysis. For example, 'Questioning' – which is defined as 'Interaction of 'questioning' between the entrepreneur and their learning contributor' was also split into 'Asking questions' and 'Being asked questions' to encompass the different ways questioning was discussed. To differentiate, the terms were added to the coding framework. In this example, asking questions was added alongside the definition 'Interaction of 'questioning' where the entrepreneur asks questions to a learning contributor' and being asked questions alongside the definition 'Interaction of 'questioning' where the entrepreneur is questioned by a learning contributor'.

Step 2: Identifying Themes

Step two of the analysis process involves identifying themes within the data. This is done by extracting significant themes from the coded segments of the data. To do this, the data is read through the codes rather than as a whole. This means that rather than reading each interview through again, the researcher reads per code. The codes are viewed in turn, and all of the sections that have been assigned to that code are read together, irrelevant of which interview the sections are from. Atlas.ti was very useful for this, as an individual report could be created for each code which showed each assigned section, which interview each section had come from, and any additional notes/memos made by the researcher about the coded section.

The themes identified in this research are a combination of semantic (on the surface of what the participant has said) and latent (underlying themes that are not stated explicitly). The latent themes will require interpretation of the coded sections to identify any underlying patterns, whereas the semantic themes will be clear. Once all the themes have been identified, they will be checked and refined to ensure that they are "(i) specific enough to be discrete (non-repetitive) and (ii) broad enough to encapsulate a set of ideas" (Attride-Stirling 2001, p.392).

Step 3: Constructing the Networks

In step three of the analysis process, the researcher constructs the thematic networks. This step in the process has multiple parts as the different types of themes need to be identified, the network itself needs to be constructed, and then the themes need to be verified and refined.

Firstly, the themes that have been identified in Step 2 need to be re-classified as 'Basic Themes'. Basic themes are the themes which come directly from the data; they describe what is happening in sections of the data but are not enough to illustrate the text as a whole (Attride-Stirling 2001). Although re-classifying the themes as 'Basic Themes' appears to just be naming the themes, it provides the researcher with a "conceptual division between the identification of themes and the creation of the thematic network" (Attride-Stirling 2001, p.392). Once they have been re-classified, the Basic Themes are then arranged into clusters of similar issues. This is demonstrated in Table 3.

Basic Themes	Being questioned Brainstorming General conversations Listening at formal learning events Listening to advice Listening to external perspectives Purposeful conversations with employees Questioning others Sharing experiences Sharing ideas Sharing information	Change in business direction Change in the business model / processes / systems / structures Change in / reinforcement of product offering Clarity Confidence Gained knowledge/skills Validation	Certain problem = certain people Competition Formal programme engagement Informal, casual engagement with others Lack of confidence Resistance to external help and advice Similarity to learning contributor Trust	Financial cost Issue limitation Overcoming personal limitations Saving time Time commitment Wrong person
	How entrepreneurs learn	*What entrepreneurs learn*	*What affects learning*	*Benefits and drawbacks*

Table 3: Identification of Basic Themes

As these issues are identified, named and explained (briefly, but so the researcher has clarification if needed at a later stage), the 'Organising Themes' will emerge. Organising Themes are the second layer of themes. These themes bring together similar Basic Themes to assimilate the themes, allowing the researcher to make connections and assumptions about the data as a whole (Attride-Stirling 2001). Organising themes help the researcher to give a bigger picture of what is occurring in the data, but they do

not tell the full story. Table 4 demonstrates the interpretation from basic themes to organising themes in this study.

Basic Themes	Reason for grouping	Organising Themes
Being questioned Questioning others	*Entrepreneurs learn from the interaction of questioning*	Questioning
Sharing experiences Sharing ideas Sharing information	*Entrepreneurs learn from the interaction of sharing*	Sharing
Listening at formal learning events Listening to advice Listening to external perspectives	*Entrepreneurs learn from the interaction of listening*	Listening
Brainstorming General conversations Purposeful conversations with employees	*Entrepreneurs learn from the interaction of conversing*	Conversing
Change in business direction Change in the business model / processes / systems / structures	*Learning outcomes which have a direct impact on business strategy*	Strategic Outcomes
Change in / reinforcement of product offering Gained knowledge/skills	*Learning outcomes which have a direct impact on the day to day business operations*	Operational Outcomes
Clarity Confidence Validation	*Learning outcomes which have a direct impact on the entrepreneur as a person*	Personal Outcomes
Certain problem = certain people	*Factors or conditions which aid in entrepreneurial learning during*	Conducive Conditions

Formal programme engagement	*social engagement with other people*	
Informal, casual engagement with others		
Similarity to learning contributor		
Trust		
Competition	*Factors or conditions which hinder entrepreneurial learning during social engagement with other people*	Barriers
Lack of confidence		
Resistance to external help and advice		
Issue limitation	*Benefits to entrepreneurs of learning during social engagement with other people*	Benefits
Overcoming personal limitations		
Saving time		
Financial cost	*Drawbacks to entrepreneurs of learning during social engagement with other people*	Drawbacks
Time commitment		
Wrong person		

Table 4: Identification of Organising Themes

Once the Organising Themes have been identified, the researcher is able to deduce the main argument(s) and/or assumption(s) that have emerged by bringing together connected Organising Themes and their associated Basic Themes. The argument(s)/assumption(s) become the Global Theme(s) of the thematic networks. Global Themes are the highest-level themes that bring together the Organising Themes in order to present the main assertions of the data. They are used alongside the Organising and Basic Themes to portray a full picture of the data. The number of Global Themes deduced depends on the number of arguments that the researcher identifies from the data. In this study, four global themes emerged. Table 5 illustrates the analysis and interpretation of the organising themes into global themes.

Organising Themes	Patterns Emerging	Global Themes
Questioning Sharing Listening Conversing	*Entrepreneurs learn from a variety of interactions during social engagement. Sometimes, they learn from more than one interaction at once – the interactions combine for learning. The interactions are not distinct from each other, they are interwoven.*	Multiple interwoven social interactions contribute to entrepreneurial learning.
Strategic outcomes Operational outcomes Personal outcomes	*Learning during social engagement impacts on multiple levels as there are both personal and business (operational and strategic) outcomes. These are intertwined as while there is a direct impact at one level, there can also be an impact on another level too.*	Learning during social engagement results in multi-layered and intertwined outcomes.
Conducive conditions Barriers	*Conditions which aided the learning of some contrast with the conditions which aided others. Some of the conditions which aided learning were contradictory with some of the conditions which hinder learning. This shows contradictions in the conducive conditions and barriers.*	The conditions that are conducive or barriers to can be contradictory.
Benefits Drawbacks	*Some of the benefits contrast with some of the drawbacks of learning during social engagement, demonstrating tensions.*	Tensions are visible between the benefits and drawbacks of entrepreneurial learning during social engagement.

Table 5: Identification of Global Themes

Tables 3, 4, and 5 are an addition to the analytic process outlined by Attride-Stirling (2001), to aid in the organisation of the themes and transparency in the research process.

After tables were created, the web-like networks were built up. The structure of the thematic networks can be seen in Figure 8. The thematic networks created for this study are presented in Chapter Four: Exploration of the Research Findings.
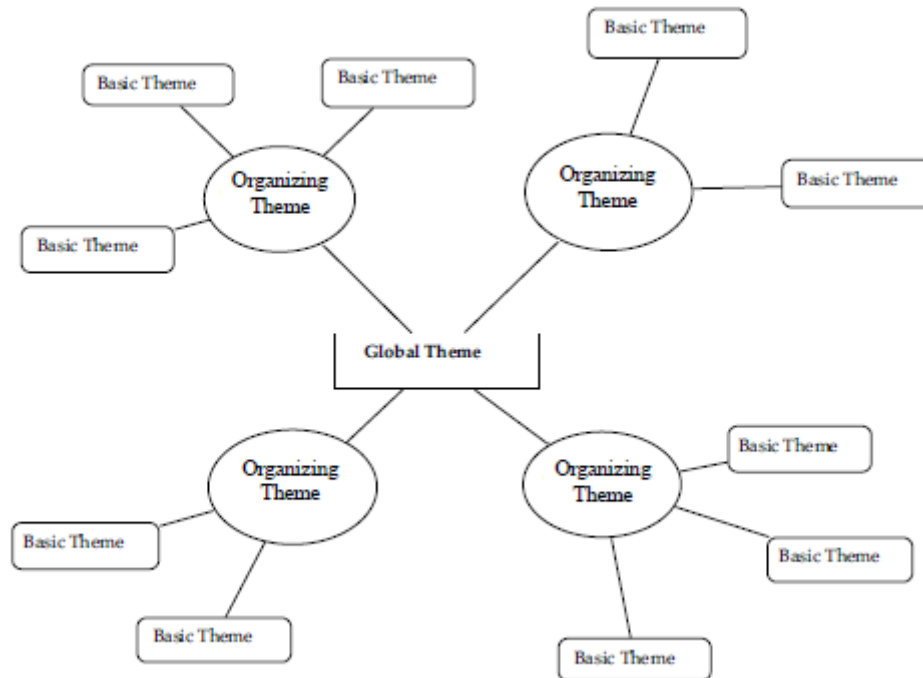
Figure 8: Structure of Thematic Networks

(Attride-Stirling 2001)

Each Global Theme is the centre of its own network of Organising and Basic Themes, with each theme only occurring once across all networks created. Following this, the researcher should verify and refine the thematic networks that have been created. This is done by going back to the data associated with each Basic Theme and ensuring that "(i) the Global Theme, Organising Themes and Basic Themes reflect the data and (ii) the data support the Basic, Organising and Global Themes" (Attride-Stirling 2001, p.393).

Step 4: Describe and Explore the Thematic Networks

Step four moves the researcher into Stage B Interpretation – the second level of analysis, abstraction and interpretation. To this point, the thematic networks created have largely described the data. At Step 4, the thematic networks become a tool to aid the researcher in interpreting the data. To do this, the researcher first describes each of the networks created. Secondly, the researcher explores the underlying patterns within the data that

become apparent during the description of the data. At this stage of the analysis, the researcher reads the data again but this time through the network of themes rather than in a linear fashion. Doing this enabled the identification of comparative and contrasting accounts across the data which may show key differences across the different participants.

Step 5: Summarise the Thematic Networks

This step of the analysis process involves the researcher summarising the thematic networks in terms of the themes and patterns that have emerged. This step involves making explicit the analysis so far. In doing so, further interpretations may be made or patterns identified making this an important step in the analysis process. In this study, three core principles emerged during this stage of analysis. These three principles built upon the global themes identified and provided the main characteristics of entrepreneurial learning during social engagement. They reveal (1) multiple, interwoven social interactions combine with other learning mechanisms and influencers for entrepreneurs to learn; (2) learning during social engagement results in multi-layered and intertwined outcomes; (3) learning during social engagement is contextually dependent and affected by various factors.

Step 6: Interpret Patterns

The final step of the analysis involves the deepest level of interpretation and analysis. In this step, the researcher brings together the interpretations so far and looks at them in relation to the research questions and associated theory. The purpose of this step is to combine the data, the thematic networks, the patterns and the summaries in order to put forward arguments and answer the research questions. In this study, step six of the analysis is presented in Chapter Five: Discussion and is based on the three core principles which emerged through the analysis of the data. The first principle was analysed through the theoretical lens of learning sequences (Bingham and Davis 2012). The second principle was analysed through a comparison of the findings, Cope's (2005) learning tasks and St-Jean et al's (2018) mentoring outcomes, and then further interpreted by drawing upon entrepreneurial identity literature. Finally, the third principle was analysed in relation to van Gelderen et al's (2012) conceptualisation of micro and macro contexts, with emphasis placed on the contradictions present in the research data.

Section Five: Reflection of the Research Process

This section will provide a reflective account of the research process from a personal perspective to demonstrate the value of reflexivity in research.

As part of the research I built in a reflexive process by reflecting after each interview and feeding these reflections into the next. For example, I reflected upon the questions I asked, what wording worked well and what areas I needed to gain more information about. My reflection involved both individual self-reflection (such as keeping a research diary and using memos when analysing the data) and discussing my experiences and thoughts from the interviews with others. I self-reflected on how I felt during the research process, what I learned during the process, and what I was finding from the research so far. The reflections that were part of conversations with others built upon the use of a social constructionist epistemology as my own learning and knowledge coming from this research was co-created through those discussions.

A key learning point for me from the reflexive process undertaken was how engagement in research is an emotional endeavour. At the start of the process I felt a mixture of excitement and nerves. I was excited about interacting with entrepreneurs and what I may find through those conversations, but also nervous about the experience due to limited experience in conducting research. My confidence grew and nerves abated with each interview I held as I felt more comfortable with the interactions and my own ability to gain the information I needed. The process was also emotional as gaining access was problematic. I faced difficulties with entrepreneurs committing their participation; many people I asked to participate were interested in my research and taking part but were evasive when I tried to arrange a day and time for interviews. There were also occasions I would hold an interview with someone recommended to me and then find they did not meet my selection criteria. Together, this meant that the research process was not only lengthy but also trying. I had to keep pushing to gain enough participants and not give up on my research no matter how difficult it was to keep being let down by other people. Based on this experience, there are some changes I would make to future research participant recruitment. Firstly, I would produce a screening questionnaire to ensure that all participants meet the selection criteria prior to the interview taking place, allowing efforts to be put into only those who fit with the study.

Secondly, I would attend more events aimed at those I am hoping to participate. In this study, I only attended two events. Attending more than this would have enabled me to make more connections and have a wider pool to draw from.

Through reflection I can see that conducting this research involved engagement in my own experiential learning. I was conscious of this because of the focus of my study being learning, which prompted me to self-reflect on my personal learning journey. I improved with each interview I conducted, especially in terms of learning how to gain the most out of each interview and keep the conversations relevant to entrepreneurial learning. Another aspect which I feel I learned experientially during the research process was how to get the participants to answer the question for them, rather than how they thought I wanted them to answer. This mainly involved reassuring them that there were no wrong answers and that I was interested in hearing about their own personal experiences and learning.

Reflection has been of value in terms of making sense of both the research process and what the research is showing. Through individual self-reflection I gained practical skills from the process. Such skills involved how to gain access, how to conduct an interview, how to get the most out of participants and how to build rapport and make people feel comfortable in the interview setting. I also started to develop my theoretical understanding of what the research was showing through a combination of individual self-reflection and reflective conversations with others (such as my supervisors and peers). It was in this reflection that my analysis and interpretation began.

There were three main areas on which my reflection was based. In the first, I reflected upon the question 'what am I gaining from the interviews?'. One thing I was able to see from this was that I was gaining a lot of examples from participants. Examples were useful to gain more detail about the learning, including contextual factors. The second area I reflected upon was 'what are the interviews showing so far?'. An example of something I identified from this question was that there are multiple ways entrepreneurs learn and these are not always separate from each other. The third and final area my reflection was based on was related to the question 'what else do I need to be asking about in my following interviews?'. One thing I began asking more directly about based on the interviews I had held and my reflection on them was the role of reflection in

entrepreneurial learning. For example, I began asking about how entrepreneurs reflected to see whether social interactions were related to learning from reflection. Feeding my reflections back into the research process demonstrates the role and value of reflexivity in conducting and analysing research.

Chapter Four: Exploration of Research Findings

This chapter explores the research findings of this study, continuing the analysis process. Steps three, four and five of the analysis process (see Figure 7, page 72 of chapter three) are represented within this chapter. In step three of the analysis, the thematic networks are created. These are illustrative depictions of the identified themes. Their web-like structure is used to show the three levels of themes (basic, organising and global) and show how interpretation has moved from identifying the initial codes and themes to generating the arguments of the study. In this study, four thematic networks have been created. Each of the networks are described and explored (step four of analysis) in turn, then summarised (step five) to explore the connections and patterns present across the data, thereby illustrating a deeper and more abstract level of interpretation. The final step of analysis and interpretation – step six – will be presented in Chapter Five: Discussion, where the findings are further analysed in relation to existing academic literature and research.

Before each thematic network is considered in turn, it is worth restating the definitions used within this study. Entrepreneurship is defined here as the creation and development of business ventures. Learning is defined as "the acquisition or alteration of skills, knowledge, habits and attitudes necessary to deal with all aspects of running a business" (van Gelderen et al. 2005, p.98). This study is conducted from a social-experiential approach, with a focus on learning during social engagement with other people. Such learning involves multiple actors, and within this research the additional actors involved in an entrepreneur's learning are referred to as 'learning contributors'. The term learning mechanism (Secundo et al. 2017; Zhang and Hamilton 2009; Cope 2005) is used for the ways entrepreneurs learn, meaning the processes they engage in when learning.

Thematic Network One: The Role of Social Interactions
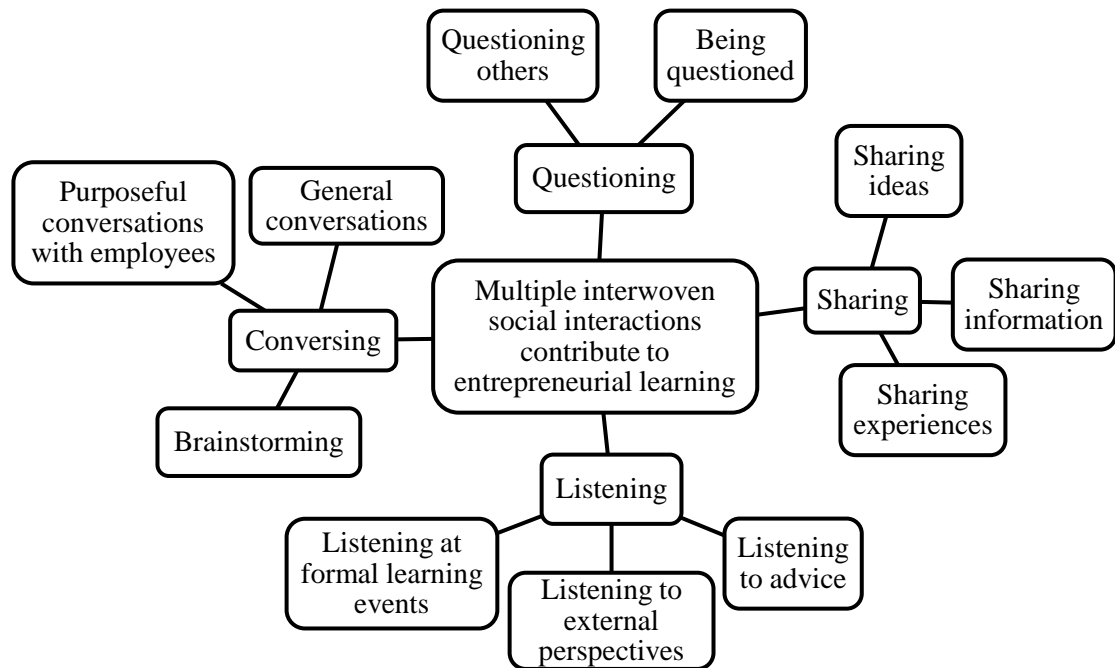
Figure 9: Thematic Network One

The first thematic network centres on the global theme: 'multiple interwoven social interactions contribute to entrepreneurial learning'. This global theme begins to illustrate the process of learning during social engagement, emphasising the role of social interactions as the core learning mechanism. The global theme is divided into four organising themes; questioning, sharing, listening and conversing. Each of these organising themes and their corresponding basic themes are explored below.

QUESTIONING

An important theme in the data is that entrepreneurs learn through questioning. The data illustrates that questioning contributes to learning in a number of ways and occurs for a variety of reasons. Questioning involves either questioning others or being questioned. There are a variety of question types identified within this data, some of which occur across both forms of questioning. These question types are outlined and defined in Table 6. This table does not demonstrate a definitive list of question types but provides an overview of those identified within this study.

	Question Type	Definition
Questioning Others	**Clarifying**	Questions used to develop clarification and understanding of actions and behaviours.
	Explanatory	Questions searching for an explanation of how other people approach specific actions/activities.
	Evaluative	Questions used to gain another person's thoughts, judgements, perceptions and insights as a way to evaluate actions/situations.
Being Questioned	**Interrogating**	Questions used to challenge assumptions, ideas, beliefs, actions and experiences. Interrogating questions do not tend to be single questions but occur successively in a relatively short period of time with a specific focus. These questions can be uncomfortable or difficult to answer.
	Probing	Questions used to explore more deeply someone's feelings, thinking and reasoning than they have already expressed.
	Clarifying	Questions used to develop clarification and understanding of actions and behaviours.
	Interview	Questions asked by the researcher in the interview as part of the research process.
	Evaluative	Questions used to gain another person's thoughts, judgements, perceptions and insights as a way to evaluate actions/situations.

Table 6: Question Types and Their Definitions

Questioning Others

As the table exemplifies, questioning others mainly involves three different types of questions within this research's data; clarifying questions, explanatory questions and evaluative questions.

Clarifying questions are used by the entrepreneurs to develop clarification and understanding of other people's actions and behaviours. For example, Stuart (Company I) can be seen to have asked clarifying questions as he spoke of asking his mentor from Business Link questions such as "why did you do it like that?" and "why have you got a mailing list to contact your clients?" These questions are a way of him gaining clarity and understanding of his mentor's actions. They also suggest he is engaging in sense making. Additionally, it appears to be a way of him asking others to share their

experiences. This could suggest that multiple interactions can combine for an entrepreneur to learn during their social engagement.

Explanatory questions are used to understand the specific ways in which people have approached certain actions or tasks. The data demonstrates that this type of question contributes to the development of entrepreneurial skills. For example, Joshua develops what he calls "learning tools" by asking other people to explain to him how they learn and how he can learn himself. This is interesting as the participant wants to learn individually rather than with the help of others but does not always know how to engage in the best form of learning. Instead of asking how to do something (and thereby learning how to do what he is struggling with), Joshua asks other people to explain how he can learn for himself. This indicates that explanatory questions enable him to develop the skills necessary for individual learning. By asking other people to explain how he can learn something he has failed to learn on his own, he gains learning skills that mean he is able to avoid further errors. This infers that there is likely a relationship between individual learning and learning during social engagement.

Rather than learning skills, Kirsty attempts to develop practical skills through this type of question. She observed that she asked explanatory questions with the intention of understanding how to do certain work with furniture. She provided an example of asking her competitor to explain how she had cut out a heart in one of her pieces of furniture, but rather than being met with a helpful answer that would help her to develop her practical skills she was met with the negative response "does Kentucky Fried Chicken tell you what they put on their chicken?". This shows that Kirsty was aiming to learn new skills for her business – things that she could have perhaps learnt individually, but she chose to attempt to learn through asking other people questions. However, learning in this way needs to be a reciprocal process. As Kirsty did not receive openness from the person she was asking, she was unable to develop practical skills during social engagement despite her intentions. This could indicate naivety in thinking competitors would be willing to share their skills with her, highlighting that it may be necessary for entrepreneurs to understand who and when to ask different types of questions in order to learn.

Evaluative questions are asked to gain another person's thoughts, judgements, perceptions and insights to evaluate actions or situations. Within the data, asking this type of question is shown to contribute to reflective processes. For example, Steve (Company C) indicated that he engages in individual, personal reflection and then asks evaluative questions to certain people external to his business to gain a second opinion and further his reflective process. He said in his interview that he asks questions such as "what do you think?" about things he has reflected on, likely asked to gain another person's opinion of his actions or thoughts for him to further evaluate and reflect. This suggests that reflection and questioning may be interconnected in learning.

Being Questioned

The data illustrates that the research participants also engaged in the social interaction of questioning by being questioned by others. Being questioned appears to involve a wider variety of questions, as the data indicates five different types of questions that contribute to entrepreneurial learning (see Table 6).

Interrogating questions are used to challenge assumptions, ideas, beliefs, actions and experiences. This type of question was spoken about in the interviews in two ways; firstly, as a way of business partners challenging each other's ideas, and secondly, as part of engagement in action learning sets. This demonstrates that interrogating questions contribute to entrepreneurial learning in both informal and formal contexts of social engagement. For the two business partners of Company D, interrogating questions are a proactive and informal part of their idea development. In their interview, they referred to this as 'being challenged', which involves being asked questions that are 'positively charged' regarding a new idea with the intention of understanding and developing it. Geoff said "If one of us has a really strong idea and you can see that they absolutely believe it, because there's a trust there, you get rid of a lot of them barriers and how do you make it work then, and the questions are around how you make it work then", illustrating the importance of trust and respect in the questioning process between the two business partners. It appears that one of the partners was more likely to come up with the ideas (Geoff) and the other was more likely to challenge them (Matt) rather than both challenging each other, but both discussed it as a way of learning together. This would suggest that the business partners have specific roles in their creation and learning processes.

This noteworthy example of being questioned is interesting as it shows the participants engage in this as proactive and deliberate social interactional learning. By refining their thinking, exploring ideas from all angles, and challenging an ideas efficacy the participants are showing that they have a deliberate strategy for idea development and learning together. Another interesting element of this is that it shows interactions are not always separate from each other; multiple interactions combine at times for learning to occur. In this example, sharing and questioning combined. For an idea to be challenged and interrogating questions asked, first an idea must be shared. Of the two interactions, the focus in the interview was on the positively charged questioning aspect rather than the sharing of ideas. This demonstrates that the sharing of the idea was a necessary precursor, while the interrogating questioning was the interaction which contributed to learning.

Interrogating questions can also be seen in the data as part of Action Learning sets, discussed in the accounts of three of the participants; Matt (Company M), Shaun (Company N) and Steve (Company C). All three of these participants talked about their engagement in Action Learning sets on the LEAD programme at Lancaster University, which shows a formal context of their learning. This illustrates a certain context and framework within which questions are asked. It also highlights that these participants have engaged in 'questioning insight' – a specific form of questioning that is central to Action Learning and can be understood as useful questions of exploration and reflection, where existing knowledge and both past and present experiences are challenged through questions so that new insight can be gained (Coghlan 2012; Revans 2011a). This suggests that the questions in this process are of an interrogating nature – with both questioning insight and interrogating questions centralising on challenging. The data illustrates that the participants who engaged in this form of questioning found the Action Learning sets to be valuable for their learning, with interrogating questioning being considered a 'powerful tool' (Matt, Company M) and 'very helpful' (Shaun, Company N) as it was based more on developing their understanding of a problem than on providing advice.

Interrogating questions within this context and framework supports the notion that sharing needs to occur for interrogating questions to be asked. In this instance, it is the sharing of problem-related experiences rather than the sharing of ideas, but the premise

is the same: sharing is shown to be a prerequisite for being asked interrogating questions. In terms of learning, interrogating questions within the context and framework of Action Learning may be considered to contribute to an entrepreneur's sense making. For example, Shaun (Company N) spoke of how questioning insight "helped people get to the root of the issue, or the nub of whatever it is, if there was an issue and I think it was good in that respect", suggesting that engaging in Action Learning sets gives the entrepreneur clarity of their problem. Similarly, Steve (Company C) commented "I think questions can be incredibly powerful because in a lot of cases the person knows the answer they just can't see it and I think the questioning can help to get clarity". This suggests the clarity that they gain can help them to make sense of the situation they are in or the problem they are facing. The use of the term 'clarity' implies that the questioning insight of Action Learning may include clarifying as well as interrogating questions. Alternatively, it demonstrates that the term interrogating questions encompasses other types of questions (such as clarifying, and potentially explanatory, evaluative and probing questions) which are asked in a particular way – multiple questions being asked to the same person within a relatively short amount of time and with a particular focus.

Another type of question that appears to contribute to entrepreneurial learning is probing questions. Probing questions are used to explore more deeply someone's feelings, thinking and reasoning than they have already expressed. Being asked probing questions is shown in the data to build on individual reflection processes. For example, Steve (Company C) mentioned that being asked questions after reflection is 'quite powerful' as the questions probe for the difference in his thinking and actions after the reflection. There is the potential that this questioning would further his reflection. It is interesting to note that this participant engages in both forms of questioning (questioning others and being questioned) after his own individual reflection and they go on to prompt further reflection. Thus, there is an indication here that there may be a complex relationship between questioning and reflection. Individual reflection potentially creates opportunities for engaging in learning through questioning (in particular, asking evaluative questions and being asked probing questions), which prompts further reflection and potential individual learning.

Being asked clarifying questions is another interaction identified in the data that contributes to learning and reflection. As previously stated, clarifying questions are questions used to develop clarification and understanding of actions and behaviours. One of the participants – Joshua (Company E) – spoke of how being asked clarifying questions is 'very very' good for his reflection as he finds it helpful to be asked to clarify why he has made the decisions or taken the actions that he has. Unlike being asked probing questions that come after reflection, being asked clarifying questions appear to lead to reflection, with learning an outcome of said reflection. This furthers the notion that there may be a complex relationship between questioning and reflection, as different types of questions combine with reflection in different ways to contribute to learning.

Interview questions show a further connection between questioning and reflection. This type of question is asked by the researcher in the interview as part of the research process. It indicates a particular context and relationship for such questions to be asked – a context and relationship that is formal, temporary and purposeful. The researcher has a specific role within this relationship. In this research, the role of the interviewer was of an active listener who directed the research conversation (Rubin and Rubin 2005). Interpretive research interviews, such as those used in this research, can have a deep outcome for participants, as the nature of the questions pushes them to reflect and perhaps think about things they would not consider without encouragement. For example, Keith (Company L) spoke of how being asked interview questions by the researcher prompted him to reflect on his business and the learning that he engages in for its creation and development. It is worth noting that this is a type of question that only certain entrepreneurs will engage with as not all entrepreneurs have the opportunity or willingness to participate in such qualitative research.

The final type of question that is evident in the data as part of the entrepreneurs being questioned is evaluative questions. Evaluative questions, as defined in Table 6, are used to gain insight into another person's thoughts, judgements and perceptions as a way to evaluate actions/situations. As with the use of evaluative questions when asking others, being asked evaluative questions also appears to be a way of reflecting. For example, Ian (Company B) spoke of a friend who had been a mentor during a previous business venture and stated that, when he was almost ready to launch the first product, his friend

and mentor asked him the question "how is this going to look to a customer?" Ian pointed to this being helpful and a prompt for him to reflect as it made him evaluate his product and gave him a new way of looking at it. He commented that it became inherent in the way he thought about both his product and his business, stating:

> "all of that thinking of ok how does something appear to the customer is played out in our website, our presentations, our exhibition material, our leaflets, erm, and you know that shaping of how a product appears or how a company looks is critical to how a business thrives or survives and thrives and so many businesses may be good underneath but they do that bit badly and that makes their lives really difficult for themselves. Learning that and applying it has been very helpful".

This example indicates some level of development of business-related skills, such as marketing skills, as the question and subsequent reflection played a role in continual decisions of how various aspects of the business are presented and perceived. In addition to this, there is some indication here that there is a relationship between this interaction and cognition as the question led to a change in the participant's thought processes and mental models (Mitchell et al. 2002).

Summary of Questioning Interaction

The data illustrates that the interaction of 'questioning' can be separated in two ways; in terms of the direction of the questioning (asking questions or being asked questions) and the type of question asked (outlined and defined in Table 6). Analysis of the data shows that entrepreneurs tend to ask other people three types of questions; clarifying, explanatory and evaluative questions. Asking clarifying questions enables an entrepreneur to gain clarity and understanding and contributed to learning by engagement in sense making. Asking explanatory questions contributed to entrepreneurial learning in the form of skill development. The skills developed were both learning skills and practical skills. This form of questioning highlighted the need for reciprocity between entrepreneur and their intended learning contributor. Finally, asking evaluative questions was a way of entrepreneurs gaining a second opinion and is a prompt for reflection.

The analysis of the interview data also reveals that entrepreneurs tend to learn when asked five types of question; interrogating, probing, clarifying, interview and evaluative

questions. Being asked interrogating questions showed how the entrepreneurs can be challenged. The data illustrated that being asked this type of question contributed to learning through idea development and sense making. It illustrated a combination of sharing (either ideas or experiences/problems) and questioning, showing that interactions combine for learning. Such questioning is proactive and purposeful, and the role of both trust and respect are highlighted. It is also the only question type that is present in the data in formal learning contexts. Both probing and clarifying questions highlight a complex relationship between interaction and reflection. While clarifying questions prompt reflection, probing questions build on reflective processes. Being asked interview questions also act as a prompt for reflection but are different to the other types of question as they are specific to the context of a research interview. Evaluative questions are the final type of question the entrepreneurs identify to being asked. This type of question also prompts reflection and can result in the development of business-related skills. The data indicates that there is likely a relationship between interaction and individual cognition.

The main assertion from this finding is that social interactions do not contribute to learning in isolation. Interactions can combine with each other or with other mechanisms of learning (reflection, cognition). This illustrates that learning during social engagement is complex rather than simplistic.

SHARING

A second organising theme of the global theme 'multiple interwoven social interactions contribute to entrepreneurial learning' is the social interaction of sharing. The data shows that entrepreneurs learn through verbal exchanges of ideas, information and experiences with their learning contributors.

Sharing Ideas

The data demonstrates that sharing ideas enables learning through the analysis of ideas. Based on their analysis, the entrepreneurs are able to decide how to move their business forward. For example, Alison (Company H) said "if you come up with an idea and you think it's going to work and the majority of people are saying no I don't like that idea or you know, you're not going to go with it". This quote illustrates that she shares her ideas to gain feedback and decide whether or not to go ahead with an idea as part of her

learning. Another example can be taken from the interview with Matt and Geoff (Company D), who talked about their employees sharing ideas with them in their staff forums. This sharing of ideas allows the business partners to assess the ideas of others and develop them. They both felt that this contributed to their learning. The difference between these two accounts is the second occurs within a formal context in the business. Staff forums are a formalised meeting setting designed for the purpose of the owner-managers hearing their employees' ideas. The similarity of these two accounts is that the interaction of sharing ideas provides a ground for analysis and contributes to decision making of how to proceed with their business. However, there is little explicit indication of how this contributed to their learning, though a relationship between the interaction and individual cognition (analysis of ideas) is suggested.

In contrast, Maggie (Company A) spoke more explicitly about learning from sharing her ideas. Maggie said in her interview:

> "You know, my husband jokes about having a little book of s**t ideas, you know, because whenever he suggests something I'm like nah. But then when I start thinking about it I work round it often to get to something that I do like so sometimes rejecting ideas leads you to a positive place because you have to analyse why you don't like that idea and by the process of you analysing why you don't like that idea you work out what you do want and you therefore turn it around somehow".

This suggests that learning occurs as a combination of interaction (others sharing ideas with her) and individual cognition (analysing and evaluating those ideas). While it seems that the learning mainly comes from this individual analysis rather than directly from the interaction, the quote illustrates the importance of sharing ideas for this learning to take place. Without hearing the ideas of others, Maggie would not engage in this analysis. This also gives an indication to Maggie's attitude. Rather than ignoring a bad idea, Maggie appears to push herself to analyse and understand why she considers that idea to be bad and explore whether there is a way of making the idea work which shows her to be open to ideas and proactive with her learning.

Sharing Information

Another form of sharing in the data is the sharing of information. This interaction appears to involve two main types of learning contributor: peers and business partners.

Though the types of learning contributor are different, the learning and information is similar in nature. The foremost type of information shared between both peers and business partners is operational information.

An example of learning from peers comes from George (Company K), who talked about how a big part of his learning is sharing information with his peers. He commented:

> "so people who have founded companies helps me a lot because we share information. So we might say you know, use this application to help manage parts of your business, or you know, try doing X Y Z to motivate your team, or try doing certain activities to get the right sort of culture within your organisation, so yeah speaking to peers who are either founders of companies or you know they might even be a founder of an institute or an organisation within a larger organisation, that helps a lot, so peer learning".

The sharing of information may be seen to provide this participant with new ideas and information that he can adopt into his own business.

Learning from sharing information with business partners is similar in nature; new information being shared between them appears to contribute to their learning and enable them to adapt their operations. This is reflected in the account of John (Company A) who said, "every day we're feeding new information to each other and new ways of doing things and we're constantly adapting the way we do things and I feel that actually we probably do this without even knowing that we're doing it". The interesting point here is that the participant observes that this as a somewhat subconscious process that the business partners engage in daily. This differs from the account given by George (Company K) above as the sharing of information between his peers appears to be more focused and purposeful, which suggests a more conscious interaction than that described by John (Company A).

Sharing Experiences

Sharing experiences as an interaction that contributes to learning was spoken about in the data in three primary ways; comparing experiences, using other's experiences and sharing problems. Comparing experiences is an interaction that, within the data, occurs between an entrepreneur and their peers. The same learning contributor is present when sharing experiences involves using other's experiences, though this can also occur

between business partners. Sharing problems does not appear to involve a specific form of learning contributor, though it is explicitly stated they should be external rather than internal to the business.

The first form of sharing experience is comparing experiences. In the interviews, some of the participants spoke of how they compared their own situation and experiences to the experiences their peers shared with them. For example, Thomas (Company G) spoke of sharing experiences with his suppliers (who are also business owners and therefore peers) about employees at a time where he was having difficulties with one of his. He expressed that hearing the experiences of others and comparing them to his own situation enabled him to see that other business owners had gone through similar situations themselves and showed him possible ways to overcome the problem he was facing. Another example that illustrates sharing experiences as a way of making a comparison to other businesses is from Keith (Company L). For Keith, comparing experiences was helpful to him when he reached a point in his business where he felt he had achieved the maximum of his own ability. Sharing experiences with others enabled him to overcome his personal limitations by learning what other similar companies are doing and comparing them to his situation. A third example of sharing experiences as comparisons can be seen in the interview with Stuart (Company I). Stuart stated

> "They might not be exactly aligned with us, they're not necessarily working on the same type of projects as us, but it's definitely kind of useful to have that peer network I suppose where we can share experiences and someone to just kind of normalise the stuff that goes on and the kind of erm, the kind of stresses, and the kind of heavy workload at times and you know, just normalise that and knowing other people are in the same circumstances I think".

This illustrates that sharing experiences allows him to compare his own business with the experiences of other business owner managers, and by knowing that there is alignment in their experiences normalises what is happening within Stuart's own business for him. Though this does not explicitly demonstrate learning, the participant felt as though the sharing of experiences was an interaction which contributed to his learning.

The second form of sharing experiences involves utilising someone else's experiences. Using someone else's experiences is illustrated in the data with two learning contributors – either peers or business partners. Ivy (Company M), utilised the experiences of her peers to identify potential issues before they occurred for her. She said, "you find someone who has gone through that process because they've been through all the teething issues and problems and stuff like that and it's good to talk to somebody who has experienced that and you want to try and avoid the same issues". This indicates that she is able to use the experiences other people have shared with her to her advantage by learning of potential issues in the hope she can avoid them. Joshua (Company E), on the other hand, spoke of sharing experiences with his business partner. He commented how he and his business partner can learn "twice as fast" by sharing their experiences with each other. They are able to 'take from' each other's experiences, demonstrating that they are able to use each other's experiences when shared in order to learn. Joshua felt this was advantageous as the business partners do not need to each individually experience everything.

The final form of sharing experiences is sharing problems. This was explicitly discussed by George (Company K), who feels that sharing his problems helps him to understand his next course of action. He said:

> "yeah it's through conversation. I guess you, what's the word, offload. So you've got this challenge or you're frustrated about this and I don't know what to do about that and then you know people, when you've got a friend who aren't right in the middle of it they can often see with more clarity of where you've got to get to. You definitely do need, well for me, I would struggle if I didn't have people to speak to".

This quote indicates that sharing problems can be a release of stress, and by sharing the problem with someone external he is able to see the problem from another perspective. As well as the example provided by George, sharing experiences in the form of problems can also occur as part of formal engagement in action learning as an important first step before questioning can begin. This illustrates that sharing problems can be both a formal and an informal social interaction when contributing to entrepreneurial learning.

<u>Summary of Sharing Interaction</u>

The social interaction of sharing can be divided into three; sharing ideas, sharing information and sharing experiences. The sharing of ideas, whether that involves sharing own ideas or hearing the ideas of others, facilitates entrepreneurs in analysing and evaluating ideas in order to decide how to move their business forward. This interaction can occur either formally (such as in formalised settings with employees) or informally. The analysis and evaluation of ideas highlights a relationship between social interactions and individual cognition in entrepreneurial learning. In terms of sharing information, the data shows that operational information can be shared between peers or between business owners as a way of learning. This interaction is presented as sometimes occurring consciously and other times occurring naturally and subconsciously when working together. The final form of sharing is sharing experiences. In the data, sharing experiences was discussed in three ways. Firstly, as a means of comparison between peers; secondly, as a way to utilise the experiences of peers or business partners; finally, as a way to share problems. Sharing problems can either be a way to 'offload', which is likely to enable the entrepreneur to view the problem from a fresh perspective, or as an integral part of action learning sets.

The findings regarding sharing support the main assertion put forward based upon the interaction of questioning; that learning during social engagement is complex. As illustrated with the previous social interaction, interactions combine with other mechanisms of learning (namely individual cognition) and other interactions (principally questioning) for entrepreneurial learning.

<u>LISTENING</u>

Another important theme in the data is that entrepreneurs learn from the social interaction of listening, which represents the third organising theme of thematic network one. The participants revealed three ways in which listening can contribute to their learning; listening to the advice of others, listening to external perspectives and listening at formal learning events.

<u>Listening to Advice</u>

Listening to the advice of others is a prominent theme within the research data. The advice discussed occurs both formally and informally, and fits broadly into three categories; strategic, operational and managerial.

Strategic advice relates to the 'strategic' plan and goal of the business. Some of the participants spoke of informal strategic advice they received. For example, Ian (Company B) spoke in his interview about an informal dinner with friends and acquaintances where the conversation turned to business. During that conversation, one of the acquaintances – who may also be considered a peer – provided him with strategic advice about how his business needs to be positioned. He stated, "he said what you've got to make sure you do is that you're either number 1 or 2 in your market because otherwise people won't find you and they won't rate you. And sure enough [our software] became the number 1 product for start-up simulation in the world. And that is, that has been critical". In contrast, Keith (Company L) spoke of more formalised strategic advice he had learned from. He mentioned listening to the advice of his non-executive director (NED). This suggests formal advice as one role of an NED is to provide both advice and counsel to the entrepreneur (Deakins et al. 2000), thereby formalising both the relationship and the interaction between the two. Keith commented: "I suppose if I think back to the NED bit we were talking about a minute ago, I think going back to the sounding board piece, it's useful to talk through where your vision of where your business is going and to get kind of advice on that and sense-check it whether it's the right thing to do or not, so maybe that is preventing a future issue". This quote illustrates that Keith actively seeks counsel and advice when considering strategic aspects of the business – namely, the vision of moving the business forward. In addition to this example, Ivy (Company M) also talked about how she learns from listening to the expertise of her accountants. She reflected on how they had helped her to understand certain elements of growing the business and maintaining control of the finances. This demonstrates listening to formal strategic advice as her accountants are contracted to provide advice.

The second type of advice identified is operational advice. Operational advice is advice for the day-to-day 'operational' aspects of the business. Within the data, operational advice appears to be given in mainly formal contexts. For example, Ian (Company B)

spoke directly about conversations with his advisor to find solutions to international issues he faces. Additionally, he said "what I need his help for most is when I say I'm going to so and so for the first time, any advice, any thoughts, are there any grants available? And he's been brilliant at finding things out and working out where there may be money and then saying right look we can do this this this and this". Rather than engaging in individual research to learn such things, he instead engages with his advisor to utilise and learn from their expertise. Another example of listening to formal operational advice is given by Maggie (Company A). Maggie said, "I think we're both very willing to say, somebody, if somebody has an area of expertise, you know whether it's listening to our accountant or listening to our printer, we will take on board their advice". This implies a high level of formality as the contributors she mentions are contracted to provide her advice. It also demonstrates the importance to the participants of accessing the people with the appropriate expertise. This is also illustrated by Joshua (Company E), who pointed out that he will turn to different people for different areas of advice. He commented, "I think I've definitely built up if I need financial advice I'm going to talk to you, if there's marketing advice I know the first person I'll talk to".

One example of informal operational advice is from the interview with Kirsty (Company F) who mentioned advice she had been given by one of her suppliers. She said:

> "nothing major, but just kind of little things like she guided me on delivery prices you know. Because I wasn't charging enough for delivery because I always thought that was money for nothing, and that sounds really crazy and Matt would kill me for saying that, but I just felt like charging £40 to deliver a piece of furniture was too much, so we were charging like £20 and it was barely covering the fuel so she kind of guided me on that. She delivers all over the UK and once I saw what she was kind of charging, I thought crikey I'm really undercutting you. And little things like the card machines. You know she's been using one particular one in there for years, and she recommended the rep to us. Business insurance as well, she was really helpful and pointed me in the right direction for business insurance".

These are all areas which were new to her as a first-time business owner. Kirsty also spoke of advice gained from a family friend who acted informally as a mentor to her. This friend had previously worked for Business Link and had in the past provided

formal advice to small business owner-managers. For Kirsty, the friend helped her to understand the problem with how she was running her business and gave her operational advice to change the business model.

The final type of advice, labelled managerial, refers to the entrepreneur's responsibility of managing their employees. This type of advice was primarily discussed by one participant, Thomas (Company G). Thomas spoke of learning from taking the advice of his wife and the HR department of the company she worked as a manager. This indicates a tension in the level of formality of the advice; taking advice from his wife is informal, however her gaining that advice from her work place indicates a higher level of formality. The account provided by Thomas illustrates a temporal element in learning from listening to the advice of others. The example he gave centred on a specific situation where one of his employees was absent from work without a sick note and he was unsure of how to handle the situation. He sought advice in order to learn how to overcome the issue he was facing at that time.

Most of the examples above demonstrate a proactivity in receiving advice, with the entrepreneurs actively seeking advice from experts. This is also the case for some of the entrepreneurs who spoke implicitly about listening to the advice of others. Though some of the participants did not use the term 'advice', they spoke of purposeful conversations to gain the help of other people. A key example of this can be taken from Kirsty's (Company F) interview, as she said "I can ring her up and say I'm having a nightmare, this has happened and that's happening and she'll say ok and she'll take me right back down to the roots and build it up from there and by the time I've finished talking to her I know what I need to do". Similarly, George (Company K) said "I always call them. So, if I'm having a battle I'll just call one of them and say what do I do here or help me with this".

In contrast, the data also reveals that advice can be taken on subconsciously and continually rather than proactively and temporally. For example, John (Company A) commented, "I think we're always taking on board advice, even if I feel we don't even know we're taking on that advice at the time, but when it comes to something and we've got a problem oh do you remember what was [Harry] saying about how we should do it, that's what we need to be doing". This illustrates that there is not always a temporal

element to listening to advice but there is for the relevance and application of said advice. This contrasts with the account provided by Thomas (Company G). The quote from John also points to the two business partners having a further interaction with each other based on the advice they have listened to previously. They have a purposeful conversation with each other when they are facing a problem, and part of solving or overcoming the problem is remembering and taking the advice they have been given in the past. Both business partners considered this to be a way of learning with and from each other. The phrasing they used suggests that, to them, the advice is the most important interaction in this learning.

Building on this notion that the interaction of listening to advice may not occur in isolation, Joshua (Company E) gave strong opinions regarding advice and stressed the role of cognition in learning this way. He reflected, "that's a mistake I think some younger business owners, or fresh business owners I should say, do is they just take advice and go right we're doing that without actually thinking it through and realising that advice is advice and not instructions". By stating "without actually thinking it through", there is a strong assertion of cognition being important for business owners alongside listening to advice – something which was not noted by the other participants.

<u>Listening to External Perspectives</u>
Another theme within the data is the interaction of listening to external perspectives. Listening to external perspectives, which involves listening to the views of people who are outside the day to day working of the business, pushes the entrepreneurs to look at their business from a different perspective. This differs from listening to advice as the focus is not on someone giving them suggestions or solutions but is on the entrepreneur stepping back and looking inward on their business based upon the interaction.

The research data suggests that listening to a different perspective is important. It is shown to allow entrepreneurs to learn about the strengths and weaknesses of themselves and their businesses. This can be evidenced by Christopher (Company J), who said "It's very important to get an outside perspective and it makes you realise where your kind of failures I suppose reside. Or the performance of the business could be a lot better. It also highlights your strengths as well, so it's a bit of both". David (Company O) also spoke of the importance of listening to external perspectives. He said "yeah I think that

a sort of external insight into some stuff, you know. I tend to see it from the point of view of what our customers do for us because they pay the bills basically you know. And she's always happy to provide a counter point of what we do for them, you know".

Both examples illustrate that listening to external perspectives prompts reflection. It appears as though it is the reflection that directly contributes to learning rather than the interaction. However, the importance of the role of the interaction should not be ignored. Without the interaction as a prompt, the entrepreneurs would not reflect – or at least not in the same way. This shows that there is an interconnected process of learning involving both social interactions and reflection and means that the role of neither social interactions nor reflection in learning can be considered in isolation of each other.

Listening at Formal Learning Events

A number of the entrepreneurs spoke of their learning from listening at formal learning events. This was largely related to listening at the masterclasses given as part of the LEAD programme at Lancaster University. Steve (Company C) illustrated the value of the masterclasses by saying "So if you take the Masterclasses for example, they work on two levels. The things you will take away immediately, and use immediately or in the near future, and then other things that you think that doesn't work for me, or that doesn't work for me now, and then maybe 6 months further down the line or whatever and you think that's really useful now". This demonstrates that some learning from listening at formal learning events occurs imminently, while others are delayed until the entrepreneur sees their relevance.

Matt (Company M) said "we have got a lot out of the masterclasses up here, a huge amount", and gave a detailed example of learning he had gained from this interaction. He stated:

> "With the masterclass, Michelle Mone. My wife and I had come up to the masterclass, my wife was going to join me in the business, at that particular moment she was going to join us in the business so we'd come up to the masterclass. Michelle Mone was standing on the stage and she said "and then I invited my husband to come and work with me in the business" so of course, Jenny and I's ears prick up, and think, wow. So Michelle Mone goes on to say that within 3 months they were having stand up rows in the office,

but because they've got lots of money they can bring the life coach in and what's the first question a life coach asks? What's your areas of responsibility? Well we haven't got any. That's your problem. So as Jenny and I drove back down the motorway, we were discussing what our areas of responsibility would be. So we agreed Jenny's would be accounts and HR, and mine would be Sales and Marketing. And so from that interaction with Michelle Mone, completely changed what we were going to do".

This example demonstrates how Matt and his wife were able to learn immediately from their social engagement in the masterclass and had purposeful conversations with each other in order to avoid facing the same problems as the speaker.

The value of the formal interactions at masterclasses was also indicated by Keith (Company L). Though he did not provide any specific examples of his learning, he commented "I come along to the masterclasses and I get involved in those. I also bring my team into the masterclasses with us, and my kind of top team within my own business have started to get more involved with the university. I think the university has been great with that". Taking his employees to the masterclasses alludes to the usefulness Keith perceives the learning events to have.

One of the participants, Ivy (Company M), had attended masterclasses outside the LEAD programme. She said:

"I go to quite a few workshops and things like that that are organised through various organisations. Erm, and you learn so much from them as well. You know, Dell, Carnegie, NatWest, I go to their masterclasses, Downtown in Business. Various organisations that you meet up with similar people that have similar or are in a similar situation and you pick up and really tid-bits of useful information and you think yeah, I could use that. So, as I say, you're learning all the time".

From attending such learning events, and listening to the guest speakers, Ivy learns by taking on board relevant information.

Summary of Listening Interaction

Three different forms of advice were identified within the research data; strategic, operational and managerial. Advice is given both formally and informally, with most of

the advice sought by the entrepreneurs. This shows learning by listening to the advice of others to be largely proactive and intentional with a temporal element. However, some advice is taken on board subconsciously and applied when relevant, demonstrating that listening to advice can also be continual with learning occurring when relevance is established by the entrepreneur. Listening to advice is also supported by additional interactions, namely purposeful conversations with business partners.

Listening to external perspectives differs from listening to advice as the emphasis is not on suggestions or a solution being provided by someone with a higher level of expertise. Instead, the interaction is about encouraging an entrepreneur to look at things differently. This prompts the entrepreneur to reflect and illustrates a connection between social interactions and reflection in learning that means the two should not be considered distinct from each other but together.

The entrepreneurs in this research also listened at formal learning events, referred to by the participants as masterclasses. Most of the masterclasses discussed were part of a specific learning programme at Lancaster University, though others were also mentioned. Listening at masterclasses provided both immediate and delayed learning for the participants who attended, depending upon whether they considered the information they listened to as relevant at the time.

CONVERSING

The fourth organising theme of the first thematic network is the social interaction of conversing. Although all social interactions involve some form of conversation, there are particular conversations which were discussed by the participants as contributing to their learning and have been identified as themes within the data. Thus, conversing can be split into three types; general conversations, purposeful conversations with employees and brainstorming.

General Conversations

General conversations are informal conversations without a specific purpose. As there is no purpose, the learning that comes from these conversations is unintentional and incidental. Across the accounts of Steve (Company C) and Shaun (Company N), there is evidence they 'pick things up' and learn from general conversations. This is

illustrated in the following quotes: "it might just be a conversation you're having where something crops up in that conversation and you think oh that's interesting" (Steve); "I think you just sometimes pick up little bits here and there, and you end up hearing things that have not been specifically told to you for the reason for you to take on board, it's just something you've heard" (Shaun).

It is likely that this type of conversation also has a connection to cognition, though this is not expressed explicitly by the participants. The connection to cognition is implied as the entrepreneurs seem to make relevant to their own situation or business that which was not told within that context or for that purpose. Thereby, the interaction influences the thought processes of the entrepreneur. Though the participants see general conversations as a way of them learning with or from others, it also involves some level of individual cognition and is likely to be more complex than the participants have portrayed.

Purposeful Conversations with Employees

Unlike general conversations, purposeful conversations with employees are intentional and have a specific purpose such as review meetings. The learning in such conversations appears to be intentional. Additionally, the conversations are somewhat formal as they occur in formalised contexts within the workplace – primarily, in meetings.

One example of learning from purposeful conversations with employees is from Joshua (Company E), who spoke about conversations to adapt his management style. He stated, "I suppose it required me to sit down because I'm a big believer in one to ones and talking to people, so it took me a while to interact with them and realise actually what their needs are rather than me just imposing my management style on them". This example shows a combination of learning during social engagement with employees and from experiential learning. Through experience, Joshua realised that his management style was not working and that he needed to sit and talk to his employees in order to understand what would work best. Thus, he had purposeful conversations with his employees to learn how he could manage them better, which demonstrates reflexivity.

Another example can be taken from Matt and Geoff (Company D), who use meetings with their employees as a feedback mechanism. It was said in the interview "We also have company update meetings where people can have the opportunity to ask questions etc. it's a case of how you get that feedback because that's how you improve, by getting that feedback from the staff". Though this does not explicitly link to the entrepreneur's learning it is implied as learning is needed in order for improvement to occur. Conversing with employees in meetings was also discussed as a way of learning by Stuart (Company I), Christopher (Company J) and Keith (Company L). Rather than talking about these conversations as a feedback mechanism, these participants spoke of them as a form of mutual reflection. For example, Stuart said:

> "every day we have a stand-up meeting in the studio. It's kind of our agile scrum meeting where we all get up every day and we all speak about what we did the previous day, how that went, what we plan to do today, are there any kind of problems and we do end up, it's probably not as concise as an official agile scrum meeting should be because we do go off on some tangents and kind of reflect on stuff that has happened or is happening and as directors we often break off, frequently break off, lots of times it's to talk about particular projects, but we often do kind of reflect on what we do".

This demonstrates that the entrepreneur purposefully interacts with his employees to engage in reflection as an intentional form of learning. This adds to the argument developed within these findings that there is a relationship between social interactions and reflection in terms of learning as the two learning mechanisms interplay and need to be considered together rather than in isolation from each other.

Another example of learning from conversations with employees can be taken from the interview with David (Company O). David spoke about learning how to manage an employee with autism. When asked how he learned this, he responded "by experience. Erm, I mean, obviously there are some stereotypes about autism. Some of those are useful at least, other aspects of it are just sitting down with him and asking him to do things and gauging his reaction and working out what I needed to do to get things done really". This reveals that a combination of direct experience and purposeful conversations with employees can contribute to an entrepreneur's learning. It suggests that the conversations are part of the learning from experience, making the two interconnected in learning.

<u>Brainstorming</u>

The final type of conversation that presents as a theme in the data is brainstorming. Brainstorming is an informal but purposeful conversation initiated by the entrepreneurs where ideas are exchanged back and forth. It is portrayed by the participants as an intentional interaction to develop ideas and overcome problems.

Some of the accounts that talk about brainstorming provide little detail, such as Joshua (Company E) who simply stated, "I've just kind of with my business partner bounced back and forth and tried to work out as we go". Alison (Company H) also comments that she brainstorms regularly with her auntie, an employee of the business. Steve (Company C) too provided little detail but did express the value of brainstorming with other people. He said "brainstorming sessions can be really beneficial, other people's suggestions. You know, what about this?".

Other accounts provided more detail. Maggie and John (Company A) illustrated that for them, brainstorming is a continual interaction. John said, "we learn off each other because we're brainstorming all the time", which means that it is not an interaction that only occurs or contributes to learning at a particular phase in the business. These participants also spoke of multiple interactions combining for them to learn in this way, stating "We're always taking on board information and advice from people. And, you know, we brainstorm and say will that benefit us or not?". The brainstorming mentioned here stems from the information and advice taken on board from previous interactions with others and suggests that brainstorming is a mutual cognitive interaction where the participants co-create knowledge. Brainstorming can be seen to involve shared cognition (Cannon-Bowers and Salas 2001) to gain the most value from the information, ideas and advice of others.

<u>Summary of Conversing Interaction</u>

The data poses three forms of conversation which contribute to entrepreneurial learning. The first type of conversation is general conversations. Learning from general conversations is unintentional and incidental, though it involves some level of individual cognition to make relevant the conversations to the entrepreneur's own situation. The second type is purposeful conversations with employees. In the data, this

type of conversation is formalised, structured and intentional, occurring in meetings. Purposeful conversations are used to gain feedback or engage in mutual reflection. This furthers that social interactions and reflection have an interconnected relationship and should not be considered separately. There is also an indication that experience and social engagement can combine for learning to occur. The third and final type of conversation is brainstorming. Brainstorming is informal but is an intentional and purposeful way of generating and developing ideas. The research data shows that it combines with cognition for learning.

Thematic Network Two: Learning outcomes of social engagement
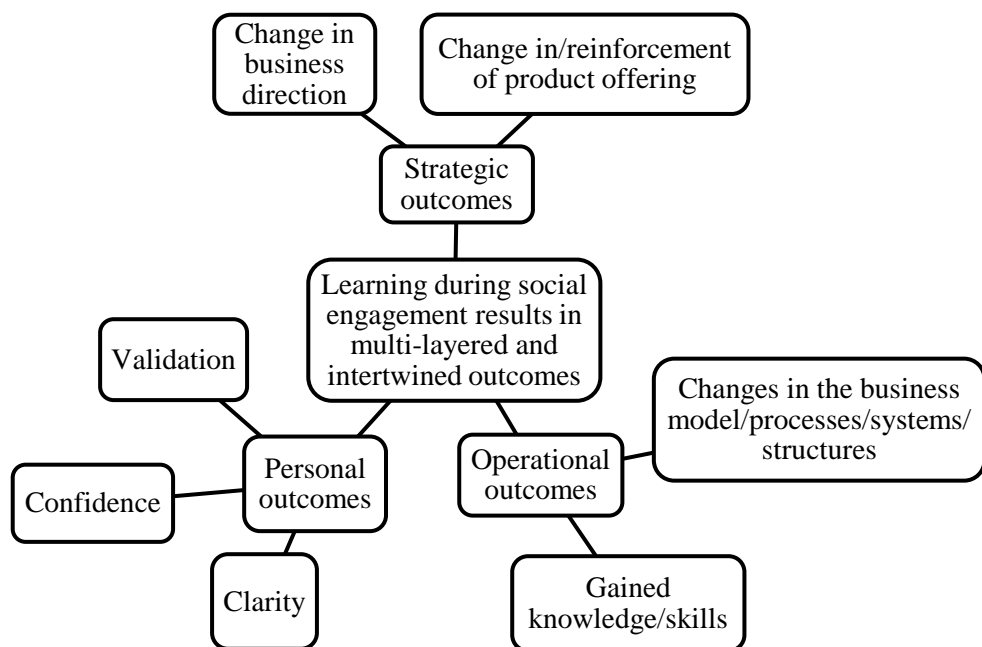
Figure 10: Thematic Network Two

The second thematic network centralises on the global theme 'learning during social engagement results in multi-layered and intertwined outcomes'. This network comprises three organising themes; strategic outcomes, operational outcomes and personal outcomes. Each of the organising themes shows how entrepreneurial learning during social engagement impacts on a different level. The main tenet of this network is that the analysis shows the learning outcomes are intertwined as they can impact on more than one level.

An important theme in the data is that social engagement can have strategic learning outcomes. Strategic outcomes are the learning outcomes that directly impact on business strategy and within this research, two strategic outcomes were identified. Firstly, a change in business direction and secondly, a change in or reinforcement of the product offering.

Change in Business Direction

One of the strategic outcomes of learning during social engagement identified in the data is a change in business direction. This is an important and significant outcome of learning as the business direction is fundamental to the creation and development of a business. However, it was only present in a small number of cases.

One example of social engagement resulting in a change in business direction can be taken from Matt (Company M) who took part in action learning sets during his engagement in the LEAD programme at Lancaster University. As previously mentioned, action learning sets involve being questioned by others and are a highly interactive form of learning. Matt commented that "I said earlier on it was LEAD that led us into manufacturing, but actually it was more specific was the action learning sets. You go through this puzzle that you're losing business because people competing with you, once the action learning set guys start asking questions you come to the conclusion that we need to do something that is different to what other people are doing". This demonstrates that his social engagement in action learning sets contributed to his learning by helping him to understand where his business was struggling and what options he had to overcome this. The outcome of this learning was to change the business direction so that they manufactured their own cups rather than importing them from China. An important note for this example is the context in which the learning took place. The LEAD programme is a formalised learning programme, illustrating that this social engagement took place in a formalised, purposeful and specific context designed for learning and developing businesses.

Another example of this learning outcome comes from George (Company K). The interaction discussed by George which resulted in a change in business direction can also be seen as formal, though it did not occur as part of engagement in a formal

programme. George held away days with the purpose of understanding the values, aims and aspirations of his employees with the intention of aligning these with the business direction. The away days are formal as they are official and organised company events. George said:

> "there's lots of examples of how the business has been steered the way it is because of our employees and around sort of two years ago, maybe two and a half years ago, we spent quite a lot of time, so we had four away days in the space of around two months, with lots of exercises so we understand what the values and the aims and aspirations of each employee was and took that data and took those aspirations and needs and wants and values and tried to align each person's ambitions and the like with the direction of the company to try and tease out where we were going to go for the next year".

The main similarity between these two examples is that the interactions engaged in by the entrepreneurs seem to be intentional and have the purpose of developing the business. Therefore, the result of learning as a change in business direction is expected. This outcome was not present in the data from social engagement in informal contexts or when the learning was unintentional.

Change in or Reinforcement of Product Offering

The product offering is a strategic aspect of the business, and the data suggests that social interactions can contribute to learning which results in the product offering being reinforced or changed. This outcome can be seen in the data in two ways; firstly, where the wants and needs of customers are learned so that the product offering can be suitably aligned, and secondly where the interaction is combined with reflection to evaluate the current product offering.

This strategic outcome is, at times, a result of learning about the wants and needs of customers. Understanding the wants and needs of customers is imperative to the success of a business and has a direct impact on the products a business offers. Geoff (Company D) spoke of how conversations with his customers "started to shape the business", and it could be interpreted that the subject of his learning in this instance was the wants and needs of the customers. Joshua (Company E) also talked about understanding his customers' wants and how, by working with them on the projects, he was able to change

his product offering. A further example of this can be taken from Maggie and John (Company A). They spoke of taking advice from their customers/clients as a way of learning more about their needs and this led them to not only offering a CD of materials but also offering a printed version. They had not originally offered the printed version in order to save on costs, but they learned from their customer that it was more efficient for them as a teacher to have a printed version they could photocopy, rather than having to log on to a computer and print the materials.

As illustrated in the exploration of Thematic Network One, interaction and reflection have a complex relationship. Specifically, interaction can be seen to be a prompt for reflection to occur. The combination of interaction and reflection results in entrepreneurial learning, and for some participants has the strategic outcome of a change in or reinforcement of the product offering. For example, Ian (Company B) was pushed to think of his product offering through the eyes of his customers by a friend and mentor who questioned him. This influenced the way his product has been presented since and he believes this has been a core element of his learning. For David (Company O), this strategic outcome was the result of learning by listening to the advice of a friend and then reflecting upon it. He said "he's said well you know, you need to stick to what you're good at, be honest about what it is that you do and don't do, and erm, and you know, stick to the, and you know he's right really you can't pretend to be something that you're not". This demonstrates that the interaction with his friend prompted his reflection; combined, these two mechanisms contributed to his learning and reinforced the product offering he provides to his customers.

Summary of Strategic Outcomes

Two strategic outcomes of learning during social engagement were identified within the data set. The first of these, a change in business direction, is presented in the data as a result of formal and purposeful learning where the entrepreneur was actively learning to move the business forward. The second strategic outcome is a change in, or reinforcement of, product offering. This strategic outcome can come from direct social interactions with customers, where their wants and needs are gained from the interaction and used to either change or reinforce the existing product offering. This outcome can also be a result of reflection which is prompted by the interaction of listening to advice.

Another important theme in the data related to the second global theme is that social engagement can have operational learning outcomes. Operational outcomes are those that impact on the day-to-day running of the business. Such outcomes include changes in the business models, processes, systems and/or structures, and gained knowledge/skills.

Changes in Business Models/Processes/Systems/Structures

An operational outcome identified within the research data was a change in the business models, processes, systems and/or structures that make up the operational running of the business. Two particular types of learning contributor – employees and advisors – are shown in the data to contribute to learning that results in this operational outcome.

New employees bring with them models, processes, systems and structures from previous companies. The data shows that by interacting with new employees, the entrepreneur's eyes are opened to what others are doing and potentially what they could be doing within their business themselves. This indicates learning during social engagement with employees. For example, Steve (Company C) said "I think new people coming to the business is interesting because they will bring new systems in with them, or new ways of doing things and you can pick elements out, there that's a really good way of doing things". In the same vein, Stuart (Company I) provided an example of a new production manager being introduced into the company who "put formal structures and processes in place" and commented that he "learnt bits of that". This demonstrates that he learned from the interactions he had whilst working with her as a new employee. Further to this, Keith (Company L) spoke of millennial employees and how interacting with them, and the experience of working with them, has allowed him to learn about how to work with and manage his employees and he has since changed his processes in order to get the most out of what he considers to be a new type of employee.

Changes in models, processes, systems and structures can also be seen in the data as an outcome of interacting with advisors. Some of the entrepreneurs have an informal relationship with their advisors. For example, Kirsty (Company F) spoke of her interactions with her friend and advisor who had previously worked for Business Link. Kirsty became aware that her current business model was not working but did not know

what changes needed to be made or how to make them, so she turned to her advisor and listened to advice that enabled her to learn and make the necessary changes to her business model so that her business could grow. In contrast, other entrepreneurs spoke of formal advisory relationships. Thomas (Company G), for instance, also spoke of operational advice resulting in this learning outcome. He provided a lengthy example of how he listened to advice from a tax official when his accountant hadn't followed due process. From this advice, Thomas learned the correct processes he should be following and he made changes accordingly.

Gained Knowledge and Skills

A second operational learning outcome identified within the interviews is gained knowledge and skills. This is considered an operational learning outcome because the knowledge and skills gained relate directly and specifically to the operational aspects of owning and managing their business. However, it is worth highlighting that gained knowledge and skills are also likely to have an impact on the personal level. This demonstrates one way in which the learning outcomes are multi-layered and intertwined; the outcomes can have multiple levels of impact.

It is surprising that not all participants spoke of gained knowledge or skills from their learning during social engagement as it is a key indicator that learning has occurred. One potential explanation for this could be that not all participants were able to pinpoint the exact knowledge they had gained during their social engagement, especially considering the way social interactions can combine with other mechanisms of learning (such as individual cognition and reflection). This may mean it is difficult to identify the source of learning and the role of social interactions and engagement.

Some participants did, however, show that their learning during social engagement resulted in gained knowledge. The data demonstrates that knowledge was gained by the participants to fill the gaps in their existing knowledge. This indicates that the learning was intentional, with the participants engaging in social interactions with others for the specific purpose of drawing on someone else's experience and expertise to fill the gaps in their own knowledge. For example, Steve (Company C) said "I think the sort of informal learning is then the conversations you're having with people – sometimes, of which are quite specific. So, we're talking about this particular thing, you know, I don't

have a particular knowledge area on this can you help me". Another example can be seen in the interview with Thomas (Company G), who mentioned "my wife learnt me how to look more into employment law, which I did, I delved into it". This gave him the knowledge and skills to be able to research employment law and expand his knowledge further. Similarly, George (Company K) said:

> "we've worked a lot with Liverpool University, so they have an institute called the Hesletine Institute which is all about public policy and working in cities which is what we're interested in, so they understand a lot more about how government works and how policy works which we don't know anything about. We just understand how to make new technology to solve people's problems, so being able to ask people like that questions of you know what's the process, how do we make this happen?".

The difference with this third example is the level of formality. As the participant is talking about working with the institute, there is likely a higher level of formality than with the previous two examples which both occur informally. This shows that both formal and informal types of social engagement can result in gained knowledge.

Gained skills was also discussed as an outcome of social engagement, though this outcome was not always achieved. As evidenced within Thematic Network One, Kirsty (Company F) attempted to gain practical skills by questioning others but failed due to her competitors not being willing to share their expertise. While this failed, Kirsty was able to gain practical skills through virtual interactions on a forum. She said "The other day, baby wipes would you believe. Somebody was distressing furniture with baby wipes and did a really good job and I thought right ok, I didn't know that, I'll give that a go. So yeah, it has been quite a good place to go". Though there was no indication of direct social interactions, there is clear evidence of social engagement in the forum. Nonetheless, it is important to highlight that this engagement was virtual and is therefore different to the other social engagement discussed by the participants.

Not all participants failed to gain skills. The data shows examples of the entrepreneurs developing their marketing skills (Ian, Company B) as well as their learning skills (Joshua, Company E), as evidenced in the discussion of Thematic Network One. In addition, Steve (Company C) expressed that his engagement on the LEAD programme and interactions with the university gave him the skills required to relocate. He also

spoke about how his interactions with other people "helps you in terms of ability to manage, grow and develop people", which suggests the development of skills in these areas.

An unsurprising but important factor in achieving this learning outcome of gained knowledge and skills is the level of expertise and experience of the learning contributor. In order to fill the gaps in their knowledge and skillsets, the participants needed to engage in learning with someone who had a higher level of expertise or more experience in the area that the entrepreneur was lacking themselves. Another important factor is the willingness of a potential learning contributor. If they are not willing to provide the answers, then the entrepreneur will be unable to learn and develop their knowledge and skills.

Summary of Operational Outcomes

From the research data, two operational outcomes of learning were identified that were the result of social engagement. The first of these - a change in the business models, processes, systems and/or structures – illustrates the role of new employees in an entrepreneur's learning. These new employees bringing in their experience from other companies provides an interesting juxtaposition of being internal and external to the entrepreneur's business. This helps the entrepreneur learn different ways of doing things. Advisors also play a role in the participants achieving this operational outcome in both formal and informal advisory relationships.

The second operational outcome – gained knowledge or skills – is suggested to be an intentional and purposeful outcome of engaging with other people. The entrepreneurs actively engage in social interactions to fill gaps in their knowledge. This requires them to interact with people who have the correct level of knowledge, expertise and experience. Additionally, a variety of skills are gained during social interactions. For skills to be gained successfully, there needs to be an openness from the other person to share. If the entrepreneur is not met with such willingness, they will need to find another avenue to gain these skills. This outcome, while having a direct impact on the operational level of the business, also has a personal impact on the entrepreneur. This therefore goes some way in demonstrating how the learning outcomes are multi-layered and intertwined.

A third organising theme which is part of the global theme 'learning during social engagement results in multi-layered and intertwined outcomes' is personal outcomes. Personal outcomes of learning during social engagement are the learning outcomes that directly impact on the entrepreneur as an individual. While their main impact is personal rather than business related, they may go on to also impact the business on either an operational or strategic level. This further demonstrates ways in which the learning outcomes of learning during social engagement are multi-layered and intertwined. The personal outcomes identified within this research analysis include validation, confidence and clarity.

Validation

The personal outcome of validation was identified in the research data. Validation was only explicitly discussed by one participant – Geoff (Company D). Geoff spoke of validation as the outcome of engaging with his peers, particularly as part of a formalised learning programme, though no specific social interactions appear to result in this outcome. He said: "This is the first time we've stepped out of the business … and what I've found with this is that not only is it giving new ideas, but it also validates what we're doing". He then made it clear that he considers validation to be learning and explicitly stated "but it's them validation points that are quite key learnings for me". For this participant, validation is not only an outcome of learning as he also appears to gain validation in other ways such as receiving awards. Nonetheless, in terms of learning, social interactions appear to be the only learning mechanism that results in this personal outcome.

The outcome of validation was implied by Steve (Company C). When talking about the introduction of new employees and how they can bring with them new systems and processes, he stated "And that works in reverse, where, actually, your business does this much better than the old business". This implies that learning what other businesses are doing can validate the way he does things in his own business. Consequently, this may also have an impact on the operational level by reinforcing the current business models, processes, systems and structures; thereby demonstrating how the different levels of outcomes can be intertwined.

Gained Confidence

A second personal outcome of social engagement for the participants in this study is gained confidence. Two of the participants gave examples of how they felt their engagement and interactions with other people had given them confidence. Firstly, Steve (Company C) commented that his engagement in a formal learning programme and specifically his involvement in Action Learning sets (which is based on the interaction of being questioned) resulted in him gaining the confidence to relocate his business. This demonstrates that the learning had a direct personal impact (gained confidence) which in turn also impacted on the operational side of his business. From this, it can be seen that the learning outcome is multi-layered.

Secondly, Shaun (Company N) talked about help he had from his dad in setting up their India operation. Working alongside his father, interacting with him and observing him provided him with the experience and confidence to be able to do this again himself in the future. He said, "I don't feel it would be impossible if we wanted to open elsewhere in the world, just having that experience of doing it in India gives you the confidence to know that if I could do it there, I could do it in a lot of different countries as well".

Clarity

The final personal learning outcome of social engagement is clarity. Clarity appears as an outcome in the data in three ways; as the result of learning with a particular type of contributor, as the result of a particular type of interaction, and as the result of a combination of learning mechanisms.

George (Company K) spoke of interacting with those external to his business as a way of engaging in learning that resulted in clarity. He mentioned in his interview "So you've got this challenge or you're frustrated about this and I don't know what to do about that and then you know people, when you've got a friend who aren't right in the middle of it they can often see with more clarity of where you've got to get to. You definitely do need, well for me, I would struggle if I didn't have people to speak to", which indicates the importance of the learning contributor being external to the business. The external learning contributor is able to provide the entrepreneur with clarity because they are looking at things from an outside perspective and are perceived to see things more clearly.

For Steve (Company C), gained clarity is the outcome of questioning. He spoke of how being questioned in Action Learning sets provided him with clarity. He said "I mean take action learning as an example. It might start off as some questions. I think questions it can be incredibly powerful because in a lot of cases the person knows the answer they just can't see it and I think the questioning can help to get clarity". Further to this, Steve talked about being questioned after reflection as a way he can gain clarity – this illustrates that clarity can be the result of a combination of learning mechanisms (social interactions and reflection). Specifically, he said:

> "I think having reflection and then having a conversation after the reflection can be quite powerful as well. So, somebody to just use as a sounding board. Somebody to ask you questions. So, you've just reflected about that, what do you think differently, what would you do differently as a result? Those kinds of questions that again would help you to get clarity over something or would reveal more out of that reflection".

Maggie (Company A) also illustrated that clarity can be the personal outcome of connected learning mechanisms, but for Maggie these two mechanisms are social interactions and cognition. She said, "at the same time because there are two of us and not just one person like other organisations then it's easier because if you get stuck in a certain area, that little interaction, that brainstorming between us, just clarifies things". Another comment she made was "talking through things I work stuff out in my own head", further pointing to clarity. This could also point to brainstorming and having conversations about ideas enables her to better cognitively process her thoughts – thus, making social interactions an enabler for individual cognition and the two combined mechanisms resulting in clarity.

Summary of Personal Outcomes

The data revealed three personal learning outcomes of entrepreneurial social engagement; validation, gained confidence and clarity. Learning provides entrepreneurs with validation when they engage with those external to the business on formal learning programmes or new employees brought in. As the new employees tend to have recent experience in another similar company, they are somewhat external to the business despite having an internal role. Confidence was gained by the participants as a result of engagement in a formal programme or by working closely with others. Finally, clarity

was the most diverse personal learning outcome. While some participants gained clarity only through interactions with external learning contributors, others found conversing with their business partners resulted in clarity. Clarity was also the outcome of learning that involved a combination of mechanisms. It was identified within the data that entrepreneurs gained clarity through a combination of either interactions and reflection or interactions and cognition. The data further revealed that the personal outcomes of learning during social engagement may go on to have an impact on the operational aspects of the business. This shows that the learning outcomes are not distinct from each other, suggesting they are multi-layered and intertwined.

Thematic Network Three: Conducive Conditions and Barriers

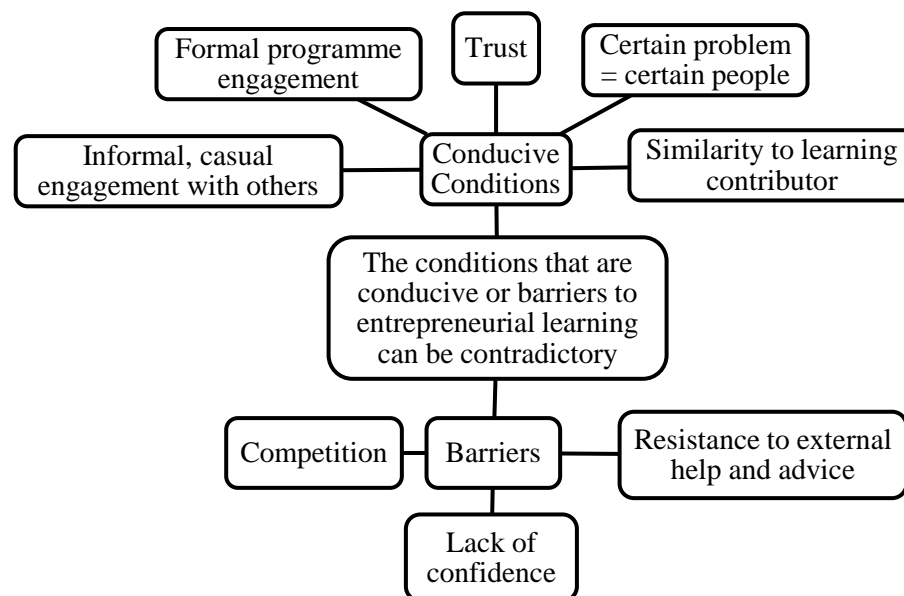Figure 11: Thematic Network Three

The third thematic network centres on the global theme: 'the conditions that are conducive or barriers to entrepreneurial learning can be contradictory'. This global theme is made up of two organising themes: conducive conditions and barriers. From the analysis of the research data, contradictions can be identified both within and between the two organising themes.

'Conducive conditions' refers to the factors (or conditions) that aid in learning during social engagement. These conditions are not required for such learning to occur but are likely to increase the level of engagement or improve the outcomes of this type of learning. The conditions which are presented as conducive by the participants include: informal, casual engagement with others; formal programme engagement; trust; certain problem = certain people; and similarity to learning contributor. Within the data, there is tension between some of the conditions which makes them appear contradictory. This is because some of the participants have contrasting experiences and opinions, meaning that a condition that is conducive for one participant may not be conducive for another. Therefore, this type of learning is context dependent, shaped by social relationships and situations, and influenced by an individual's personal preferences.

Informal, Casual Engagement with Others

The first condition in the data that is shown to be conducive for learning during social engagement is informal, casual engagement with others. The participants who talk of a preference for informal and casual engagement stress their aversion to engaging in formal learning programmes. This does not, however, suggest that they do not engage in learning intentionally – just that their preference is to engage in a more natural, less official way.

Ian (Company B) perceives formal programmes to be at risk of being boring and showed his preference to informal, casual engagement in the following statement: "if someone said to me go on a two day course and if at the end of you've passed, and assessor will come along and see if you can get a grant it's almost like, well I'm bored listening to that so maybe I won't bother going at all […] whereas I can sit down with somebody for an hour, and we have a chat and a cup of coffee and he can give me advice and I can do something I will sort it out". Joshua (Company E) perceives formal learning programmes in a different way. To him, they are costly and he finds it more conducive to engage informally. However, there is disparity in his account as he comments that informal engagement with others requires willpower and is time-consuming. If Joshua has paid for a formal programme he creates the time, but with informal engagements he does not always make himself available. This potentially may go beyond a time issue. Throughout his interview, Joshua indicated an overall preference to learn individually.

Consequently, he may not be forthcoming in engaging with others casually despite him finding more value in informal than formal learning.

Formal Programme Engagement

In contrast to the above, a number of participants spoke positively about their learning from engaging formally at Lancaster University either on the LEAD programme or as a result of winning a BIBA award. In terms of being conducive to their learning, formal engagement was of particular importance for questioning which occurs within the context of action learning sets. All of the participants who talked about action learning spoke of its value but only one participant continued to participate in action learning beyond the scope of the formal programme. Steve (Company C), who continued meeting with his group for a number of years, commented "A framework of a university and being on a programme I think helps, it's the glue that holds all those things together" and "Erm, we'd often meet here because we'd try and recreate the conditions as much as possible. We'd run them as a formal action learning meeting". These two quotes illustrate that Steve found the structure and conditions of a formal programme conducive to his social interactional learning. After the programme finished, his action learning set continued to meet, and they would try to recreate the structure and conditions of the formal action learning set on the LEAD programme. However, the group could only maintain this structure for so long without the formality of the LEAD programme, furthering the notion that formal programme engagement is conducive to social interactional learning. It could also suggest the importance of the role of facilitator in action learning though this was not explicitly expressed by Steve.

Shaun (Company N) also points to formal programmes as an enabler of learning during social engagement. He commented "I just think, you know, sometimes again you focus so much on your own business, but again I think other people and learning about the business, and you know picking up ideas of what they're doing and how they're doing things can be good as well. So speaking to other business owners is quite good, whether that's at a networking event or whether it's at another LEAD to innovate environment, or you know as the Federation of Small Businesses or whatever". This statement illustrates that formal programmes can provide opportunities to engage with peers and highlights how isolated entrepreneurs can be. When engaging with peers, entrepreneurs are able to develop themselves and their businesses.

<u>Trust</u>

One of the most important themes within the data is the condition of trust between the learner and their learning contributor. In the data, two dimensions of trust are spoken about; firstly, the influencers on trust and secondly the breach of trust. There appears to be two primary influencers on the trust discussed in the interviews. The first of these is having had positive experiences with a learning contributor in the past. This can be seen in the following quote from Maggie (Company A): "we, err, we take on board advice and we listen to people but for someone like [Harry] where we have built up a really good relationship we actually trust him and then his advice because we've seen from experience that he's been so beneficial for us then we will really listen to him". This illustrates that positive experiences influence the level of trust the participant has, and that the trust makes the participant more likely to listen to the advice of the contributor and consequently learn. This links to integrity trust which may be built on the consistency of past actions (Mayer et al. 1995). Another influencer on trust is the intentions of the learning contributor. In order to trust the contributor, a participant may need to feel as though the intentions are right and good for the business. This links to benevolence trust, a form of trust which has a large affective component and can be built upon a belief in good motives (Mayer et al. 1995). For example, Kirsty (Company F) commented "I've got very very few people who I trust and that I'd go to for any kind of advice. I wouldn't expose myself to anybody that I wasn't 100% sure of, and that their answer was going to be right for me and right for my business". This is important because it demonstrates that without trust, the entrepreneur is unwilling to open up and ask for advice. By doing this, they are limiting their opportunities to learn from others.

The breach of trust was also discussed in the interview of one of the participants. David (Company O) said "there was a bit of a disaster with the ALG from the second course, from LEAD to innovate there was a fairly bad breach of trust that happened in that group which meant that it sort of died really". This indicates the significant role trust has in certain contexts of learning; Action Learning requires a high level of trust, and once this trust is breached this form of learning no longer continues.

<u>Certain Problem = Certain People</u>

The fourth condition conducive to learning during social engagement is certain problem = certain people. This means that for certain problems that arise, there are certain people

that entrepreneurs are likely to engage with in order to learn and overcome the problem they are facing. For example, George (Company K) said "There's certain people you have that you ask about certain things. So, I've got friends who work in very corporate situations and I'll say how do you do things there, and I've got friends who work in start-ups and you know you say how do you do things there? I've got a friend who has worked in Silicon Valley for fifteen years and it always feels like his advice is you know a few years ahead of the way we're doing things in the UK". Similarly, Steve (Company C) said that "A lot of my reflection I would probably do on my own, only if there was some things in particular that I wanted a second opinion on then it would depend on what that was who you went to". This demonstrates that when combining interactions with personal reflection, the learning contributor is important. The subject of reflection has an impact on the most relevant person to interact with in order to learn.

Matt (Company M) also spoke of this condition being conducive to his learning but within the specific context of mentoring. He expressed that he felt different mentors were needed at different levels of business growth due to the problems and considerations innate to each level. He gave the example of the mentor they are currently using – this mentor is aiming to get them to £10 million turnover. The same mentor would not have been of value to them when they were at £100,000 turnover as his expertise and advice would not necessarily be aligned with their position and at the time. This is also the case in reverse; the mentor who helped them at £100,000 turnover was focused on helping them save money and develop in a way that may not be appropriate for achieving £10million. Therefore, there is a suggestion here that in order to learn from social interactions – even within the context of formal learning such as mentoring – only certain people will be able to contribute, and the current situation has a bearing on who that person may be as well as the type of issue faced.

Similarity to Learning Contributor

Another conducive condition is the entrepreneurs having similarity with their learning contributor. The similarities within the data revolve around having similar experiences or facing similar problems. Stuart (Company I) stated "I personally find it more useful when it was companies kind of a similar ilk to ourselves, so it was learning from shared experience", whilst Christopher (Company J) said "If you all meet up and you're all in different boats it isn't much use". For Matt and Ivy (Company M), talking about issues

that someone else has faced (i.e. having similarity with the learning contributor in terms of having similar experiences) can be helpful to learning as they are able to learn about issues they may face and learn how to avoid them or handle them if they arise.

Summary of Conducive Conditions

There are a variety of conditions present in the data that are conducive for learning during social engagement with other people. Most of these conditions are conducive as they increase the level of interaction between entrepreneurs and potential learning contributors, and consequently are likely to increase the chances of learning occurring. Some of the conditions also relate to the relationship between the entrepreneur and their learning contributor, such as trust and similarity. These conditions are conducive to learning because the relationship between the entrepreneur and their learning contributor is stronger, making them more willing to share and more open to listening to the advice and experiences of others. There is some contrast in the views, with some participants opting for informal learning, while others also see value in formal learning programmes.

BARRIERS

In addition to conditions conducive to learning during social engagement, the data also reveals factors which may hinder learning in this way. These factors do not necessarily stop the entrepreneur from learning during social interactions, but they are likely to limit the engagement in or impact on the outcomes of learning. Barriers identified within the data include resistance to external help and advice, lack of confidence and competition.

Resistance to External Help and Advice

Resistance to external help and advice means that entrepreneurs may not always be willing to engage with people outside their business about their business. The interviews suggest that this limits their learning, showing that they are creating their own learning barrier. The participants who spoke of their resistance to external help and advice also talked about how they now see the value in engaging with people outside their business. For example, Keith (Company L) said in his interview "I've had my business 12 years in May and for 8 or 9 of those, I'd say I had no external input whatsoever. It was either my way or the highway". For the past four years, Keith has been engaging with external networks in order to go beyond his own abilities and overcome his personal limitations

and commented that he wished he had "tapped into" external networks sooner. He has also created opportunities and systems for his employees to engage with other recruitment managers, which could suggest he is now trying to instil an openness to external interaction and engagement throughout his business. In addition to this, David (Company O) explicitly said "For a very long time I was very resistant to any form of external help or advice. Very resistant actually". He also came to the realisation during the interview that he tends not to learn by listening to the advice of others, despite complaining about a customer who does not act upon his advice to them, suggesting again that he has a resistance to external help and advice. He has, however, engaged in formal learning programmes and is now no longer resistant to interacting with those external to his business, though he may not necessarily take the actions suggested to him by others.

Further to this, Shaun (Company N) stated:

> "There is a bit of cognitive dissonance that you come in and you come in with a problem and I sense that with some people and although they took everything on board and it kind of led down one direction, they thought I know better. But that's an entrepreneur though isn't it, we can sometimes be a bit one minded and think well they don't know everything … There is still always at the back of your mind they don't know what I know. Therefore, they can't be 100% right".

This illustrates some level of negative associations with the help and advice provided because entrepreneurs feel they know better themselves. It also suggests that potential contributors are provided with only limited information due to this resistance and negative association. Sharing only limited information limits the help and advice given, and in turn limits learning. This barrier and quote from Shaun could further indicate the importance of talking to certain people about certain problems, as there might only be certain people an entrepreneur feels comfortable sharing all information about a problem with. It also implies the importance of a trusting relationship between the entrepreneur and their learning contributor, as if they don't feel they can trust them they are unlikely to provide the full information associated with the problem they are facing. It additionally highlights how personal owning and managing a business is to the entrepreneur, and the reluctance to engage and interact with those external can perpetuate the conceptualisation of entrepreneurs as isolated individuals.

Lack of Confidence

A second barrier identified in the research data is a lack of confidence. Having a lack of confidence can prevent an entrepreneur from interacting with others, and therefore limit both the number of potential learning contributors they have and opportunities to engage in learning with others. Within the data this appears to be a barrier for Alison (Company H), who mentioned that she does not have the confidence to attend networking events. Although she does not explicitly make a connection between her lack of confidence and a limit on her learning, her interview illustrated that her professional networks are limited and her learning involves very few learning contributors, mainly family and friends.

Competition

Competition can be a barrier to learning from social interactions and engagement as direct competitors are not always going to be willing to engage, particularly if they feel their interactions may pose a threat to their own business. Competition as a barrier can be seen in the account of Kirsty (Company F), who gave examples of her failed attempts to engage in learning with her competition. The examples Kirsty gave relate to asking her peers questions in order to advance her own knowledge and skills, however the competition was not willing to 'share their secrets' with her and she had to find the information through individual research. One thing that Kirsty mentioned was that when it came to asking people for help in online forums, the UK site was more helpful than the local site. The local site members saw her (in her eyes) as a competitor and would not answer her questions or reply to her posts. On the national site, she was able to get responses and considered them to be 'helpful'.

In contrast to Kirsty's experiences, Christopher (Company J) spoke positively of engaging with his competition and considered them to have contributed to his learning. He said:

> "we do occasionally talk to what you would deem as competitors and or sometimes their partners in certain projects, and occasionally we do have some very specific issues where I might talk to them about how they've handled certain aspects, it's usually ill-defined regulatory obligations or something of that nature […] There's, you know, particularly UK based

companies are fairly supportive with each other. Although competing, they share anecdotes and they're very useful".

These contrasting accounts of engaging with competition illustrate that competition may be, but is not always, a barrier to learning from social interactions during engagement with others. It can be seen to be connected to 'certain problem = certain people' and 'similarity with LC' (some of the conditions conducive to this type of learning). When looking to learn a specific skill that competitors are using, social interactions do not appear to be the most appropriate learning mechanism and individual research may be a better form of learning. However, when facing a more general and 'ill-defined' problem, having the similarities of being competitors can aid learning. Therefore, for certain problems, competitors may be the best person to learn with or from. It is important for an entrepreneur to have an understanding of what is and what is not acceptable to ask of direct competitors.

Summary of Barriers

Barriers make learning during social interactions and engagement more difficult, without necessarily stopping such learning from occurring. One barrier is a resistance to external help and advice. This is a self-imposed barrier by the entrepreneurs. Those who spoke about this barrier showed that once they began engaging outside their business, they saw the value in external social engagement and now actively engage rather than being resistant. The barrier also shows the importance of being open when engaging with others, potentially highlighting the importance of trust and interacting with certain people about certain problems.

A second barrier is a lack of confidence. This is closely aligned with the first barrier, as a lack of confidence can prevent an entrepreneur from interacting with others and is likely to make them resistant to external help and advice. However, this is more likely to impact upon formal avenues such as networking, with informal external help and advice still of value to the entrepreneurs. It creates a barrier to learning as it limits both their learning contributors and their opportunities for learning.

Competition is a third barrier to learning during social engagement, with direct competitors not being willing to engage if they feel it is a threat to their own business.

Not all participants spoke negatively of competition, and some felt competitors had contributed to their learning rather than created a barrier. This barrier reinforces the conducive condition of certain problem = certain people and demonstrates the importance of the entrepreneur carefully considering who to turn to for what help.

Thematic Network Four: Benefits and Drawbacks
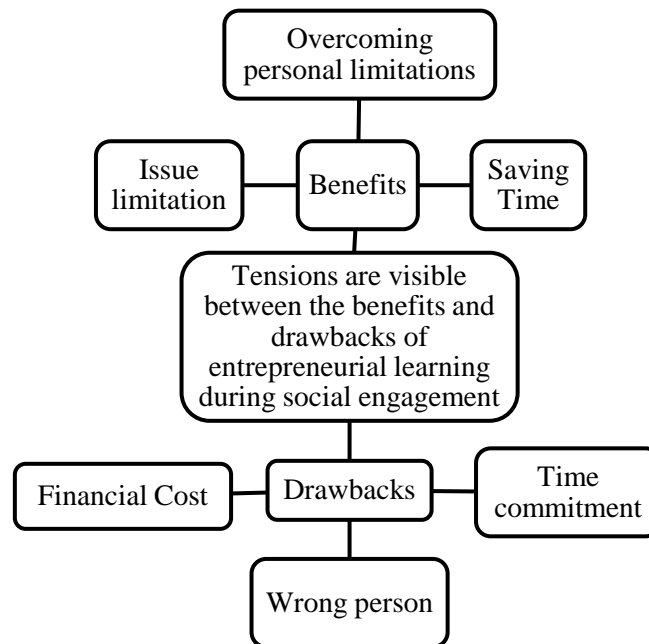
Figure 12: Thematic Network Four

The fourth and final thematic network is built on the global theme: 'tensions are visible between the benefits and drawbacks of entrepreneurial learning during social engagement'. It is split into two organising themes – benefits of learning during social engagement, and drawbacks of learning during social engagement. Analysis of these themes highlights that what some entrepreneurs experience as benefits to learning during social engagement, others consider to be drawbacks of such learning.

BENEFITS OF LEARNING DURING SOCIAL ENGAGEMENT

The data portrays a variety of perceived benefits to the entrepreneur and their business venture from their engagement in learning with other people. These benefits are: issue limitation, overcoming personal limitations and saving time.

<u>Issue Limitation</u>

Learning during social engagement with others can help an entrepreneur understand the issues they may face and learn how to avoid or limit the negative consequences of an issue should it arrive. Therefore, issue limitation is identified as one of the benefits of this form of learning. Within the data there are various accounts that illustrate this benefit. For example, Steve (Company C) commented "You can talk through with people who understood what was happening and any potential downfalls". Having an understanding of 'potential downfalls' suggests that there is a new awareness of potential issues and, though not stated explicitly, it is likely that measures are put into place to limit the chance or impact of such issues.

Other examples of this benefit can be seen in the accounts of Ivy (Company M) and Keith (Company L) who present differing perspectives. While they both hold the view that someone with experience can pass on their learning and limit the impact issues have, Keith believes issues can be avoided where Ivy sees issues as an inevitability. Ivy commented "you're going to hit issues whatever happens. But they've been through it and hopefully there's some lessons learnt that you can learn prior to actually going through it. It makes it a bit smoother that's all", illustrating that learning during social engagement can benefit an entrepreneur as they are better prepared for tackling the inevitable issues. In contrast, Keith said "it's useful to talk through where your vision of where your business is going and to get kind of advice on that and sense-check it whether it's the right thing to do or not, so maybe that is preventing a future issue". This demonstrates that social engagement benefits entrepreneurs as they learn about issues before they arise and therefore removes some of the ambiguity entrepreneurs face and may prevent issues from occurring.

<u>Overcoming Personal Limitations</u>

Entrepreneurs have their own personal limitations when creating and developing their businesses; their knowledge and skills only get them so far before learning is needed. A number of the entrepreneurs interviewed spoke of how learning during their social engagement with others helped them to overcome their personal limitations and perceived this as a benefit of learning in this way.

Some of the entrepreneurs openly spoke of how they were aware of not having the knowledge and skills required to develop their businesses. For example, Matt (Company M) said "I think from the very beginning I accepted that I didn't have the skills to be able to do what I wanted to do. So, the original plan was to take the business to 5million. I thought I would be able to develop enough skills to be able to take us to 5 million but I knew that I needed to develop them, so to develop them I needed to talk to and interact with lots of people". Keith (Company L) also spoke of overcoming his personal limitations in this way. Keith's account is interesting, as his interview shows that he did not engage with people external to his business until he felt he had reached his own ability. To continue developing his abilities and his business, he began engaging with other entrepreneurs and property recruiters. This illustrates that social engagement with other people can benefit entrepreneurs by helping them to overcome their personal limitation.

Overcoming personal limitations was also implicitly discussed within some of the interviews. In these accounts, the participants were learning without recognising or acknowledging that they had reached a personal limitation. For example, Maggie (Company A) spoke of brainstorming with her business partner, John, when stuck on a particular issue. Struggling with a certain issue could suggest that she had reached her own personal limitation, and social interactions helped her to "work stuff out in [her] own head" and overcome the limitation through changes in cognition. Similarly, Steve (Company C) said "if you don't know an answer, you're able to tap into a network and that an answer will emerge either directly from somebody or through conversations". Like with Maggie's account, Steve does not overtly acknowledge reaching a personal limitation. However, this is hinted at as the answer is unknown and he needs to engage with others in order to find the answer.

Saving time

Learning during social engagement is also perceived to benefit the entrepreneurs in this research by saving them time. Saving time is a perceived benefit of social engagement as, through interactions with others, entrepreneurs are able to take from someone else's experiences rather than having to experience everything for themselves. This is expressed by Joshua (Company E), who stated "because there's two of us and we're doing different things a lot of the time it means that I can take from his experience and

he can take from my experience. So, we almost learn twice as fast because there's two of us". This demonstrates that learning in this way saves time and increases efficiency as the two business partners can combine their experiences and learning rather than having to encounter everything individually.

Saving time and increased business efficiency was also alluded to by other participants. For example, Maggie and John (Company A) illustrated that during social engagement with others they have learned how to be more efficient as they do not have time to research things such as the different grams of paper or costs of posting. Instead, they can interact directly with their supplier and utilise his expertise in order to save time. Similarly, Kirsty spoke of bringing her father into the business and how this has enabled her to save time. She commented "So he's been fantastic for researching the stuff that I just haven't got the time to do", which illustrates that working and interacting with him provides her with the benefit of saving time. It also illustrates that she has learned how much she needs other people to help her in order to efficiently run her business.

Summary of Benefits

Three perceived benefits of learning during social engagement were identified in the data. The first of these is issue limitation. By interacting with other people, the entrepreneurs in this research study learn about potential issues before they arise. This can reduce the ambiguity that the entrepreneurs face, enabling them to either avoid issues completely or minimise their impact. A second benefit is overcoming personal limitations. Social engagement with others can enable learning that takes the entrepreneur beyond their current ability as they can learn from others who have advances skills, knowledge and expertise. It can also benefit them by initiating changes in cognition that get an entrepreneur past an issue they are facing. The third benefit identified in the data relates to saving entrepreneurs time. This benefit increases the entrepreneur's business efficiency. The main way this benefit occurs is through learning from someone else's experience or expertise rather than having to experience or research everything for themselves.

DRAWBACKS

The data indicates that learning from their social engagement with others isn't an entirely beneficial process for entrepreneurs. Several perceived drawbacks of engaging

in learning in this way are identified in the data. These include the time commitment, wrong person and financial cost.

<u>Time Commitment</u>

While some of the participants speak of learning during social engagement as a way of saving time, others consider social engagement to have the disadvantage of requiring a significant time commitment. This illustrates a tension in the various accounts as it directly conflicts with the benefit of saving time.

Both formal and informal social engagements are portrayed in the data to be time consuming for the entrepreneur. Joshua (Company E) showed this by saying:

> "The problem with a formal course is that you have to fill your calendar up with lots of things and, erm, it's hard because if it was informal I probably would be like, I don't have time I don't have to go, but because it's a formal thing that I have to pay for, right I will go to this because I've paid for it and it forces me to do it. So yeah, if I had the willpower an informal thing would work really well, but then other people might not come as well".

This highlights that a financial cost makes it more likely for him to make the time to participate in learning during social engagement. Informal engagement with others is perceived to require a lot of time, effort and willpower. Consequently, finding the time is not always a priority for Joshua and he feels there is a risk that the time commitment will mean others would not attend informal arrangements.

Time commitment was also discussed in relation to continuing learning during social engagement beyond the scope of a formal learning programme. Steve (Company C) spoke of continuing his Action Learning set after the LEAD programme finished and found that it was difficult to manage the members' different schedules and commit to meeting regularly without the structure of the programme. This reinforces the point made by Joshua that though both formal and informal engagement requires a time commitment, there is more commitment with a formal programme. Further to this, the time commitment limits the life span of this form of learning. Steve stated that "we know this over action learning, and actually for a group to meet every month for 7 or 8 years is quite an achievement in itself. They just have a natural half-life, and what

creates that is just people's availability". Thus, time commitment is perceived a prominent disadvantage of learning during social engagement with others.

<u>Wrong Person</u>

Interacting with someone does not necessarily mean that learning will occur, and intentions of learning with someone does not mean that they are the 'correct' person to be interacting with and learning from. Therefore, a perceived drawback of trying to engage in learning during social interactions with others is the risk of interacting with the wrong person. For example, Matt (Company M) spoke of his negative experiences with mentors who he felt were the wrong fit for his business, claiming "some of the people came in and I don't know whether it's the wrong chemistry or they were just s**t, I don't know, but they weren't any good to us". He felt that these were the wrong people for him to be able to learn with and from. This could point to some need for trial and error in achieving the 'right person', as other mentors he has used have been helpful and until the mentoring relationship begins it is unclear whether learning will occur.

Another example has already been provided within Thematic Network Three, where it was highlighted that direct competitors may be the wrong people to ask – particularly in the case of Kirsty (Company F) where her direct competitors refused to help her. This shows that wanting and attempting to engage in learning during social engagement is not necessarily enough for learning to occur, and the person an entrepreneur is interacting with needs to be the right fit. In any engagement with others – even in formalised contexts such as mentoring – there is the risk of it being with the wrong person.

This drawback is also talked about in the data in relation to people having other motives. Someone can be seen to be the wrong person to have as a learning contributor if their motives are based on their needs as an individual rather than on the needs of the company. For example, George (Company K) said "I've made the wrong call in the past where I've taken advice which was not to the benefit of the overall company, but maybe to the benefit of certain individuals" when asked about learning with his employees. Therefore, his attempts to engage in learning during social engagement with his employees through listening to their advice have not always resulted in a positive learning experience. This could, however, suggest that the process of taking advice from

those with other motives could create opportunities for learning, even if the initial experience is negative.

Financial Cost

Formal social engagement – whether at networking events or on learning programmes – are shown to have a large financial cost for the participants in this research. This is a perceived drawback to learning during social engagement as it can restrict participation. For example, Matt (Company M) highlighted the costs of learning programmes when he said "it was a little bit traumatic to start off with because the course itself cost £5,000. There was funding for £3,500 of that but even that £1,500 that was left over was an enormous amount of money, that was 2months salary for me or something like that". In addition, Thomas (Company G) commented "Networking, these networking groups tend to, you can get to the point where I've talked to people who have joined them and they're paying like £5-600 a year for joining them and that for me is not worth it". Both formal learning programmes and networking events/groups bring peers together and give entrepreneurs opportunities to connect and interact with others. Further to this, formal programmes involve elements such as Action Learning which are interaction-based and therefore directly contribute to learning during social interactions and engagement. The financial cost of both formal programmes and networking events/groups can stop people from engaging in them as the entrepreneurs likely feel the money is needed elsewhere in the business. However, not engaging can limit an entrepreneur's learning. Therefore, the financial cost of formal learning during social engagement is two-sided; it is costly for the business, but valuable to the entrepreneur and their ability to develop the business.

When engaging informally with others, the drawback of financial cost is not apparent. Therefore, this perceived drawback only applies to learning from social interactions and engagement that occurs as part of a formalised programme or network.

Summary of Drawbacks

Three perceived drawbacks were identified in the data from the entrepreneur's learning during social engagement with others. The first of these is time commitment, which demonstrates a tension in the accounts as time is also portrayed as a benefit from learning in this way by some of the participants. Both formal and informal social

engagements require a time commitment from entrepreneurs, meaning that entrepreneurs do not always engage and may miss opportunities for learning. Time commitment is also a problem when attempting to continue learning beyond the scope of a formalised programme. Once the programme has stopped, members who had committed their time previously become less available without the structure and formality.

A second perceived drawback is the risk of interacting with the wrong person. Social engagement and interactions do not guarantee learning and the entrepreneurs who participated in this study provided examples of when they had interacted with the wrong person and how this had negatively impacted the learning they had intended. However, this does not mean that there is a barrier to learning; the entrepreneurs may still learn from their engagement, but the outcomes may be different to the entrepreneur's intentions.

The final perceived drawback of learning during social engagement is the financial cost to the entrepreneur. In the data this specifically relates to formal avenues of social engagement and learning. The high financial cost can be a drawback as there is no guarantee of learning and may stop entrepreneurs from engaging. If they do engage in the formal programmes, they are sacrificing a large financial cost.

Summary of Research Findings

This chapter has explored the four thematic networks created based upon steps three, four and five of the analysis of the research data. These networks are built around the four following global themes: (1) multiple interwoven social interactions contribute to entrepreneurial learning; (2) learning during social engagement results in multi-layered and intertwined outcomes; (3) the conditions that are conducive or barriers to entrepreneurial learning are full of contradictions; and (4) tensions are visible between the benefits and drawbacks of entrepreneurial learning during social engagement. A number of key findings stem from each of these networks.

Thematic Network One demonstrates how entrepreneurs learn. In analysis and exploration of this network, the data reveals that social interactions have a significant

role in entrepreneurial learning during social engagement as the core learning mechanism. More importantly, the analysis demonstrates that these social interactions combine not only with each other but also with other learning mechanisms. This shows how learning during social engagement is more complex than it first seems because of the variety of learning combinations which contribute. From this, it can be seen that entrepreneurial learning during social engagement is an interrelated process of social interactions, individual cognition and reflection which is influenced by personal experiences. Therefore, the different learning mechanisms should not be considered in isolation and entrepreneurial learning must be understood as an integrated process.

The second thematic network represents what entrepreneurs learn. This network reveals that learning can impact on multiple levels – i.e., on both personal and business levels. Though the learning will have one level it most directly impacts, analysis of the data shows that the outcomes of entrepreneurial learning during social engagement can impact on more than one level. Personal outcomes interlink with both operational and strategic outcomes, showing they are multi-layered and intertwined.

Drawing on Thematic Network Three, analysis shows that there are many factors which may aid or impede entrepreneurial learning during social engagement. Two important conditions which are conducive to entrepreneurial learning during social engagement are trust and similarity with learning contributor. These conditions are not absolutely necessary for learning to occur but are shown in the data to have a beneficial impact on the learning and how entrepreneurs perceive the advice they have been given. The analysis within this network shows that both formal and informal learning contexts can be conducive for entrepreneurial learning during social engagement. It also shows that the participants engage in proactive and reactive/incidental learning during their social engagement. These factors demonstrate that not all learning during social engagement is the same. This is highlighted by the contradictions present in the data across the various accounts. From this research it can be seen that learning is not the same for everyone and the context of the learning and nature of the relationship between the entrepreneur and their prospective learning contributor can affect learning during social engagement.

Analysis of the fourth thematic network demonstrates that there are both perceived benefits and drawbacks to learning during social engagement; some of which highlight tensions between the accounts of different participants and further showing that not all learning is the same. One of the important findings from the analysis of thematic network four is that learning during social engagement is perceived to benefit entrepreneurs by reducing the ambiguity they face. As entrepreneurship is characterised by uncertainty (Bergh et al. 2011) and novel situations (Ravasi and Turati 2005) entrepreneurs often face ambiguity, particularly in terms of what issues may arise ahead of them. This research study demonstrated that by engaging in learning during social engagement with others, the entrepreneurs interviewed can be presented with potential issues and how to minimise their impact before they occur. Therefore, they do not have to personally experience all issues and learning during social engagement can limit both the number of issues they face and their level of impact during the creation and development of their business. However, the analysis of this thematic network also revealed that learning during social engagement is not always the most appropriate as it can be costly (both in terms of financial cost and time commitment) and the prospective learning contributor may not be the most appropriate source of learning. Reasons for this include the potential learning contributor not having the right information, not being willing to help, or not being the right fit for either the entrepreneur or their business.

Based on the analysis in steps three, four and five, three core principles have emerged which reveal the main characteristics of learning during social engagement. These build upon the four global themes identified and better represent the complexity of entrepreneurial learning during social engagement. The principles are:

1. Multiple interwoven social interactions combine with other learning mechanisms and influencers for entrepreneurs to learn
2. Learning during social engagement results in multi-layered and intertwined outcomes
3. Learning during social engagement is contextually dependent and affected by various factors.

Chapter Five: Discussion

This chapter represents the sixth and final step of analysis where patterns are interpreted and connected to the existing literature for Stage C of interpretation, the most abstract level (see Figure 7, p.72). The findings chapter moved through steps three, four and five to achieve Stages A and B of interpretation. Step three involved the creation of the four thematic networks, with step four describing the networks and beginning the analytic exploration of each. At step five, the four thematic networks were summarised and patterns were identified across the data. The analysis in steps three, four and five revealed three core principles: (1) multiple, interwoven social interactions combine with other learning mechanisms and influencers for entrepreneurs to learn; (2) learning during social engagement results in multi-layered and intertwined outcomes; (3) learning during social engagement is contextually dependent and affected by various factors. The three core principles act as a structure for this sixth step of analysis, in which the data patterns are connected to existing literature for the development of arguments that expand understandings of entrepreneurial learning.

The three core principles are interlinked, with the first principle being the foundation for the other two. It is foundational as it explains *how* entrepreneurs learn during social engagement with others, and therefore underpins *what* entrepreneurs learn (the second principle) and how entrepreneurial learning is affected (the third principle). In this chapter, the framework of learning sequences (Bingham and Davis 2012) is applied as a theoretical lens to further interpret the first principle. The findings are compared and contrasted with Cope's (2005) entrepreneurial learning tasks and St-Jean et al's (2018) outcomes of mentoring to interpret the second principle, and the concept of entrepreneurial identity (Bell et al. 2018; Leitch and Harrison 2016; Navis and Glynn 2011) is drawn upon to explain how the outcomes are intertwined at multiple levels. Various literature, such as van Gelderen et al (2012), is connected to the third principle, with the analysis demonstrating the importance of context to learning and explaining some of the contradictions present across the different accounts of the research participants.

Section One: The First Principle - Multiple, interwoven social interactions combine with other learning mechanisms and influencers for entrepreneurs to learn

As demonstrated in the previous chapter, social interactions are core to entrepreneurial learning as the main learning mechanism. This was illustrated through different forms of social interactions such as questioning, sharing, listening and conversing. The analysis in step three revealed that these multiple social interactions are interwoven, as shown in the way they combine with each other in different ways. However, through analysis steps four and five it was identified that an important aspect of the findings is how these social interactions are connected not only to each other, but also with the other learning mechanisms (Secundo et al. 2017; Zhang and Hamilton 2009; Cope 2005) of cognition and reflection and are influenced by personal experience. The first part of this section builds upon this first principle by discussing the different learning combinations; meaning how the different learning mechanisms and learning influencer are used in conjunction with social interactions in multiple ways. Three combinations are discussed to demonstrate the connections between the prominent mechanisms in the literature and social interactions, and to highlight the need for integration when researching entrepreneurial learning.

The identification of the learning combinations points to the framework of learning sequences developed by Bingham and Davis (2012). The framework was introduced to this study and discussed in the literature review chapter (Chapter Two, page 39) as a bridging approach to entrepreneurial learning. This theory of learning sequences (Bingham and Davis 2012) is influential as it was one of the first attempts to bring integration to the fragmented field of entrepreneurial learning. It partially explains the ways different learning processes combine for entrepreneurs to learn, and therefore provides a good foundation and lens through which to further interpret the findings of this study. In the second part of this section, the framework is applied to the first principle and an extended model of learning sequences is proposed.

Social Interactions and Cognition

One of the learning mechanism combinations identified within the accounts of the participants of this research is between social interactions and cognition. The understanding of cognition here is the ways information is processed and thoughts and perceptions are changed or reinforced. The different ways social interactions and cognition combine shows evidence of both individual and shared cognition. This combination of mechanisms is characterised (1) by the analysis and evaluation of social interactions, and (2) by a change in perception or way of thinking.

The first characterisation, the analysis and evaluation of social interactions, utilises existing stocks of knowledge (Minniti and Bygrave 2001) and is used by entrepreneurs to learn in three ways. The first way is to assess the value of other people's ideas/suggestions, as evidenced by Maggie (Company A) when her husband shares his ideas with her. Second, the combination is used by the entrepreneurs to make relevant the 'irrelevant' by putting what they are told regarding an unrelated matter into the context of their own business situation. Examples of this are given by Steve (Company C) and Shaun (Company N) when engaging with others in general conversations. Third, analysis and evaluation of social interactions is used by the entrepreneurs to avoid taking for granted what other people say and to avoid relying on other actor's perceptions and experiences by thinking through issues for themselves. This is evidenced by Joshua (Company E), who stressed the importance of not taking advice without evaluating it first.

The second characterisation of this learning combination, a change in perception or way of thinking, links to Mitchell et al's (2002, p.96) definition of cognition; the mental models and processes of individuals based upon their "perceptions, memory and thinking". This characterisation can be evidenced by Ian (Company B), who provided an example of how his mentor and friend changed his way of viewing his product before it was launched. With both characterisations of the combination, the findings show that the social interaction occurs first, and entrepreneurs are then prompted to think, update their stocks of knowledge and adapt their mental models in line with how they have made sense of their interactions and experiences. The initial interaction in this

combination is likely to be one of the following: the sharing of ideas, listening to advice, having general conversations, being asked questions and brainstorming.

While much of the cognition identified in the findings as part of this combination occurs at the individual level, the use of social interactions enables thinking to occur at the group/team level and, consequently, the sharing of mental models. Such cognition is termed 'shared cognition' (Cannon-Bowers and Salas 2001). The entrepreneurial learning literature predominantly considers cognition at the individual level (for example, Petkova 2009; Minniti and Bygrave 2001). This is likely to be because of the imbedded and continually reinforced assumption that the entrepreneur is a solo being who enacts entrepreneurship on an individual level (Cope et al. 2007). However, entrepreneurship is also enacted as a team process (Forbes et al. 2006; Ensley et al. 2003; Ensley et al. 2002; Lechler 2001; Chrisman et al. 1998; Kamm et al. 1990). This is reflected in the participant selection of this research, where a number of those interviewed created their businesses as part of a team rather than on their own. It is some of those partnership teams who demonstrate examples of engagement in shared cognition alongside social interactions with each other as a form of learning. Therefore, this study adds insight to entrepreneurial learning literature by demonstrating the ways entrepreneurs engage in both individual and shared cognition. This detracts from the emphasis currently placed on individual cognition by cognitive-experiential approaches to entrepreneurial learning. The findings of this study align with the shared cognition literature and demonstrate how both interactive and nominal brainstorming combine with shared cognition through cognitive conflict and the co-creation of meaning and ideas. They also show that not all brainstorming involves shared cognition, with some of the interactive brainstorming examples given by the participants reflecting engagement with individual cognition instead.

Shared cognition is effective for teams as "when team members share knowledge, it enables them to interpret cues in a similar manner, make compatible decisions, and take appropriate action" (Cannon-Bowers and Salas 2001, p.196). The connection between social interactions and shared cognition is reflected in the literature as team interactions are explicitly considered to contribute to the "development, modification and reinforcement of mental models" (Van den Bossche et al. 2011, p.286) that are shared between members. This research supports this premise, with at least two of the

partnerships showing suggestion of shared mental models. A stand-out example of shared cognition and social interactions combining is between the partners of Company A when they engage in brainstorming. The pair portray brainstorming as a way they co-create ideas, knowledge and solutions to problems they face. This links with Van den Bossche et al's (2011), belief of shared cognition involving co-creation and agreed upon solutions. The authors also highlight the importance of cognitive conflict in shared cognition, as do Ensley and Pearce (2001). The brainstorming of the participants in this study includes cognitive conflict as it involves "thinking about multiple ideas … [and] sharing and developing those ideas through cognitive tug and pull" (Ensley and Pearce 2001, p.146).

Another example of shared cognition can be seen in the interview with the two business partners of Company D (Matt and Geoff). Though Matt and Geoff do not explicitly talk about their engagement in the combination of social interaction and cognition, the way they discuss 'being challenged' resonates with cognitive conflict and shared cognition stemming from their interactions with each other. Cognitive conflict can be seen in their use of sharing ideas and interrogating questions – the two interactions Matt and Geoff use together in their 'challenging' – which somewhat aligns with nominal brainstorming. Nominal brainstorming involves generating ideas on an individual basis and then combining ideas for evaluation and selection (Kohn et al. 2011). The only way this does not align, is the challenging element discussed by Matt and Geoff comes from one idea whereas Osborn's rules of brainstorming dictate a focus on high quantity of ideas (Kohn et al. 2011; Osborn 1963). Nonetheless, the interactions between the two business partners are used to challenge, analyse and develop ideas (cognitive conflict) to ensure they have a shared understanding (co-creation of meaning) and thereby contributes to shared cognition. Therefore, the two business partners learn through a combination of social interactions and shared cognition.

However, the findings also reveal that brainstorming can be connected to individual cognition, meaning that not all of the brainstorming discussed by the participants in the interviews points to shared cognition. For some of the participants, brainstorming involved bouncing ideas back and forth (classed as interactive brainstorming (Kohn et al. 2011)), with no evidence of co-construction of knowledge, co-creation of meaning or cognitive conflict. Nonetheless, interactive brainstorming is discussed by the

participants as an effective and valuable way of learning with other people. This is interesting as the brainstorming literature argues that nominal brainstorming (where ideas are generated on an individual basis (Kohn et al. 2011)) is more effective than interactive brainstorming, both in terms of the quantity and quality of ideas (Rietzschel et al. 2006; Dugosh et al. 2000), for four reasons. These reasons are; (1) individuals may fear others viewing their ideas negatively so they are reluctant to share, (2) production blocking may occur when individuals choose not to share or forget their ideas whilst waiting for their turn to share, (3) people find it difficult to process and evaluate the ideas of others while concurrently generating their own ideas, and (4) there is a risk of downward social comparison, meaning that individuals may reduce their productivity rate in line with the least productive member (Dugosh et al. 2000). A potential explanation for the entrepreneurs' effective engagement in interactive brainstorming is the social influence model, which "suggests that exposure to highly productive partners…can increase group performance" (Dugosh et al. 2000, p.722). The 'partners' in the entrepreneurs' brainstorming sessions are highly productive because they have some form of stake in the business – brainstorming partners tend to be business partners or employees. Therefore, it is in their best interest for brainstorming to be productive. This infers a level of intentionality and proactivity from the entrepreneurs when engaging in this form of learning. The findings also align with the literature as it asserts that effective brainstorming inspires cognitive stimulation (Dugosh et al. 2000), showing how the entrepreneurs use the combination of social interactions (sharing ideas and brainstorming) and cognition.

Interestingly, the way the different participants of this study use the combination of social interactions and cognition seems to align with their locus of cognition, which provides new insight to understandings of entrepreneurial learning during social engagement. Locus of cognition "refers to the expectation that answers and solutions are more likely found internally or externally. In the latter case, actors consult others when they are facing a problem they cannot solve alone or feel insecure about" (van Seggelen-Damen and Romme 2014, p.6). In this study, Maggie and John (Company A), Steve (Company C), Kirsty (Company F), Thomas (Company G), Christopher (Company J), and Matt and Ivy (Company M) are all associated with an external locus of cognition as they all actively engage with other people to learn. In contrast, some of the participants show an internal locus of cognition. For example, both Ian (Company

B) and Joshua (Company E) declared a preference for individual learning to overcome any problems they face. This does not mean that they only learn by themselves, but they expect and prefer to find solutions and learn by themselves rather than relying on or turning to other people.

Some of the entrepreneurs appeared to have an external locus of cognition, but a limited network they could turn to for learning and solving problems. This can be seen in the account of Alison (Company H), who had a small number of both strong and weak ties (Granovetter 1973) but did appear to actively engage with her strong ties rather than finding solutions internally on an individual basis. However, this may be problematic for Alison's learning as Jack (2005) argues strong ties tend to be homogenous and consequently produce redundant information. Weak ties are considered more effective and conducive to entrepreneurship and entrepreneurial learning (Jack 2005). Similarly, Matt and Geoff (Company D) both appear to have an external locus of cognition but started their business with a limited network. Their opportunities for social engagement increased when they won an award which connected them to Lancaster University, meaning they are more able to act, problem solve and learn with others. Thereby their learning became more in line with their loci of cognition.

Beyond this, the findings of this research highlight that it is possible for entrepreneurs to change their locus of cognition through increased social engagement. For example, Keith (Company L) showed that when he started his business he had an internal locus of cognition, but once he started engaging with other people this shifted to external. This is likely because of his positive experience in engagement leading to an increased confidence in the ability of others to contribute to his learning. While literature points to different loci of cognition (van Seggelen-Damen and Romme 2014), the possibility of shifts in cognition has not been acknowledged previously. This demonstrates that the findings and analysis within this study have built upon existing literature as they reveal personal experiences can change an individual's loci of cognition.

Locus of cognition also illuminates differences in the ways partnerships or teams engage in this combination (social interactions and cognition) of entrepreneurial learning. For example, Joshua (Company E) has a clear internal locus of cognition. His use of the social interaction and cognition learning combination aligns with this as he

utilises social interactions to solve problems through his own cognition. He prefers to learn individually but if this fails he uses social interactions to find out how he can learn something on his own. Therefore, he combines social interactions with individual cognition to satisfy his internal locus of cognition. In direct contrast, Maggie and John (Company A) have external loci of cognition. There is alignment with this preference present in their use of the social interactions and cognition combination when they brainstorm and develop shared cognition. These two examples could help to theorise why some partnerships use the combination with individual cognition and others shared. An entrepreneur with an internal locus of cognition is unlikely to be trying to co-construct meaning and create shared cognition as, by nature, they are individualistic even if they are in a partnership. In contrast, those who have an external locus of cognition and are in a partnership are actively finding ways to interact and build shared cognition. These differences revealed in the data provide fresh insights into the loci of cognition and the understanding of entrepreneurial learning. Personal preferences (in the form of loci of cognition) play an important role in the way entrepreneurs participate in social engagement and consequently in how entrepreneurs learn with/from others.

Social Interactions and Reflection

An important finding of this research is the pivotal role of reflection in entrepreneurial learning, which supports the findings of a number of other scholars (such as Pittaway et al. 2015; Bagheri and Pihie 2010; Zhang and Hamilton 2009; Cope 2005). The main difference between the findings of this research and the existing literature is that this study highlights the interconnected nature of reflection and social interactions, providing important new insight to the field of entrepreneurial learning.

This combination of learning mechanisms is characterised by different types of reflection and the prominence of the social interaction 'questioning'. When considering the reflection in the accounts of the research participants in this study, the differences can be explained by using Pittaway et al's (2015) directional theorisation. They provide four directions of reflection - backward (reflecting on past experiences), forward (reflecting for future experiences/actions), inward (introspection) and outward (reflecting on the interactions with others) (Pittaway et al. 2015). The reflection discussed in this research study tends to be backward and inward. For example, Steve (Company C) spoke a lot about reflection, and one quote in particular stands out for

suggesting his reflection is backward and inward: "just ***reflecting back*** on a particular situation you know ***reflecting back*** on something that has immediately happened or something that's happened in the past and just thinking well ***what would I do about it***, you know, now". Similarly, Joshua (Company E) said "it's just a time where you get to ***step back*** and ***think about your work*** on the business". The added emphasis is used in these quotes to illustrate the indicators of backward and inward reflection. Outward reflection can also be identified within the research data. An example of this in the data is from the interview with Christopher (Company J) who spoke of "sitting back and digesting many different views and perspectives", which directly points to reflecting 'outward' on the interactions with other people.

The mechanism of reflection combines with a number of social interactions, but one of the most prominent is questioning. This combination can be related to the work of Daudelin (1996), who suggests that managers can use 'challenging questions' as part of their reflective approach, and that both asking and answering questions is "one of the techniques for increasing the learning power of reflection" (Daudelin 1996, p.41). She outlines that reflection is a process which consists of articulation, problem analysis, hypothesis generation and action, and that different types of questions are best suited to the different stages of reflection.

While Daudelin (1996) conceptualises questions as part of the reflection process, the participants in this research appear to portray the use of questions in reflection as both part of the process and separate to it. Questions can both add to the reflection of entrepreneurs (part of the reflective process) and prompt reflection (separate to it). Questioning can be seen to aid reflection with probing questions such as 'what do you think differently?' and 'what would you do differently as a result?' – questions which appear in the data as part of the theme 'being asked questions'. This shows questions as part of the reflection process, with probing questions fitting into Daudelin's (1996) hypothesis generation stage, where potential theory is formulated to either explain or address the issue at hand. Though the terminology is different as the examples are 'what' questions rather than the 'how' prescribed by Daudelin, being asked about how their feeling, thinking and acting may be different resonates with the hypothesis generation stage because it can help them to understand what they are reflecting on and how they may take action.

Questioning can also be seen as a prompt for reflection in the accounts of the participants, meaning it is separate from but connected to reflection. Clarifying questions such as 'why have you done this?' are shown in the research data to stimulate an entrepreneur's reflection. This resonates with the findings of Zhang and Hamilton (2009), who also see social interactions as provocations and prompts for reflection. In contrast, 'why' questions are argued to be a part of the problem analysis stage of reflection by Daudelin (1996) and are therefore a part of the process. This likely demonstrates that reflection "takes different forms in different contexts" (Jordi 2011), in this case, management and entrepreneurship. However, it could also be argued that the questioning as a prompt is part of the reflection process as the interaction shapes the reflection. This gives a relational view of learning and reflection where dialogue (in the form of questioning in this case) is an essential part of the process (Jordi 2011) not separate from it. Additionally, the entrepreneurs in this study asking 'what do you think about it?' illustrates them asking an evaluative question to gain a second opinion on something they have reflected upon. This could be considered as separate to the reflection process as the interaction occurs after the reflection; something which is not considered by Daudelin (1996). However, taking Jordi's (2011) view of relational learning, the interaction after the reflection is a continuation of the reflection process as it continues to shape the learning through both dialogue and listening.

Literature in the field of management education also point to the role of questions in reflection. For example, van Seggelen-Damen and Romme (2014, p.2) suggest that engaging in reflection while interacting with others "may be more productive than learning alone, particularly in the face of ill-structured managerial issues and problems". They also comment that while individual reflection is useful for making sense of personal experiences, reflecting with others reinforces individual critical reflection and deepens it (van Seggelen-Damen and Romme 2014). Organisational learning literature supports this, with Høyrup (2004) also highlighting the importance of social interactions in reflection. However, he stresses that most existing considerations of reflection place explicit emphasis on the individual level of reflection, neglecting the social. In this way, this research study extends thinking beyond the level of the individual, which is the dominant tendency in the literature, by highlighting the relationship between social interactions and reflections. It also shows the importance of this finding, as only considering reflection at the individual level is problematic because it suggests that

reflection occurs in isolation rather than as part of a social context which is shaped by the interactions with others. This then creates a divide between reflective and social forms of learning; portraying them as separate from each other rather than complementary and interconnected as found in this study.

Social Interaction and Experience

Related to the foundational principle identified in this analysis, which is focused upon how social interactions combine with each other and other learning mechanisms and influencers, another prominent combination identified is that of social interactions and practical experience. Unlike cognition and reflection, experience is not a mechanism of learning but is an influencer. The findings of this research demonstrate that practical experience is highly influential to how entrepreneurs learn. This is a somewhat unsurprising finding of the research considering existing entrepreneurial learning literature takes an experiential perspective to learning (Zheng et al. 2017) and this research is built upon a social-experiential approach to learning. However, the relationship between social interactions and experience has had less focus in the entrepreneurial learning literature. The findings support existing views that not everything can and/or should be learned through first hand experiences and demonstrates how experiences can be combined with social interactions for learning. Analysis also reveals that social interactions are a form of vicarious learning, enabling entrepreneurs to learn from second-hand experiences.

The analysis of the research data shows that personal, practical experience can drive the ways in which entrepreneurs interact with others. Their direct experience can show the entrepreneur what is wrong (for example, with employees, finances or product development), but social interactions with others can help them to understand why it is wrong and how to change behaviours or actions for the better. A key example of this in the data can be taken from Joshua (Company E) learning about and changing his management style. His personal, practical experience with his employees showed him that his current management style was not working. Through social interactions during meetings with his employees, Joshua was able learn how to adapt his management style to better suit his employees. This somewhat aligns with Vince's (1998) argument that not everything should be learned from direct, personal experience. Joshua could have used an experiential learning method such as trial and error (which would mean further

engagement in direct experience) to find the most suitable management style. However, this would not necessarily be successful. Learning through social interactions with his employees meant that Joshua did not have to face negative consequences, such as alienating or demotivating his employees, of selecting an improper management style. It shows a deliberate strategy for learning about managing people and addressing the problem he was facing despite his preference for solving issues through direct experience. While this is a very different example to the ones provided by Vince (1998) (such as harassment), it supports his argument that some things are better learned using other mechanisms. In this case, management style was better learned and changed through the mechanism of social interactions, and in particular through asking questions. However, the direct experience of working with his employees provided him with the contextual background needed to identify the problem and strategize its resolution. This shows a combination of social interactions and experience, revealing how experience can influence learning during social engagement.

Experience was also shown to be the basis of a number of interactions for the participants, and therefore the underpinning of the learning combination. Without first experiencing a situation, many of the interactions cannot happen as experience is the topic of the interactions. Sometimes the experiences are the entrepreneurs own, other times they are their learning contributors. This demonstrates that the entrepreneur is either interacting about their own experiences (such as when Thomas (Company G) interacted with his suppliers to seek their experiences and advice about issues he was currently facing with his employees) and learning from it, or learning vicariously about indirect experiences through interactions (as evidenced by Ivy (Company M), who would listen to the experiences of others to avoid facing such issues herself).

Much of the existing literature on vicarious learning focuses upon observation and modelling as the learning mechanism (Bingham and Davis 2012; Hoover et al. 2012). Observation and modelling do not necessarily require social interactions, though they may be used. Learning from the mechanism of observation involves watching how someone else acts and seeing the consequences they face for taking that action (Hoover and Giambatista 2009). Similar to the iterated choice problem theorised by Minniti and Bygrave (2001), entrepreneurs are likely to repeat the actions that they see to have a positive consequence and avoid those with a negative consequence (Hoover and

Giambatista 2009). Social interactions allow entrepreneurs to learn from the experiences of others without having to directly observe them which allows them to learn from a wider range of experiences. This demonstrates an expansion of current understandings of vicarious learning within the entrepreneurial context, as social interactions as well as observation can be used as a vicarious learning mechanism.

LEARNING SEQUENCES

As the combinations of mechanisms can occur in multiple different ways, an important finding of this research is that entrepreneurial learning consists of various 'learning sequences' rather than as one specific learning process. Learning sequences are defined as "an ordered use of learning processes" (Bingham and Davis 2012, p.612). As shown in the literature review, Bingham and Davis (2012) consider the ways direct and indirect learning processes combine in sequences. Direct learning processes are those which involve active engagement in first-hand experience (such as experimentation and trial and error), while indirect learning processes involve learning from the experiences of others (such as observational vicarious learning). Previous to Bingham and Davis' (2012) research on learning sequences, research considered either direct or indirect learning processes rather than both. One main contribution of their work is combining these different processes in interconnected learning sequences. This contribution is reflected within this research study as it supports the notion that learning sequences form entrepreneurial learning and that direct and indirect processes should be considered together.

The framework of learning sequences has been applied in this study as a theoretical lens to further the interpretation of the research data. In applying the framework, new insight has been generated and has led to the expansion and development of Bingham and Davis' (2012) research. This study extends their framework in two ways. Firstly, there is an expansion of the direct and indirect learning processes which form the sequences. Secondly, the model is extended to include four additional learning sequences which this research found are present in entrepreneurial learning during social engagement.

Building on the work of Bingham and Davis (2012), the learning sequences that can be identified within this study involve additional direct and indirect learning processes. The mechanisms of cognition, reflection and social interactions were not explicitly

listed by Bingham and Davis (2012) as either direct or indirect learning processes. Based upon their prominence in the research findings of this study, these mechanisms have been added to the framework. Table 7 has been developed to illustrate how the learning processes have been expanded to include the addition of these learning mechanisms. Row one illustrates the original learning processes explicitly outlined by Bingham and Davis (2012), while row two demonstrates the additional processes which have been added as a result of this study.

		DIRECT LEARNING PROCESSES	INDIRECT LEARNING PROCESSES
ORIGINAL (Bingham and Davis 2012)		Trial and error Experimental learning Improvisational learning	Observational vicarious learning
ADDITIONAL (Based on research data)		**Inward reflection** **Cognition**	**Outward reflection** **Social interactions**

Table 7: Expansion of Direct and Indirect Learning Processes of Entrepreneurs
(Development of Bingham and Davis 2012)

An important additional direct process shown in Table 7 is inward reflection. This form of reflection can be classed as a direct learning process as it is based upon personal experiences. In contrast, outward reflection has been added as an indirect learning process as it involves reflecting on the interactions with others rather than reflecting on the self. Social interactions are also added here as an indirect learning process as they occur with others at the social rather than at the individual level. Conversely, cognition is added as a direct learning process as it largely involves individual analysis and thinking. The difficulty with classifying cognition as a direct learning process lies

within the definition given by Bingham and Davis (2012) of a direct learning process, where the emphasis is on direct experience-related processes. Cognition does not necessarily fit within this definition but opening the definition to include wider direct, individual processes is less restrictive and may better demonstrate the learning mechanisms/processes entrepreneurs engage in.

Bingham and Davis (2012) identified two learning sequences in their research which they name 'seeding' and 'soloing'. Seeding is a sequence of indirect learning processes followed by direct learning processes, whereas soloing is direct learning processes followed by further direct learning processes (Bingham and Davis 2012). The sequence of soloing was not identified within this research study. This is not surprising as emphasis in this study is placed on social engagement rather than direct, experience-based processes like Bingham and Davis' (2012). While this study does not discount the use of soloing sequences by entrepreneurs, its primary focus places more emphasis on how entrepreneurs learn during social engagement therefore the sequences identified involve at least one indirect learning process. In contrast, the sequence of 'seeding' (Bingham and Davis 2012) was identified in the findings of this research as it involves an indirect learning process. The sequence of 'seeding' – an indirect learning process followed by a direct learning process – is identifiable in the research data in two ways. Firstly, when social interactions (indirect learning process) prompt backward and inward reflection (direct learning process). Evidence of this can be seen in the example from Joshua (Company E) in preparation for board meetings as he is asked clarifying questions which prompt him to reflect. Secondly, the seeding sequence can be identified when social interactions (indirect learning process) prompt cognition (direct learning process). For instance, Maggie (Company A) discussed her husband sharing his ideas with her (social interaction) which pushed her to analyse and evaluate those ideas (cognition). Similarly, Matt and Geoff (Company D) spoke of their employees sharing ideas with them (indirect learning process), which they then analyse and evaluate (direct learning process) in order to decide how to take the business forward.

The four other sequences identified within this research study were all additional sequences. All of the newly identified sequences involve at least one indirect learning process and were incorporated as a result of the different focus of the research study –

social engagement. This shows that the work of Bingham and Davis (2012) can be expanded to better capture the complexity of entrepreneurial learning.

One of the new sequences identified through the analysis of the interviews involved a direct learning process followed by an indirect learning process. This sequence is the reverse of the seeding sequence and is named here 'feeding' as the indirect learning feeds the direct learning process. The feeding sequence was a preferred mode of learning for one of the participants (Joshua, Company E) who stated he tended to learn by trying (learning by doing – direct learning process) and then asking other people (learning from a social interaction – indirect learning process). However, it is worth noting that this is only a learning sequence if the first element of the learning (the direct learning process of trying) is unsuccessful.

A second additional learning sequence is an indirect learning process followed by a further indirect learning process. In this research, this sequence has been named 'tandeming', as indirect learning processes work in tandem with each other. This can be evidenced in the findings of this research when the entrepreneurs spoke of listening to external perspectives (indirect learning process) and then reflecting outward on that interaction (indirect learning process). For example, Christopher (Company J) spoke of how listening to people outside his business and then reflecting on that conversation allowed him to understand his strengths and weaknesses. The tandeming sequence can also be seen in the combination of listening to advice (indirect learning process) and then brainstorming (indirect learning process), evidenced by John (Company A) when he stated "We're always taking on board information and advice from people. And, you know, we brainstorm and say will that benefit us or not?".

The findings of this research also suggest a learning sequence with three elements – a direct learning process followed by an indirect learning process followed by a further direct learning process. Bingham and Davis (2012) only considered two element sequences in their research, something which potentially limits our understanding of entrepreneurial learning. Adding a sequence with more than two elements demonstrates further complexity in the way entrepreneurs learn during social engagement. Analysis suggests that reflection and social interaction can be iterative, with some participants suggesting they reflect (backward and inward), interact with others (are asked questions

about their reflection) and then reflect further (backward/forward and inward). This sequence has been named here as 'repeating' as the sequence repeats, and is evidenced by Steve (Company C), who spoke of being asked probing questions after reflection as a powerful way to make him reflect further.

A final sequence that has been identified in this research shows that entrepreneurs combine social interactions with multiple direct processes. For instance, this can be seen in the data when participants are questioned (social interaction – indirect process), which prompts them to reflect inward (direct process) and change their perceptions (cognition – direct process). Evidence of this can be seen in the interview with Ian (Company B) when he provided the example of being questioned by a friend and mentor about his product. This made him reflect upon how his product is perceived by others and then changed his way of thinking about how his product is presented. This suggests a learning sequence with three elements, showing a deeper level of interconnectedness between the different learning mechanisms of entrepreneurs. This sequence has been termed 'echoing' as the use of direct processes is reiterated like an echo.

The learning sequences represent a number of different ways that entrepreneurs can learn during social engagement rather than being prescriptive in one linear process of learning. The sequences are not used by the entrepreneurs in a specific order; they are used when needed either separately or together, selected by the entrepreneur either consciously (deliberate, intentional learning) or subconsciously (incidental learning). This portrays learning sequences as tools the entrepreneurs can use to learn as part of their iterative engagement in learning during their entrepreneurial activity.

The findings of this study result in an extended model (Figure 13) of learning sequences, drawing on Bingham and Davis (2012). The model provides a visual representation of the sequences identified by Bingham and Davis (2012) and the additional sequences identified within this study. The sequence of soloing is included despite not being present in these research findings so that its role in entrepreneurial learning is not discounted due to the emphasis of this study.
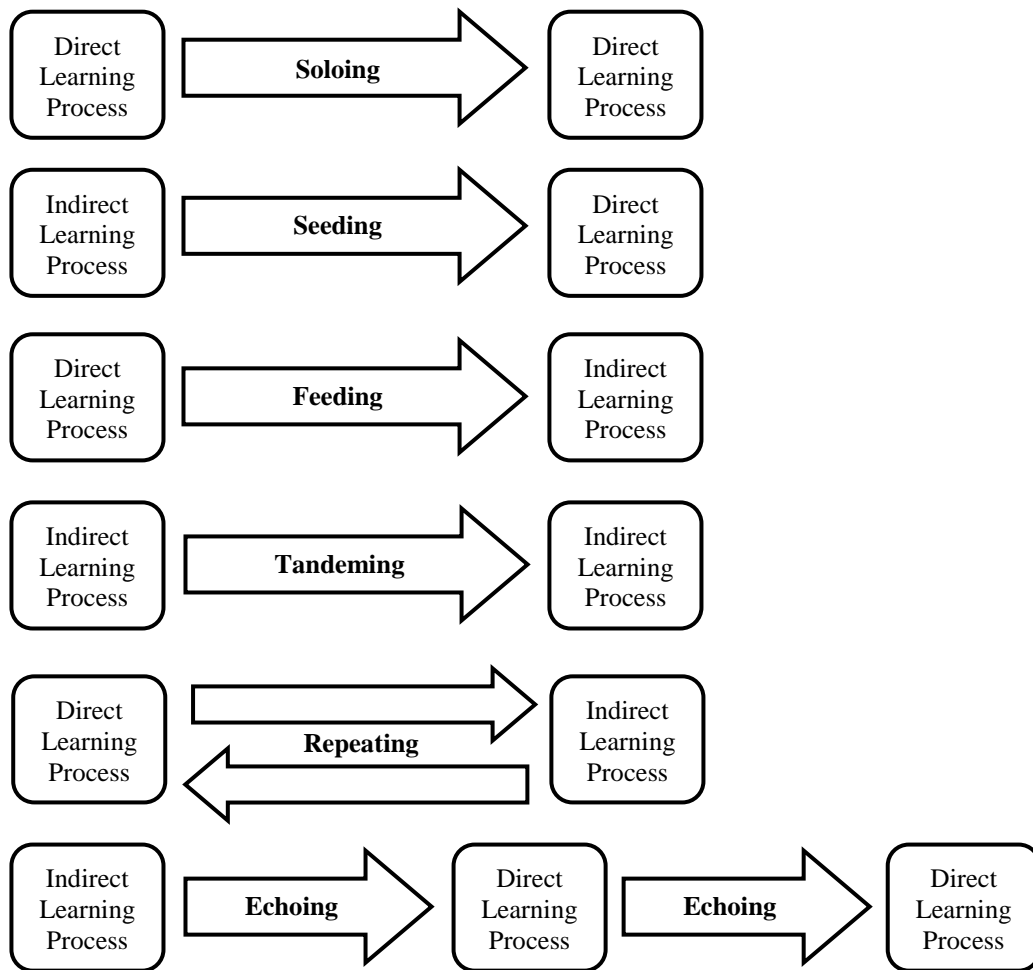
Figure 13: Extended Model of Entrepreneurial Learning Sequences

(Development of Bingham and Davis 2012)

An important contribution of this study to the entrepreneurial learning literature is therefore the development and expansion of learning sequences (Bingham and Davis 2012). This research first highlighted the need to expand the direct and indirect learning processes of the framework as the three core learning mechanisms (social interactions, cognition and reflection) identified within this study were not explicitly considered by Bingham and Davis (2012). Secondly, by taking a social-experiential approach to the research, emphasis in this study has been placed on social engagement over individual experiences. This has allowed for the identification of four new entrepreneurial learning sequences, extending the original model. These new learning sequences demonstrate the importance of social interactions, social engagement and indirect learning processes. Consequently, there is the suggestion that future research considers interconnected sequences of learning in preference to separate forms of entrepreneurial learning.

A consideration of learning sequences also shows a departure from Kolb's Experiential Learning Theory (1984) which includes a learning cycle. This learning cycle has been the foundation of much entrepreneurial learning theorisation. However, it neglects the important role social engagement plays in entrepreneurial learning (Pittaway et al. 2015). Pittaway et al (2015) revised Kolb's (1984) cycle to include social engagement and show how it contributes to learning alongside concrete experience, active experimentation and reflective observation. The main problem with this revision is that it assumes social engagement only occurs prior to reflective observation or active experimentation. This could be connected to seeding. However, as demonstrated by this research, social interactions can also be used after either a direct learning process or another indirect learning process to add to the learning. Therefore, the learning cycle is limited in its application and does not fully reflect the variety of ways in which social engagement contributes to entrepreneurial learning. Similarly, Kolb's (1984) cycle can be critiqued for the way it asserts a specific order in which everyone learns (Illeris 2015; Seaman 2008). His cycle is considered to be 'simplistic' and 'uniform' (Illeris 2015). In contrast, the suggestion of this research study is that learning is complex and dynamic, with entrepreneurs engaging in a variety of learning sequences that can be used independently or together depending on the context or problem at hand. Therefore, an additional contribution of this research is to move our understanding of entrepreneurial learning away from a specific and orderly cycle.

Section Two: The Second Principle - Learning during social engagement results in multi-layered and intertwined outcomes

The second principle which emerged from the analysis of the findings is that entrepreneurial learning outcomes are multi-layered and intertwined. Analysis of the interviews revealed this principle as engagement in the various learning sequences has outcomes at both the individual (personal outcomes) and business (operational and strategic outcomes) level, and therefore learning during social engagement has an impact on multiple layers of entrepreneurship. Further to this, it showed how these different layers and outcomes are intertwined, with outcomes having an impact at multiple levels simultaneously. In this section the outcomes identified within this research study will be compared and contrasted with the outcomes (St-Jean et al. 2018) and learning tasks (Cope 2005) put forward in existing entrepreneurial learning

literature. Following a consideration of the types of learning outcomes, this section will then draw on entrepreneurial identity literature alongside this study's data to provide a potential explanation for the intertwining of outcome levels.

<u>Types of Learning Outcomes</u>

Three types of learning outcomes were identified in this study; personal outcomes (individual level), operational outcomes (business level) and strategic outcomes (business level). Based on the findings, personal outcomes include a sense of validity, an increase in confidence and gained clarity. In addition, operational outcomes include changes in business models, processes, systems and/or structures and gained knowledge and skills. Finally, strategic outcomes include a change in business direction and a change in, or reinforcement of, product offering. These outcomes add to the literature by revealing what entrepreneurs learn during social engagement with others, an area under-researched in the existing literature.

These identified outcomes can be related to the mentoring outcome types highlighted by St-Jean et al (2018), who briefly distinguish between cognitive and affective outcomes of entrepreneurial learning from mentoring by stating "Extensive empirical research (Ozgen and Baron, 2007; Sullivan, 2000; Ucbasaran et al., 2008) confirmed the positive impact of mentoring relationships on both mentees' cognitions (improving opportunity identification, clarifying business vision) and emotions (reducing stress and feelings of being isolated, establishing more ambitious goals)". The outcomes identified in this research study can also be split into cognitive and affective outcomes. The majority of the outcomes identified can be considered cognitive, impacting thinking and acting rather than feelings. However, the personal outcomes of validity and confidence are affective outcomes as they impact the entrepreneur's emotions.

One limitation of applying the cognitive/affective conceptualisation to the outcomes identified within this study is that they stem from a specific form of learning. Mentoring is relevant to entrepreneurial learning, as shown in the literature review, as a social-experiential form of learning as the learning occurs during social engagement. Consequently, the outcomes outlined in the entrepreneurial mentoring literature represent the outcomes of a specific form of learning. This could limit its applicability to other forms of learning. However, the analysis of this study demonstrates that these

outcome typologies (cognitive/affective) can also be applied to other social-experiential forms of entrepreneurial learning.

Drawing on literature which is not specific to one form of learning, Cope's (2005) work can also be applied to this research study. Cope (2005) discussed the learning task of entrepreneurs, which he considered to be the 'content' or the 'what' of entrepreneurial learning. Therefore, his learning task can be considered the prospective outcomes of learning. The entrepreneurial learning task provides entrepreneurs with five areas to focus their learning in preparation for the creation and development of their business, as outlined in Table 8 below.

Learning about oneself: Learning issues include understanding one's strengths and weaknesses; one's changing role within the business; personal and family needs and objectives; areas for personal development; personal interests and motivations.

Learning about the business: Including strengths and weaknesses, opportunities and threats; internal business needs; requirements for growth; areas for development; understanding and facilitating one's staff; future direction.

Learning about the environment and entrepreneurial networks: Learning about how to manage relationships with existing and potential customers, suppliers, and competitors. Also about appreciating and maximizing the relationship with advisory agencies and support services such as the bank, the accountant.

Learning about small business management: Learning about how to run and control the business effectively, including important procedures and systems such as recruiting, salary and reward structures, and financial monitoring.

Learning about the nature and management of relationships: This regards both internal (to the firm) and external relationships. This final element of the learning task forms an integral part of the other four elements outlined above.

Table 8: The Entrepreneurial Learning Task
(Source: Cope 2005, p.380)

If we consider these five areas in relation to St-Jean et al's (2018) outcome typologies, only cognitive outcomes are expected. None of these learning task dimensions appear to involve affective outcomes for the entrepreneur, with no explicit outcomes that change how entrepreneurs feel. However, Cope's (2005) learning tasks point to relational outcomes. Relational outcomes are those which have an impact on personal relationships rather than thinking and acting or feelings. Both 'learning about the environment and entrepreneurial networks' and 'learning about the nature and management of relationships' point to entrepreneurs learning with relational outcomes.

The participants of this study can be said to engage in relational outcomes when learning about their management style. Drawing the two theorisations together, this research adds insight by demonstrating that entrepreneurial learning outcomes can be cognitive (impacting thinking/acting), affective (impacting feelings) or relational (impacting interpersonal relationships). This aligns with Lefebvre et al (2015), who identified cognitive, affective and relational outcomes of social interactions in formalised peer networks. The difference is that Lefebvre et al (2015) suggest these different outcomes occur from learning at different stages of network evolution, while this research does not make any connection between length of relationship and resulting outcomes.

Interestingly, the learning task of 'learning about the environment and entrepreneurial networks' does not appear to be present within the accounts of the participants in this research study. This could suggest that the entrepreneurs involved in this study (a) had already engaged in those aspects of the learning task before the creation of their business, (b) were not conscious of engaging in those aspects of the learning task and did not recognise them as outcomes of their learning, or (c) learned these aspects of the learning task from another form of learning that did not involve social engagement.

The findings of this research can be connected to the other four learning task dimensions. Personal outcomes connect to 'learning about oneself' as both involve personal development and emphasis on the entrepreneur over the business. Operational outcomes are connected to 'learning about small business management' as both involve the entrepreneur learning about the practicalities of business operations and how to run the business. Strategic outcomes connect to 'learning about the business', where the focus is on the business direction and overall strategy. The findings of this research also make a connection between operational outcomes and 'learning about the nature and management of relationships'. Part of this learning task dimension involves learning about internal relationships. This was evident in this research as some of the participants discussed changes in their management style – and therefore changes in their relationship with their employees. This demonstrates an operational outcome, which can be considered both cognitive and relational. The external relationships part of this area of the entrepreneurial learning task does not appear to be addressed in the learning discussed during the interviews.

INTERTWINED LEVELS OF LEARNING OUTCOMES

A significant and interesting insight of this study is in the intertwining of the learning outcomes. The main way that the learning outcomes of the entrepreneurs in this study are intertwined is in their impact on multiple levels simultaneously. When the entrepreneur learns using one of the sequences identified within this study, there is a direct impact on either the entrepreneur as an individual or on the business operationally or strategically. This shows three layers of learning outcomes. Though there is a primary direct impact on one of these levels, it is also possible for there to be a wider impact on multiple layers. For example, while gained confidence has a direct impact on the entrepreneur on a personal level, that gained confidence also impacts on the way the entrepreneur acts within their business and therefore there is an indirect outcome on the business at the operational and/or strategic level. Similarly, when discussing the gaining of knowledge and skills, the entrepreneurs demonstrated their impact on the operations of their business as the main learning outcome. However, an outcome such as gained knowledge and skills will also impact the entrepreneur on a personal level in terms of their stocks of knowledge, ways of thinking and mental models. Therefore, it is a cognitive outcome that has an impact on both the operational and personal levels, showing how the multiple layers of entrepreneurial learning outcomes are intertwined.

A potential explanation of the way the multiple layers are intertwined is the concept of entrepreneurial identity. Entrepreneurial identity is a 'concept of self' (Fauchart and Gruber 2011) than can be viewed as "our representation of the internalization and incorporation of socially-held behavioural expectations. As such, it can have an important impact not only on the way we feel, think and behave (present) but also on what we aim to achieve (future)" (Leitch and Harrison 2016, p.3). Existing literature shows that the entrepreneurial identity is multi-level (Leitch and Harrison 2016; Navis and Glynn 2011). For instance, Navis and Glynn (2011, p.481) comment that "The entrepreneurial identity embeds all three levels of analysis - the founder (individual level), the proposed new venture (organizational level), and the focal institutional sector (market level)". This suggests that the entrepreneur is unable to differentiate themselves from their business as their identity is interwoven in these three levels. This could therefore explain why learning impacts the entrepreneur not only on the personal/individual level, but also at both the operational and strategic levels of the business, with the strategic level connecting the entrepreneur to their market/sector.

The work of Bell et al (2018) can help rationalise why entrepreneurs are unable to separate themselves from their businesses in their entrepreneurial identity. Their research indicates that entrepreneurs feel 'weighed down' by the risks of creating and developing their own venture. As the consequences of failure are high, and often very personal, the risks and the pressure they face in trying to succeed in their venture shapes how the entrepreneur self-identifies. Alongside the risks, the entrepreneur feels a great sense of responsibility which shows itself through the role of 'care-taker of the organisation'. In these ways, the entrepreneur is identifying "as something very different from being an employee" (Bell et al. 2018, p.8) and their portrayal suggests the venture can be seen as an extension of the entrepreneur as a person. Therefore, the venture is also an important part of their identity as an entrepreneur.

However, knowledge of entrepreneurial identity is limited (Leitch and Harrison 2016; Navis and Glynn 2011) and connections between entrepreneurial identity and learning outcomes have not been made directly in previous research. This illuminates an area which may be of value to further study in both the areas of entrepreneurial learning and entrepreneurial identity creation.

Section Three: The Third Principle - Learning during social engagement is contextually dependent and affected by various factors

The third principle of this research study is 'learning during social engagement is contextually dependent and affected by various factors'. This principle was developed as the analysis of the data in stages three, four and five revealed a variety of conditions which can either aid or impede learning. It also showed differences in learning which may be accounted for by a consideration of context. This section draws upon existing literature to illustrate that an appreciation of context is neither new nor surprising to understanding learning but is important. It also considers the different contradictions and tensions found within the data and relates them to existing literature whilst considering how they are impacted by contextual factors. By considering the role of context, this study is answering calls made within existing entrepreneurship research (e.g. by Welter 2011) and demonstrates the integral role context plays in entrepreneurial learning.

Context covers a variety of situations and can be divided into micro and macro contexts to differentiate between those which are personal and societal (van Gelderen et al. 2012). Micro contexts involve "a person's life situation and local, situational characteristics" while macro consider "wider contexts such as social, industry, cultural, ethnic, sustainability-related, institutional, and historical contexts" (van Gelderen et al. 2012, p.1). Contexts are dynamic and ever-changing, evolving over time (van Gelderen et al. 2012). Recently, there have been calls for entrepreneurship research to consider the importance of context (van Gelderen et al. 2012), as "context is important for understanding when, how, and why entrepreneurship happens and who becomes involved" (Welter 2011, p.166). This is likely due to a shift away from positivism towards interpretivist research which aims to maintain and understand the context of people's experiences (Yanow 2006). Consequently, with this research being underpinned by an interpretivist philosophy, it is unsurprising that context is coming through as a finding.

Entrepreneurship itself can be seen a contextual process as it is a temporal experience (Morris et al. 2012). This reflects arguments made by Reynolds (2009) in the leadership and management literature, as he suggests that context is an important part of leadership as an experiential process that operates and is defined differently for different people. Similarly, the experience of entrepreneurship is different for different people because of both situational and personal factors and how people personally experience it (Morris et al. 2012). Therefore, context is an important part of the entrepreneur's experience in entrepreneurial activity more widely and in entrepreneurial learning more specifically. Building on this, entrepreneurship is argued to be "a contextual process of 'becoming' (Rae, 2000), where the entrepreneur is continually learning and developing in relation to his or her business and the wider environment" (Cope 2005, p.374). Therefore, if entrepreneurship is considered to be a contextual process of learning to become an entrepreneur, context plays an important role in an entrepreneur's learning. Cope (2005) explicitly stresses the role of context in entrepreneurial learning, particularly in terms of what entrepreneurs learn. He argues that the entrepreneurial learning task is contextual to meet the entrepreneur's needs. Cope also draws on the work of Minniti and Bygrave (2001, p.5) to demonstrate that learning is cumulative, and "entrepreneurs learn by updating a subject stock of knowledge accumulated on the basis of past experiences".

The importance of context to entrepreneurial learning is demonstrated in this research study in the contradictions and tensions present across the different accounts of the participants. Within the research data, a variety of conducive conditions and barriers to, and benefits and drawbacks of, entrepreneurial learning were suggested by the participants. Across the different interviews, contradictions became clear as conditions which were conducive for the learning of some entrepreneurs were barriers for the learning of others, and the benefit of saving time contrasts with the drawback of time commitment. Two contradictions in conditions were prominent during steps four and five of analysis; formal or informal learning contexts as conducive, and similarity with learning contributor as conducive but competition as a barrier. These contradictions show how the different participants experience learning in different ways and have different learning preferences. Therefore, context is important to consider.

Contradiction One: Formal Versus Informal Learning

The first prominent contradiction present in the findings of this research study is the contrast between formal and informal learning contexts as a conducive learning environment for the participants. This relates to the micro context of learning. The formality of learning contexts is an important factor in wider learning literature (for example, Coetzer et al. 2017; Eraut 2004; Eraut 2000; Marsick and Watkins 2001; Marsick and Volpe 1999; Marsick and Watkins 1990) with differentiation between formal and informal learning based on both the learning environment and learning design. In the entrepreneurial learning literature, informal learning is the focus of cognitive- and practice-experiential approaches, while social-experiential approaches focus upon formal learning. Bridging approaches to entrepreneurial learning have covered both formal and informal learning.

In this research, the participants spoke of their experiences with both informal and formal entrepreneurial learning. A number of the participants had engaged in formal learning programmes and had found them to be of value for a number of reasons. For one, formal learning programmes are highly designed in terms of their structure (Marsick and Watkins 1990) and are facilitated by a designated trainer (Eraut 2000) which provides a framework for entrepreneurial learning. Some of the entrepreneurs (such as Steve, Company C and Shaun, Company N) found such a framework to be conducive for their learning. In addition, Steve (Company C) found it difficult to

continue the learning outside of the formal programme, further suggesting the importance of the framework, facilitator and learning environment. A second reason formal learning programmes were shown to be of value was that they offered entrepreneurs the opportunity to engage directly with their peers. This ties in with Zhang and Hamilton's (2009) research as they found that entrepreneurs often feel lonely and isolated and formal learning programmes can provide them with a peer network. Often, entrepreneurs do not have other opportunities for such engagement (Zhang and Hamilton 2009).

Despite these reasons why formal programmes are conducive to entrepreneurial learning, not all of the participants were happy to engage in learning in this way. Ian (Company B) in particular was against learning in formalised contexts, preferring to stay away from structured programmes which may not be suitably tailored to his specific needs. He appeared to suggest formal contexts would be a barrier to his learning as there is no guarantee of relevant information. This aligns with Jones et al (2014, p.133), who state that traditional business support has a 'problem of value', meaning that "entrepreneurs usually struggle to see how programmes can help their business, understanding that the opportunity costs of their time are high".

All of the participants spoke of ways in which they engaged in informal learning either internally or externally. The informal learning the entrepreneurs engage in has different levels of intentionality. This is something Eraut (2004; 2000) highlighted in his discussions of informal – or, in his terminology, non-formal – learning. Eraut (2004; 2000) distinguished between reactive/opportunistic learning and deliberative learning. Reactive or opportunistic learning is incidental (Coetzer et al. 2017; Marsick and Watkins 1990), unplanned and spontaneous (Eraut 2004; 2000). In contrast, deliberative learning is planned, has a clear goal and time is set aside for the purpose of engaging in learning (2004; 2000).

When considering the role of informal learning of entrepreneurs, the learning is often thought to be incidental rather than deliberative (Cope and Watts 2000). There is some evidence of incidental learning within the findings of this research. Instances of incidental learning are evidenced most clearly with the social interaction of 'general conversations'. A stand-out quote to demonstrate this can be taken from Shaun

(Company N), who said "I think you just sometimes pick up little bits here and there, and you end up hearing things that have not been specifically told to you for the reason for you to take on board, it's just something you've heard". This demonstrates spontaneous learning during social engagement that had no learning goal or purpose. However, the findings of this research do not fully support the assumption that entrepreneurial learning tends to be incidental, with both incidental/reactive learning and deliberative learning discussed in the research interviews. Informal learning occurs both intentionally and incidentally, but most of the interactions identified pointed to deliberative learning by the entrepreneurs. Whilst this is a departure from the view of entrepreneurial learning as incidental, it is not surprising as deliberative learning is more likely to be explicit meaning the learner is conscious of it (Eraut 2000). Incidental learning may be implicit (Eraut 2000), meaning the entrepreneurs in the study will not be aware they have learned and are therefore unable to discuss such learning. For this reason, it is unsurprising that intentional, deliberative learning monopolised much of the discussions in the interviews.

Intentional learning is evidenced in the accounts of various participants. One example is when the two business partners of Company D engage in 'challenging'. This learning occurs informally within their business venture, making in informal, but has a purpose and is a planned use of social interactions which makes it intentional. Another example is from Alison (Company H), who purposefully shares her ideas in informal contexts to gain feedback as a form of learning. A further example is from Thomas (Company G). Thomas spoke of sharing experiences with his suppliers to find a solution to overcome issues he was facing with his employees. This demonstrates a deliberate attempt to learn during his social engagement with other people in informal contexts.

Though no new insight is added in terms of the formality of entrepreneurial learning, this research shows that both formal and informal learning contexts are of value to entrepreneurial learning. It also supports existing literature which argues that learning has different levels of intentionality as well as formality.

Contradiction Two: Similarity Versus Competition
A second contradiction identified in the analysis of the research data is between similarity and competition. The data shows that entrepreneurs have a preference for

their learning contributor to be similar to themselves, whilst also showing that direct competition can be a barrier to learning during social engagement. As competitors are in the same field, there are natural similarities between an entrepreneur and their competition. This can create a barrier to learning as competitors may be reluctant to share their knowledge in case they face negative consequences in their own business as a result (such as loss of custom, lack of differentiation etc). Therefore, the data reveals that there is a tension between the want for similarity and a reluctance to contribute to learning by competitors.

In their work on entrepreneurial role models, Bosma et al (2012) shed light on the importance of similarity. They state "without such similarity it is difficult for the entrepreneur to perceive the behaviour of the role model as compatible with their own (perceived) behavioural opportunities" (Bosma et al. 2012, p.414). Though this is specific to vicarious, observational learning rather than wider understandings of learning during social engagement, it shows the importance of entrepreneurs seeing resemblance between themselves and their learning contributor. This connects to both micro and macro contexts, as the similarity between individuals may be on either a personal or a societal level.

Often, the discussions of similarity in the interview data is connected to formalised learning programmes. When engaging in such programmes, the entrepreneurs are looking for similarity between the various programme participants. This is likely to be connected to the 'contextual problem' of formal learning programmes (Jones et al. 2014). The contextual problem arises from traditional learning programmes which are "'supply orientated' rather than 'demand orientated' (Dalley and Hamilton 2000; Pittaway and Thorpe 2012). They struggle to meet what is required by entrepreneurs whose learning needs can vary by the types of firm; problems experienced; entrepreneur's motivation; stage of growth and immediacy of the issues being addressed" (Jones et al. 2014, p.133). This problem connects to Christopher's (Company J) view that "If you all meet up and you're all in different boats it isn't much use". Therefore, it highlights that entrepreneurs prefer to learn with those similar to themselves in terms of industry, experience and business size. This points to a consideration of micro context as emphasis is on personal and situational context similarities and macro context in terms of the industry (van Gelderen et al. 2012).

A want for similarity can be connected to the concept of homophily. Homophily is "the principle that a contact between similar people occurs at a higher rate than among dissimilar people" (McPherson et al. 2001, p.416). Such similarity is based upon "socially important attributes such as race, sex, education, and age" (Borgatti and Cross 2003, p.434), incorporating both micro and macro contextual factors. This understanding demonstrates that people tend to choose to interact and form networks with those who they see social similarities with. Because entrepreneurial identity is interwoven between the entrepreneur as an individual and their business venture (as shown in principle two), the similarity entrepreneurs are wanting is different. Rather than social factors, they are looking for business similarities such as being in the same industry and having the same role. This shows that the similarity entrepreneurs are looking for in their social engagement resembles homophily, but the distinct context of entrepreneurship and how it affects identity creates a new form of similarity.

Despite this preference for similarity, "entrepreneurs may be suspicious toward other entrepreneurs and feel uncomfortable revealing too much about themselves or their businesses. For example, they may worry about the risks of exposing sensitive information related to their weaknesses or too much information about their unique business concepts" (Bergh et al. 2011, p.18). This highlights the contradiction between wanting similarity and finding competition to be a barrier to entrepreneurial learning. Evidence of competition as a barrier can be seen in the example from Kirsty (company F), who spoke of her experiences trying to learn from her competitors by asking them questions. In doing so, she hoped to gain skills and knowledge to apply to her own business. However, the competitors she attempted to engage with refused to help. In contrast to this experience, Christopher (Company J) spoke of how he and fellow competitors would talk about regulatory issues and share learning with each other. This demonstrates competition is not always a barrier. Context can explain these differences. Kirsty and Christopher work in very different industries, demonstrating different macro contexts. Kirsty paints furniture. If there are things that her competitors can do that she cannot then they have a unique selling point and can stand out; therefore, they are unlikely to share those skills with others. In contrast, Christopher works in chemical regulations. As his competitors will be bound by the same regulations, they are more willing to share knowledge as they are not sharing anything which makes them unique. Therefore, competition is less of a barrier in some industries than others and has an

impact on the level of knowledge sharing and learning during social engagement. This is not to say that competitors are willing to share all of their knowledge as they are still competitors and need some level of differentiation. This example also illustrates that the context can have an influence on the most appropriate form of learning used. In her industry (macro context), social engagement is not an appropriate way of gaining skills and knowledge. Rather, Kirsty needed to engage in individual learning through research or experimentation.

In the analysis of the data, it was found that trust can be a mediating factor between similarity as conducive and competition as a potential barrier to entrepreneurial learning. This connects to Bergh et al's (2011, p.18) comment that "building trust in order to gain experience and exchange knowledge […] may be essential". It highlights that trust has a role both as a condition that is conducive to entrepreneurial learning and as a facilitator for competitors to become learning contributors rather than barriers. Trust can be understood to be "the willingness to be vulnerable and open to others based on positive expectations that others have something to give and are concerned and reliable in their motives and conduct" (Bergh et al. 2011, p.20).

It is not new to connect trust to learning during social engagement. McEvily et al (2003), for example, show that trust has multiple impacts on the sharing of knowledge. Firstly, it increases the likelihood and willingness of knowledge to be shared. Secondly, the holder of the knowledge feels confident that the knowledge with be used correctly. Thirdly, the receiver is more likely to consider the knowledge reliable and accurate without having to verify the information. However, "even the most reliable and best-intentioned source can mistakenly share knowledge that is inaccurate, invalid, or outdated" (McEvily et al. 2003, p.97), and therefore trust is not always positive.

Consideration of this contradiction supports existing research which shows the importance of similarity and trust to social forms of learning. It builds upon existing understandings of homophily which explain a want for similarity and demonstrates that entrepreneurial homophily is distinct. As entrepreneurs search for business similarity rather than similarity of social factors, the homophily they require is of a different nature. This relates back to the concept of entrepreneurial identity, further demonstrating that the ways entrepreneurs identify has an impact on their learning.

Summary

This chapter has explored the three principles in relation to existing literature, representing the final stage of interpretation and abstraction. From this analysis, a number of insights and contributions to the existing entrepreneurial learning literature have been provided. To summarise, the insights of each principle will be highlighted before the three main contributions of the study are presented.

The most insight has been generated through the analysis of the first principle, which states 'multiple, interwoven social interactions combine with other learning mechanisms and influencers for entrepreneurs to learn'. Analysis of this principle demonstrates that learning occurs through combinations of learning mechanisms rather than in a linear cycle of prescribed steps. These combinations are presented as learning sequences. These learning sequences can be considered to be learning tools, with the entrepreneurs selecting (consciously or not) a sequence and engaging in learning with no specific process, cycle or order to their use.

Analysis of the first principle builds upon entrepreneurial learning literature as existing theorising of cognition is focused on individual cognition. This research adds to this by showing how entrepreneurs also engage in shared cognition when they engage in brainstorming – a process that involves both cognitive conflict and the co-creation of meaning. This study has also highlighted the role of an entrepreneur's locus of cognition in learning during social engagement. The way entrepreneurs engage with others is affected by their locus of cognition, with some entrepreneurs having a preference for learning with others (external locus) and others having a preference for learning on their own (internal locus). This adds insight into the learning differences of the partnerships and why some entrepreneurs were more likely to engage in shared cognition and others individual. This research study also adds to the existing literature by demonstrating that an individual's locus of cognition can change over time with experience; something which has not been previously considered.

Analysis of the first principle also reinforced the pivotal role reflection has been shown to have in existing entrepreneurial learning literature. From this, insight has been added by recognising how social interactions and reflection are interconnected rather than

distinct. This builds upon extant literature which emphasises reflection at the individual level. Further to this, the analysis reveals that experience influences entrepreneurial learning during social engagement. It supports the argument that not everything can or should be learned from direct personal experience alone. Additionally, it expands existing understandings of vicarious learning which only appear to consider observational vicarious learning. This research has shown that entrepreneurs are able to learn from second-hand experience through social interactions as well as observations.

Insight was also generated in the analysis of the second principle, which states 'learning during social engagement results in multi-layered and intertwined outcomes'. Analysis of this principle pulled together existing conceptualisations of learning outcomes (St-Jean et al. 2018; Cope 2005) to reveal three categories of entrepreneurial learning outcomes (cognitive, affective and relational). In applying Cope's (2005) learning tasks to the analysis of principle two, only four of the five learning tasks were identified. This suggests that there is a need for entrepreneurs to engage in other forms of learning alongside learning during social engagement in order to fulfil all five learning tasks. The analysis of this second principle also revealed that entrepreneurial identity explains why the outcomes of learning during social engagement are intertwined at different levels, as entrepreneurial identity is also intertwined at multiple levels. This adds new insight and points to an area of further study as the intersection of entrepreneurial learning and entrepreneurial identity.

Analysis of the third principle (learning during social engagement is contextually dependent and affected by various factors) mainly reinforced existing literature. One of the contradictions considered in the analysis was between formal and informal learning. This research does not add new insight in this area but supports that there is value in both formal and informal learning contexts and that informal learning occurs with different levels of intentionality. The other contradiction this analysis considered was between similarity and competition. From this contradiction, this study supports the existing research in terms of the role of both trust and similarity in social forms of learning. It builds upon this research by connecting with the concept of homophily. The analysis proposes that homophily is distinct in entrepreneurship due to the entrepreneurial identity and entrepreneurs wanting business-related similarity over similarity of social factors such as age, race and gender. This study argues that factors

such as trust can mediate between contradictions, but elements of both micro and macro context mean there will always be differences in experiences of entrepreneurial learning. From this analysis of the third core principle, this research argues that context plays an integral role in entrepreneurial learning during social engagement.

Based on these insights, this research study has three main contributions to the entrepreneurial learning literature. The first contribution is the argument for integration rather than fragmentation. Analysis in this study demonstrates a need to pull together the different approaches to entrepreneurial learning as the different mechanisms combine in a number of ways. This suggests that the different forms of learning are not as distinct as they first appear. The second contribution is in the provision of an extended model of learning sequences (Bingham and Davis 2012). The analysis and resulting model have extended the learning sequences framework in two ways; firstly, by expanding the processes/mechanisms which are present in the sequences, and secondly, by adding four new learning sequences. The third contribution of this research is in the interlinkages of the three core principles which show entrepreneurial learning is an integrated process which is contextually dependent, impacted by various factors and results in cognitive, affective and relational outcomes which are intertwined at multiple levels.

Chapter Six: Conclusion

This concluding chapter of the study brings together the research and closes the thesis. It is split into three main parts. Firstly, the chapter will address the four research questions. Secondly, it will demonstrate the contribution of this research study to the field of entrepreneurial learning and present a model of entrepreneurial learning during social engagement based upon the findings. It will also outline the practical implications of the study in relation to both entrepreneurial learning programmes and relevant policy. Finally, it will show the limitations of this research with emphasis on how future research could develop work in this area.

Section One: Addressing the Research Questions

A review of the existing literature (Chapter Two) highlighted that the field of entrepreneurial learning is largely fragmented with a variety of different approaches taken to how entrepreneurs learn. Though there is a consistent understanding that entrepreneurial learning is an experiential process (Zheng et al. 2017), research has been divided into approaches which emphasise the role of cognition, practice or social relationships in such learning. Within this fragmentation, social-experiential approaches are under-developed. This illuminated four gaps in our knowledge of entrepreneurial learning during social engagement. The first gap in our understanding is in terms of the process of entrepreneurial learning during social engagement, specifically in the role of social interactions. The second gap is in the understanding of what affects this learning process in terms of the factors that can aid or impede the learning. The third gap relates to the results of the learning as there is limited understanding regarding the outcomes of entrepreneurial learning during social engagement with other people. Building on this is the fourth gap, which considers how the entrepreneurs perceive their learning during social engagement to be of benefit to them. These four gaps led to the research questions guiding this study and are addressed in the following sub-sections.

RESEARCH QUESTION 1: ROLE OF SOCIAL INTERACTIONS

The first research question asks, "how do social interactions contribute to entrepreneurial learning during social engagement?". In answering this question, two points can be established. Firstly, social interactions have a significant role in

entrepreneurial learning during social engagement. Secondly, whilst these interactions are important, they are not the only learning mechanism involved. This shows entrepreneurial learning is complex and integrated. Rather than learning mechanisms always occurring in isolation, they often combine with each other in multiple ways.

Expanding on these two points, this study demonstrates that social interactions are a core learning mechanism for entrepreneurs in learning during social engagement. Various social interactions were identified; including questioning, sharing, listening and conversing. Although each of these has a distinct purpose, analysis showed a number of ways they are interwoven and combine with each other for entrepreneurs to learn. Moreover, there is evidence to show that the social interactions combined not only with each other, but also with the mechanisms of cognition and reflection. The combination of social interactions and cognition occurs in the data in two ways; (1) with cognition as the analysis and evaluation of social interactions, and (2) social interactions prompting a change in perception or way of thinking (cognition). The combination of social interactions and reflection mainly occurs with the interaction of questioning. Questioning is shown to be part of the reflection process and as a prompt for reflection, with social interactions and reflection often being iterative. In addition to these mechanisms, experience can be seen to influence entrepreneurial learning during social engagement. Practical experience drives social interactions and social interactions are shown to be a form of vicarious learning. Therefore, the analysis points to the dynamic complexity of entrepreneurial learning during social engagement by demonstrating how social interactions are interwoven and how different learning mechanisms combine.

RESEARCH QUESTION 2: FACTORS AFFECTING LEARNING DURING SOCIAL ENGAGEMENT

The second research question asked, "how can entrepreneurial learning during social engagement be aided and/or impeded?". This question aimed to build understanding of the factors which may enable and those which may hinder entrepreneurial learning. In answer to this question, the analysis has shown that there are multiple conditions conducive to learning during social engagement and also a number of barriers. Importantly, the analysis highlighted that there are contradictions present within these conditions.

Conditions which are shown to be conducive for entrepreneurial learning during social engagement include: informal, casual engagement with others; formal programme engagement; trust; engaging with certain people when facing certain problems; and similarity with learning contributors. Conditions which are barriers to entrepreneurial learning during social engagement include: resistance to help and advice; lack of confidence; and competition. Though these barriers do not necessarily stop learning from occurring, they can impede it. One of the contradictions identified is in the formality of learning, with some participants stressing that informal learning contexts are most conducive and others expressing the value of formalised learning contexts. Another prominent contradiction in the data is the want for similarity with a learning contributor (a factor which is conducive to learning) but facing competition as a barrier to learning during social engagement. Interestingly, one of the conditions – trust – may have the ability to turn a barrier into a conducive condition. Trust was revealed to be both a conducive condition and a mediator between the similarity-competition contradiction.

An important element coming from the analysis which contributes to answering this research question is the need for balance between the learning contributor, the learning problem and the learning situation. This means the entrepreneur needs to ensure the learning contributor they are turning to is appropriate for the problem they are facing. The learning situation may also play a role in this appropriateness, as the formality of the learning context may have a bearing on whether a learning contributor is appropriate or not.

RESEARCH QUESTION 3: OUTCOMES OF LEARNING

The third research question asked in this study is "what are the outcomes of learning during social engagement?". In answer to this question, there are a variety of learning outcomes that impact the entrepreneur on both personal and business levels. These personal and business levels are intertwined due to entrepreneurial identity.

The different learning outcomes were shown to impact upon three levels; firstly, at the personal level of the entrepreneur, secondly on the operational level of the business and thirdly on the strategic level of the business. Examples of the outcomes identified include changes to the business direction, gained knowledge and skills, and gained

confidence. Analysis revealed that these three levels are intertwined, with learning outcomes having multiple levels of impact. Some specific outcomes which impacted more than one level include gained knowledge and skills (which have a direct operational impact but also impact the entrepreneur on a personal level) and gained confidence (which has a direct personal impact but also impacts on the operational and/or strategic level of the business). The outcomes are cognitive, affective and relational and are connected to four of the five learning tasks Cope (2005) suggests entrepreneurs should focus on. These four learning tasks are 'learning about oneself', 'learning about small business management', 'learning about the business' and 'learning about the nature and management of relationships' (Cope 2005).

Entrepreneurial identity theory was employed to explain how and why the learning outcomes are intertwined at multiple levels. As literature suggests that the business venture can be seen as an extension of the entrepreneur as a person (Bell et al. 2018), the venture is an important part of an entrepreneur's identity. The entrepreneur as a person and the business venture are intertwined rather than distinct entities. Consequently, the outcomes which are the result of entrepreneurial learning impact on both personal and business levels.

RESEARCH QUESTION 4: BENEFITS TO ENTREPRENEURSHIP

The final research question asked in this study is "how does entrepreneurial learning during social engagement benefit entrepreneurs?". The aim of this research question was to gain understanding of the benefits the entrepreneurs perceived to have gained from their engagement in learning during social engagement. In answering this research question, the analysis revealed that learning during social engagement has both perceived benefits and drawbacks for the entrepreneurs in this study. It also revealed tensions between these benefits and drawbacks, demonstrating the contextual dependency of learning during social engagement.

Perceived benefits which were identified in the analysis of the research data include issue limitation, overcoming personal limitations, and saving time. Perceived drawbacks include the required time commitment, the financial cost and the possibility of engaging with the wrong person. This reveals a tension between the perceived benefits and drawbacks to entrepreneurs, with time being considered both a benefit and

drawback of learning during social engagement. This highlights the different perspectives, demonstrating how learning is different for different people.

This thesis demonstrates how learning is context dependent. It became evident that learning during social engagement is not always the most appropriate form of learning, and that context is vital in determining the best way to learn. Important contextual factors, including the problem, situation, experience of the entrepreneur, financial situation, availability of learning contributors, and access to networks, all play a role in the most appropriate form of learning for entrepreneurs to engage in.

Section Two: Contributions to the Field

This study contributes to the entrepreneurial learning field in three main ways. Firstly, in the development of three core principles that demonstrate how entrepreneurial learning is an integrated rather than fragmented process which impacts on multiple entrepreneurial levels and is influenced by a variety of factors. Secondly, by expanding extant theory. The findings extend Bingham and Davis' (2012) theory of learning sequences by adding to the direct and indirect learning processes which contribute to entrepreneurial learning, and identifying four additional learning sequences. Thirdly, this study contributes to the existing literature by introducing a model of entrepreneurial learning during social engagement based upon the three core principles and the learning sequences. Each of the following subsections explains these contributions in more detail, with a final subsection outlining the practical implications of this research study.

LEARNING PRINCIPLES

From this study, three core principles emerged that contribute to our understanding of entrepreneurial learning. They do this by illustrating the key characteristics of entrepreneurial learning during social engagement and demonstrate how these characteristics are interrelated, building on the existing entrepreneurial learning literature from a social-experiential approach.

The three core principles are: (1) multiple, interwoven social interactions combine with other learning mechanisms and influencers for entrepreneurs to learn; (2) learning during social engagement results in multi-layered and intertwined outcomes; (3)

learning during social engagement is contextually dependent and affected by various factors. The first principle is of particular importance as it draws attention to the fragmented nature (Wang and Chugh 2014; Warren 2004) of existing entrepreneurial learning literature and argues for understanding entrepreneurial learning as an integrated process. Rather than considering cognition, practical experience, reflection and social engagement separately, this research demonstrates the need to integrate them as they combine in a variety of ways in entrepreneurial learning (shown in answering the first research question). The first principle is foundational for the second and third as it represents how the entrepreneurs learn, underpinning what entrepreneurs learn and how their learning is affected. This interrelationship of the three core principles forms the basis of the model of entrepreneurial learning presented later in this chapter (Figure 14, p.178).

LEARNING SEQUENCES

A second contribution of this research is the extension of Bingham and Davis' (2012) theory of learning sequences. Learning sequences provide a framework for the combinations of learning mechanisms identified within this study. They are appropriate as they allow for the integration of different learning mechanisms in various ways (principle one) and explain how entrepreneurs learn during their social engagement with other people. Bingham and Davis' (2012) theory is extended in this research study in two ways: (1) the addition of direct and indirect learning processes (termed mechanisms in this study); and (2) the addition of four learning sequences. Bingham and Davis (2012) explicitly provided three direct learning processes (trial and error, experimental learning, and improvisational learning), and one indirect learning process (observational vicarious learning). The findings of this research point to the inclusion of cognition, reflection and social interactions. Cognition is a direct learning process while social interactions are an indirect process. Reflection can be either, with inward reflection a direct learning process and outward reflection an indirect learning process. This is illustrated in the second row of Table 7 (page 152, chapter 4).

By expanding the processes and having a focus on social engagement rather than practice, four additional learning sequences were identified. This further builds upon the work of Bingham and Davis (2012) who identified two sequences, seeding and soloing. The sequences of seeding and soloing each involve two processes, and both

sequences include at least one direct learning process. In contrast, all of the suggested additional sequences involved an indirect process. Some of the sequences identified within the analysis of this study's data also included more than two processes. These additional sequences are shown alongside the original sequences in the figure below which illustrates the extended model (Figure 13, also shown on page 154, chapter 4). This is important because it reinforces the integrated nature of entrepreneurial learning due to the interplay between the different learning mechanisms.
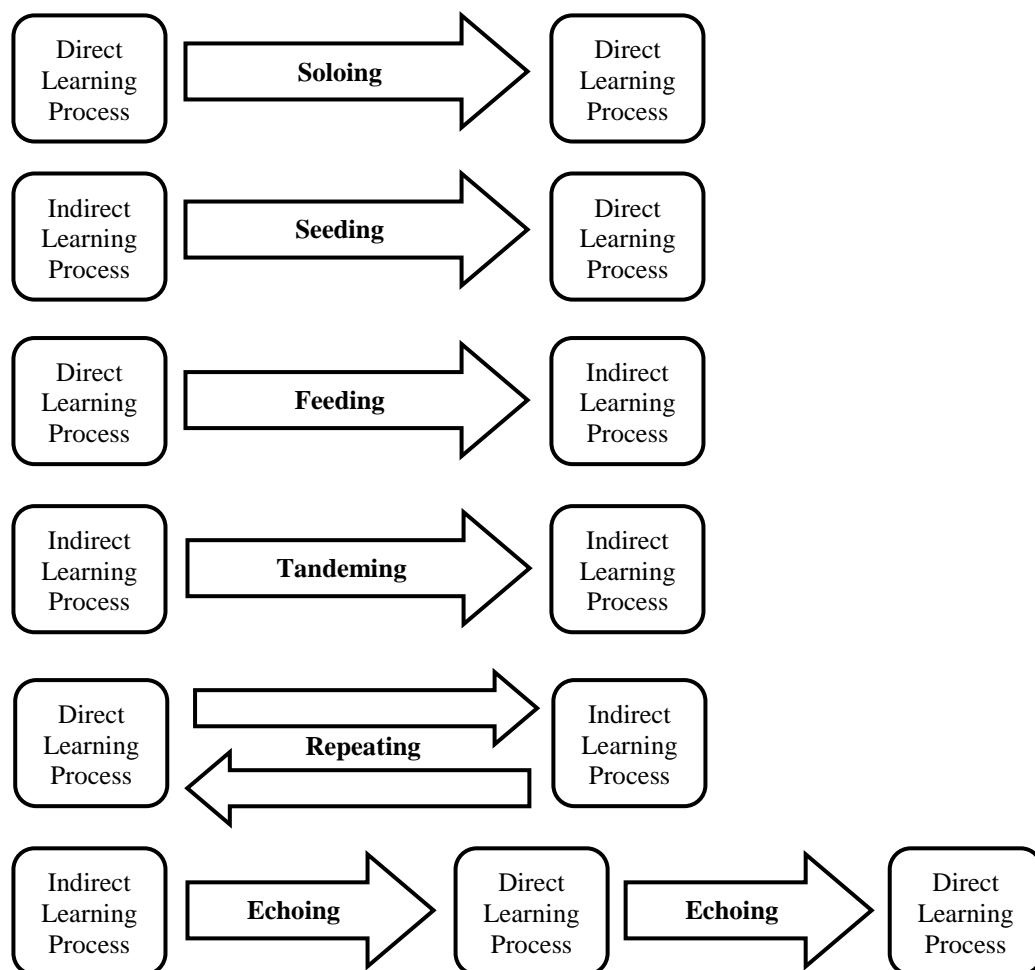
Figure 13: Extended Model of Entrepreneurial Learning Sequences
(Development of Bingham and Davis 2012)

Applying and extending the model of learning sequences presents a shift away from cyclical understandings of learning. Learning cycles, in particular Kolb's experiential learning cycle (1984), have previously been used to explain the process of learning. Such cycles are highly structured and can present as linear which may imply that all learning occurs in the same way. The experiences of the participants of this research

study contrast with this. Not only does learning vary between the different participants, there are also differences in their learning depending on the problem at hand. Sequences better model their learning as there is less structure and more freedom in their use because the learning sequences represent the different combinations of mechanisms that entrepreneurs can draw on (either consciously or subconsciously) depending upon their situation and learning needs. Rather than demonstrating a prescribed process of entrepreneurial learning, the sequences demonstrate a range of learning tools the entrepreneurs can use as part of their iterative engagement in learning.

Model of Entrepreneurial Learning During Social Engagement

A significant contribution of this research is in the presentation of a social-experiential theory of entrepreneurial model (Figure 14, overleaf), reflecting entrepreneurial learning during social engagement. The suggested social-experiential learning theory brings together the three core principles, showing entrepreneurial learning is an integrated process of interwoven learning mechanisms which is impacted by multiple factors and is context dependent. The outcomes of such learning impact on both the entrepreneur and their business as the two are intertwined. The interwoven learning mechanisms are used by the entrepreneurs as learning tools in a variety of learning sequences.
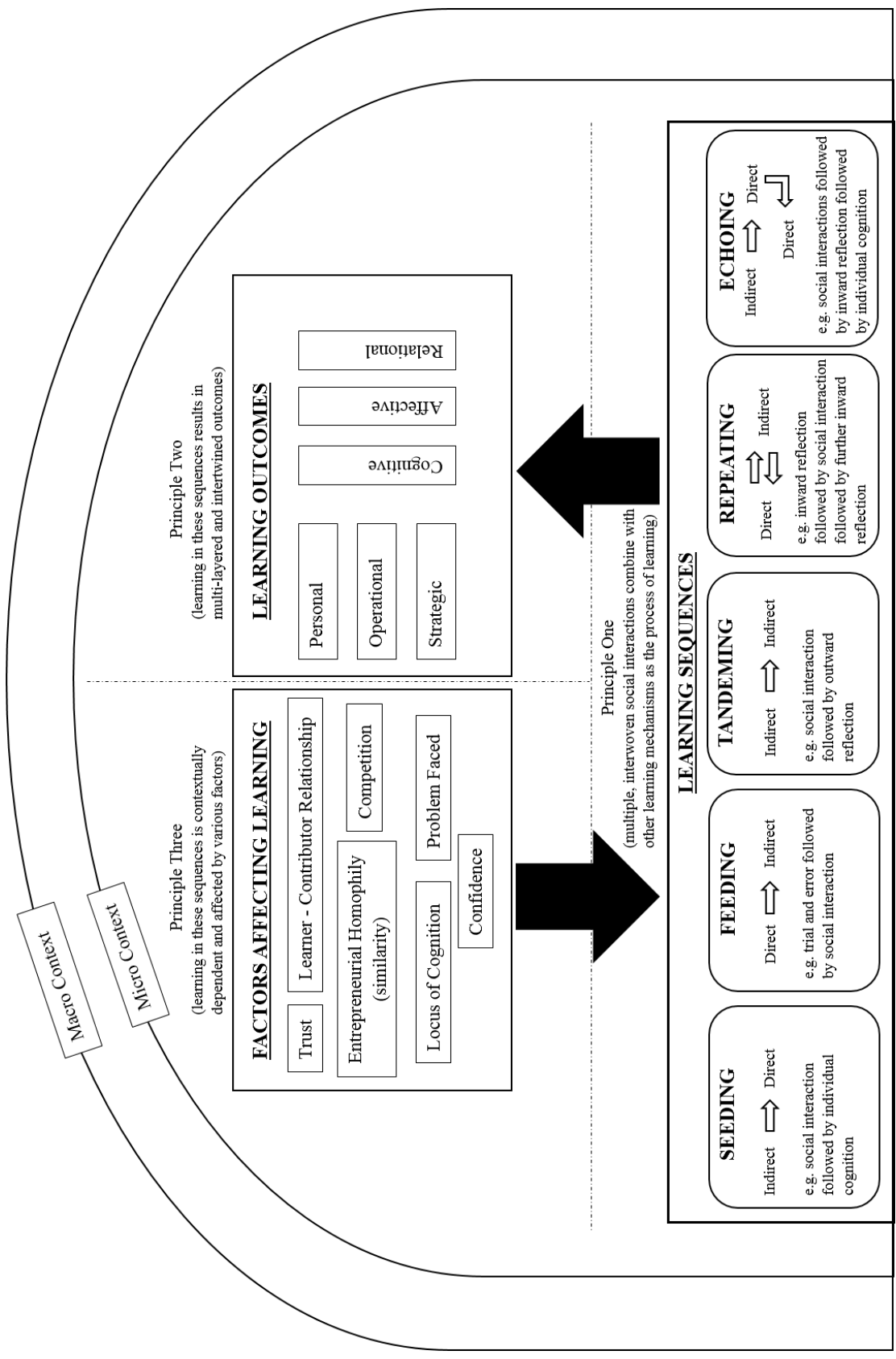
Figure 14: Social-Experiential Model of Entrepreneurial Learning

(Author's Own)

FACTORS AFFECTING LEARNING

Trust | Learner - Contributor Relationship

Entrepreneurial Homophily (similarity) | Competition

Locus of Cognition | Problem Faced

Confidence

Principle Three
(learning in these sequences is contextually dependent and affected by various factors)

LEARNING OUTCOMES

Cognitive

Affective

Relational

Personal

Operational

Strategic

Principle Two
(learning in these sequences results in multi-layered and intertwined outcomes)

LEARNING SEQUENCES

Principle One
(multiple, interwoven social interactions combine with other learning mechanisms as the process of learning)

SEEDING
Indirect ⟷ Direct
e.g. social interaction followed by individual cognition

FEEDING
Direct ⟷ Indirect
e.g. trial and error followed by social interaction

TANDEMING
Indirect ⟷ Indirect
e.g. social interaction followed by outward reflection

REPEATING
Direct ⟷ Indirect
e.g. inward reflection followed by social interaction followed by further inward reflection

ECHOING
Indirect ⟷ Direct   Direct
e.g. social interactions followed by inward reflection followed by individual cognition

Macro Context

Micro Context

Principle one, which reads 'multiple, interwoven social interactions combine with other learning mechanisms and influencers for entrepreneurs to learn', is the foundational principle and is therefore positioned at the base of the diagram. This section of the model demonstrates *how* entrepreneurs learn during social engagement with others. It includes five learning sequences; seeding, feeding, tandeming, repeating and echoing. All of these sequences were identified within this research study and involve at least one indirect learning process. To recap, indirect processes are those where entrepreneurs learn from the experiences of others. Therefore, the sequences in the model include at least one learning mechanism that comes from social engagement with other people. Some of the sequences also include direct learning processes which involve active engagement in experience and do not require any social engagement with others. The five sequences comprised in this model highlight that entrepreneurial learning is an integrated process because the variety of combinations demonstrates that the different learning mechanisms interplay in learning in several ways.

The top right of the model represents principle two of this research. Principle two reads 'learning during social engagement results in multi-layered and intertwined outcomes'. This reflects *what* the entrepreneurs learn, demonstrated by the arrow coming out of the learning sequences. Three types of outcome are listed – cognitive, affective and relational – which are multi-layered as they impact on at least one of three levels – personal, operational and strategic. These levels represent both the individual and the business. The outcomes of learning during social engagement are intertwined, sometimes affecting more than one level. Entrepreneurial identity explains why the outcomes are multi-layered and may impact both the individual and business levels as the "entrepreneurial identity embeds all three levels of analysis - the founder (individual level), the proposed new venture (organizational level), and the focal institutional sector (market level)" (Navis and Glynn 2011, p.481). Theorising within the entrepreneurial identity literature suggests entrepreneurs are unable to differentiate themselves from their businesses (Bell et al, 2018). Therefore, the outcomes of entrepreneurial learning have multiple levels of impact.

The top left of the model and the two arcs that surround all of the boxes represent the third principle. Principle three states 'learning during social engagement is contextually dependent and affected by various factors'. The box shows factors affecting learning,

demonstrated by the arrow going into the learning sequences, including elements such as trust, competition and confidence. These factors may not always be present and may not be limited to just those listed. Surrounding the rest of the model are the micro and macro contexts, which influence the sequence, the condition(s) which is/are most conducive and the outcomes of learning.

This model contributes to the entrepreneurial learning literature by adding to existing understandings of entrepreneurial learning during social engagement. Unlike existing research in this area, this social-experiential model of entrepreneurial learning demonstrates how entrepreneurs learn from various learning mechanisms, what they learn both on a personal and business level, and how their learning can be affected. It also emphasises the importance of both micro and macro contexts to this learning process, an area which is important for the development of the entrepreneurial learning field. In the presentation of this model, the researcher advocates for a shift away from fragmentation towards an integrated understanding of entrepreneurial learning.

PRACTICAL IMPLICATIONS

Alongside theoretical contributions, this study also provides practical contributions to entrepreneurship education and policy. This research can enhance entrepreneurship education programmes in terms of both content and design. Based on the social-experiential theory of entrepreneurial learning put forward in this thesis, programmes could update their content to make connections between different forms of learning for entrepreneurs. This would broaden the entrepreneur's understanding of their own learning and help them to connect their experiences to their learning. In addition, it could expose them to new forms of learning and provide them with new learning tools (in the form of learning sequences) to use when facing a problem. Further to this, programmes could be designed to encourage entrepreneurs to think about who is in their networks and how they interact with them.

Practical implications to policy stem from the participants of this research sharing their positive experiences of entrepreneurial programmes they have engaged in. This supports the need for policy to include initiatives that provide entrepreneurs with opportunities to engage with others, particularly in learning programmes that encourage peer networks. Not only would such initiatives directly aid entrepreneurs in their

learning, they are also shown in this research to change the locus of cognition of those who engage. This then expands the forms of learning entrepreneurs engage with, providing them with wider opportunities for learning and overcoming issues. It can also begin to remove the feeling of isolation as it encourages entrepreneurs to both build new networks of trust and engage more with existing networks.

Section Three: Limitations and Future Research

As with all research, this study is not without its limitations. In identifying limitations, suggestions can be made for future research which would continue to develop understandings of entrepreneurial learning. One limitation of this research is that it engages in the fragmentation of entrepreneurial learning research by only considering entrepreneurial learning during social engagement. An observation of the fragmented nature of entrepreneurial learning literature showed that social-experiential processes which consider learning during social engagement are an underdeveloped area. However, this research has been important in articulating the integrated nature of entrepreneurial learning as it highlights the interconnection between the mechanisms of social interactions, cognition and reflection. Going forward, entrepreneurial learning should be considered in its entirety to see how the different mechanisms interplay in the various forms of learning. Therefore, future research should consider entrepreneurial learning as an integrated process rather than emphasising a single learning mechanism as part of a distinct learning approach. Such future research would have value by showing the different processes involved in entrepreneurial learning and how they interrelate which could lead to the development of an overarching theory of entrepreneurial learning.

This research took a broad overview of social-experiential entrepreneurial learning in order to understand more fully how entrepreneurs learn during social engagement. The study has built upon existing knowledge of social-experiential entrepreneurial learning and outlined how entrepreneurs learn during social engagement, what entrepreneurs learn during social engagement, and how entrepreneurial learning during social engagement can be affected. This sets up opportunities for further, in-depth study. In particular, further research should explore the learning sequences as they have been revealed in this research to be the process of entrepreneurial learning during social

engagement. Longitudinal research which uses a variety of data collection techniques, such as diaries/learning logs, observations and questionnaires, is suggested to capture the learning and development of skills by entrepreneurs over time and in a variety of learning situations. Important aspects for future research to consider include whether the sequences involve only certain learning mechanisms, and whether certain sequences are best suited to a specific type of problem. This will help develop understanding of entrepreneurial learning by breaking down the complexity of the entrepreneurial learning process and providing more in-depth detail than has been achieved in this study.

This research takes an interpretivist perspective, which is useful for understanding experiences and building theory based upon them. This has led to the development of a model which could be tested in future studies. The data and analysis are specific to the experiences of those entrepreneurs participating in the research, which provides an opportunity for future research to test the model and its applicability to entrepreneurship more generally. Such future research may be better achieved from a different perspective. Other perspectives may reveal how applicable the model is to a wider sample of the entrepreneurship population and could build more understanding of the interlinkages between the three core principles in this model.

A final area of future study highlighted by this research is the role of identity in entrepreneurial learning. The analysis of the second core principle in relation to existing research suggests that entrepreneurial identity explains why the learning outcomes are multi-layered. As knowledge of entrepreneurial identity is limited (Leitch and Harrison 2016; Navis and Glynn 2011), the connection between entrepreneurial identity and learning outcomes is under-developed. It is proposed here that this could be a fruitful area for future research as it develops understanding in two important areas of entrepreneurship research. It is also of value because it further distinguishes entrepreneurship as a distinct context of learning. Entrepreneurial identity demonstrates differences between entrepreneurs and other managers/leaders, and its effect on entrepreneurial learning outcomes illustrates why learning is different for entrepreneurs and therefore needs to be considered as a distinct learning context.

Summary

This research study has taken a social-experiential approach to entrepreneurial learning, exploring how entrepreneurs learn during social engagement. It proposes a model of entrepreneurial learning during social engagement built upon the three core principles which emerged from the data analysis. An important part of this model is the learning sequences. Learning sequences show how entrepreneurs learn through a combination of different learning mechanisms. This study expands current theory of learning sequences (Bingham and Davis 2012) and identifies four new learning sequences that are present in entrepreneurial learning during social engagement. This thesis advocates future research should take an integrated approach to entrepreneurial learning. Doing so would move entrepreneurial learning away from fragmentation (Wang and Chugh 2014; Warren 2004), towards a recognition of how different learning mechanisms and forms of learning are interrelated.

Appendices

Appendix One: Participant Information Sheet

Appendix Two: Participant Selection Form

Appendix Three: Coding Framework

Participant Information Sheet

My name is Jennifer Carter and I am a PhD student at Lancaster University. I would like to invite you to participate in a research project that will contribute to my PhD. Before you decide whether you would like to take part, please read the following information to understand why the research is being done and what it will involve for you. Please take time to read the information carefully and ask questions if anything you read is not clear or you would like more information. Thank you.

_____

Focus of the Study:

The role of social interactions and working together in the learning of small business owner-managers.

Purpose of the study:

Research to date has largely been focused upon how small business owner-managers learn by themselves as they create and grow their businesses. Such research has looked at how small business owner-managers learn through a combination of experience and reflection. My research aims to broaden this understanding of how small business owner-managers learn by looking at how other people contribute to such learning. In particular, I aim to understand the role of social interactions and working together in the learning, the different situations in which this learning occurs, and the factors which encourage and impede such learning.

Design of the study:

The study involves interviews with business owner-managers that will last approximately 45minutes to an hour. These interviews may be on an individual basis or, in companies where there are multiple owners, a group interview may be conducted.

Why have I been asked to participate?

You have been asked to participate in this study because of your experience in creating, developing and growing your own business. The experiences and learning that you have encountered so far during the development of your business are of great value to this study.

What does participation in the study involve for me?

Participation in the study is completely voluntary and all meetings/interviews will be arranged at your convenience.

Follow up interviews (on either a one-to-one or group basis) may be requested if I feel that more questions have arisen throughout the research process.

If you decide to participate in the study, I will ring or email you to discuss the interview procedure and arrange a time, date and location for our interview. All meetings/interviews will take place at your workplace or at Lancaster University, depending upon your preference. With your consent, interviews will be audio-recorded.

Will my participation in the study be kept confidential?

All interviews will be regarded as strictly confidential. If you participate in a group interview, we ask that you respect the confidentiality of your business partner(s) and do not share anything that is said outside of the group.

Consent forms, participant information, interview notes and guides, interview recordings and transcripts will all be kept secure in a locked filing cabinet. Additionally, the recordings will be kept on an encrypted external hard drive for added security. All data will be kept for a period of ten years before being deleted. The data will be used primarily for academic purposes including in publication of academic articles, books, chapters etc. All names will be anonymised.

What if I decide I no longer wish to participate?

There is no pressure for you to participate, and you can withdraw from the study at any time. If you withdraw at any time during the data collection and up to four weeks after

data collection your data will be removed from the study and destroyed. If you withdraw at a later date, your data will remain in the study.

<u>Contact information of the researcher and supervisors:</u>

If you have any questions, or require any further information then please feel free to contact the researcher at the following:

Jennifer Carter

Department of Management Learning and Leadership

Lancaster University Management School

Lancaster University

Lancaster

LA1 4YX

Email: j.carter@lancaster.ac.uk

If you have any concerns or queries regarding any aspect of this research project, please contact the researcher's supervisors at Lancaster University on the following email addresses or telephone number:

Dr Valerie Stead

Email: v.stead@lancaster.ac.uk Tel: 01524 510932

Professor Claire Leitch

Email: c.leitch@lancaster.ac.uk Tel: 01524 510933

Appendix Two: Consent Form

Participant Consent Form

Research Details
Focus of the Study: The role of social interactions and working together in the learning of small business owner-managers.
Level of the Study: Doctoral Research Study (PhD Research)

Researcher Details
Name of the Researcher: Jennifer Carter
Programme: PhD in Management Learning and Leadership
Institution: Lancaster University Management School, Lancaster University
Email: j.carter@lancaster.ac.uk

Consent

I am asking if you would like to take part in a research project that explores how small business owner-managers learn from their interactions with others. Before you consent to participating in the study please read the participant information sheet and tick each box below if you agree. If you have any questions or queries before signing the consent form please speak to the principal investigator, Jennifer Carter.

☐ I have read and understood the Participant Information Sheet. I have asked any questions I had, and these have been answered satisfactorily.

☐ I understand that my participation is voluntary and I can withdraw from the project at any time.

☐ I understand that any information disclosed within the group interview(s) remains confidential to the group, and will not discuss the interview with or in front of anyone who was not involved.

☐ I understand that the research findings from this project may be used in future articles, projects or presentations, but my personal information will not be included and I will not be identifiable.

☐ I am happy to be recorded in all interviews with the researcher, and understand that my data will be protected and kept secure.

☐ I agree to participate in the research project.

_____   _____

                                      _____

Name of Participant   Date   Signature

_____   _____

                                      _____

Researcher   Date   Signature

Appendix Three: Coding Framework

Code	Definition
Accountant (ELC)	Reference to accountant as an external learning contributor
Asking questions	Interaction of 'questioning' where the entrepreneur asks questions to a learning contributor
Being questioned	Interaction of 'questioning' where the entrepreneur is questioned by a learning contributor
Brainstorming	Interaction of 'conversing' where the entrepreneur engages in 'brainstorming', defined as creating, sharing and developing ideas
Business Partner (ILC)	Reference to business partner (either current or past) as an internal learning contributor
Certain problem = certain people	Impact of choosing to interact with a particular person/network when facing a particular problem
Chairman / board member (ILC)	Reference to chairman or board member as an internal learning contributor
Change in/reinforcement of product offering	Learning resulting in a change to or reinforcement of the product offering
Change in business direction	Learning resulting in a change in the business direction
Change in the business model/processes/systems/structures	Learning resulting in a change to the business model, processes, systems and/or structures
Clarity	Learning resulting in a sense of clarity
Cognition	Reference to thinking/thought processes as a form of learning
Competition	Impact of competition on learning
Conflict	Impact of conflict on learning

Conversing	Interaction of 'conversing' between the entrepreneur and their learning contributor
Customers/clients (ELC)	Reference to customers/clients as an external learning contributor
Employees (ILC)	Reference to employees as an internal learning contributor
External Learning Contributor	Additional actor involved in the entrepreneur's learning who is external to the business and its operations
Family/Friends (ELC)	Reference to family/friends as an external learning contributor
Financial cost	Impact of financial cost on learning
Formal business engagement	Engagement with others in internal and formalised business contexts (e.g. meetings)
Formal programme engagement	Engagement with an external and formalised learning programme
Gained confidence	Learning resulting in gained confidence
Gained knowledge/skills	Learning resulting in new knowledge and/or skills
General conversations	Interaction of 'conversing' where there is no specific purpose to the conversation
Informal, casual engagement with others	Engagement with others in informal contexts
Internal Learning Contributor	Additional actor involved in the entrepreneur's learning who is internal to the business and its operations
Issue limitation	Learning resulting in the limitation of issues
Lack of confidence	Impact of a lack of confidence on engagement and learning with others
Limited knowledge/resources	Impact of a contributor's limited knowledge or resources on learning
Listening	Interaction of 'listening' to other people

Listening at formal learning events	Interaction of 'listening' specific to formalised learning events
Listening to advice	Interaction of 'listening' to the advice of others
Listening to external perspectives	Interaction of 'listening' to the perspectives of actors who are external to the business
Mentor/advisor/consultant (ELC)	Reference to mentor, advisor or consultant as an external learning contributor
Non-Executive Director (ILC)	Reference to a Non-Executive Director as an internal learning contributor
Online interaction	Reference to online interaction rather than face-to-face
Overcoming personal limitations	Learning resulting in the entrepreneur feeling they have overcome their own personal limitations
Peers (ELC)	Reference to peers as an external learning contributor
Purposeful conversations with employees	Interaction of 'conversing' between an entrepreneur and their employees where the conversation has a specific purpose
Questioning	Interaction of 'questioning' between the entrepreneur and their learning contributor
Reflection	Reference to reflecting as a form of learning
Resistance to external help and advice	Impact of resistance to external help and/or advice on learning
Saving time	Positive view of time to learning
Sharing	Interaction of 'sharing' between the entrepreneur and their learning contributor
Sharing experiences	Interaction of 'sharing' where experiences are shared between an entrepreneur and their learning contributor

Sharing ideas	Interaction of 'sharing' where ideas are shared between an entrepreneur and their learning contributor
Sharing information	Interaction of 'sharing' where information is shared between an entrepreneur and their learning contributor
Similarity to learning contributor	Impact of similarity between the entrepreneur and their learning contributor
Supplier (ELC)	Reference to supplier as an external learning contributor
Support Agency (ELC)	Reference to support agency as an external learning contributor
Time commitment	Negative view of time to learning
Trial and error	Reference to 'trial and error' learning
Trust	Impact of trust on learning
University (ELC)	Reference to a Higher Educational Institution as an external learning contributor
Validation	Learning resulting in a sense of validation for the entrepreneur
Wrong person	Impact of selecting the wrong learning contributor on learning

References

Adams, M.G. (2010). The Practical Primacy of Questions in Action Learning. In R. L. Dilworth & Y. Boshyk, eds. *Action Learning and its Applications*. London: Palgrave Macmillan UK, pp. 119–130. [online]. Available from: http://link.springer.com/10.1057/9780230250741 [Accessed July 3, 2017].

Agbim, K.C., Owutuamor, Z.B. and Oriarewo, G.O. (2013). Entrepreneurship Development and Tacit Knowledge: Exploring the Link between Entrepreneurial Learning and Individual Know-How. *Journal of Business Studies Quarterly*, 5(2), pp.112–129.

Ahsan, M., Zheng, C., DeNoble, A. and Musteen, M. (2018). From Student to Entrepreneur: How Mentorships and Affect Influence Student Venture Launch. *Journal of Small Business Management*, 56(1), pp.76–102.

Aldrich, H.E. and Yang, T. (2014). How do entrepreneurs know what to do? learning and organizing in new ventures. *Journal of Evolutionary Economics*, 24(1), pp.59–82. Alvarez, S.A. et al. (2014). Realism in the Study of Entrepreneurship. *Academy of Management Review*, 39(2), pp.227–233.

Alvarez, S.A. and Barney, J.B. (2007). Discovery and creation: alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*, 1(1–2), pp.11–26.

Alvarez, S.A. and Busenitz, L.W. (2001). The entrepreneurship of resource-based theory. *Journal of Management*, 27, pp.755–775.

Anderson, A., Park, J. and Jack, S. (2007). Entrepreneurial Social Capital: Conceptualizing Social Capital in New High-tech Firms. *International Small Business Journal*, 25(3), pp.245–272.

Anderson, A.R. and Starnawska, M. (2008). Research Practices in Entrepreneurship: Problems of Definition, Description and Meaning. *The International Journal of Entrepreneurship and Innovation*, 9(4), pp.221–230.

Argyris, C. (1976). Single-Loop and Double-Loop Models in Research on Decision Making. *Administrative Science Quarterly*, 21(3), pp.363-375.

Argyris, C. and Schön, D.A. (1978). *Organizational learning*. Reading, Mass: Addison-Wesley Pub. Co.

Arksey, H. and Knight, P. (1999). *Interviewing for social scientists: an introductory resource with examples*. London ; Thousand Oaks, Calif: Sage Publications.

Armstrong, S.J., Cools, E. and Sadler-Smith, E. (2012). Role of Cognitive Styles in Business and Management: Reviewing 40 Years of Research: Role of Cognitive Styles in Business and Management. *International Journal of Management Reviews*, 14(3), pp.238–262.

Atkinson, R. and Flint, J. (2004). Snowball Sampling. In M. Lewis-Beck, A. Bryman, & T. Futing Liao, eds. *The SAGE Encyclopedia of Social Science Research Methods*. 2455 Teller Road, Thousand Oaks California 91320 United States of America: Sage Publications, Inc. [online]. Available from: http://methods.sagepub.com/reference/the-sage-encyclopedia-of-social-science-research-methods/n931.xml [Accessed August 7, 2017].

Attride-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. *Qualitative Research*, 1(3), pp.385–406.

Audretsch, D.B., Kuratko, D.F. and Link, A.N. (2015). Making sense of the elusive paradigm of entrepreneurship. *Small Business Economics*, 45(4), pp.703–712.

Bagheri, A. and Pihie, Z.A.L. (2010). Entrepreneurial Leadership Learning: In Search of Missing Links. *Procedia - Social and Behavioral Sciences*, 7, pp.470–479.

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, N.J: Prentice Hall.

Bell, R., Liu, P., Zhan, H., Bozward, D., Fan, J., Watts, H. and Ma, X. (2018). Exploring entrepreneurial roles and identity in the United Kingdom and China. *The International Journal of Entrepreneurship and Innovation*, pp.39–49.

Bergh, P., Thorgren, S. and Wincent, J. (2011). Entrepreneurs learning together: The importance of building trust for learning and exploiting business opportunities. *International Entrepreneurship and Management Journal*, 7(1), pp.17–37.

Berglund, K. and Johansson, A.W. (2007). Constructions of entrepreneurship: a discourse analysis of academic publications. *Journal of Enterprising Communities: People and Places in the Global Economy*, 1(1), pp.77–102.

Bingham, C.B. and Davis, J.P. (2012). Learning Sequences: Their Existence, Effect, and Evolution. *Academy of Management Journal*, 55(3), pp.611–641.

Birks, M. (2014). Quality in Qualitative Research. In J. Mills & M. Birks, eds. *Qualitative methodology: a practical guide*. Thousand Oaks, CA: Sage Publications, pp. 221–236.

Bisk, L. (2002). Formal entrepreneurial mentoring: the efficacy of third party managed programs. *Career Development International*, 7(5), pp.262–270.

Blaikie, N.W.H. (2007). *Approaches to social enquiry*. 2. ed. Cambridge: Polity.

Blundel, R. (2007). Critical realism: a suitable vehicle for entrepreneurship research? In H. Neergaard & J. P. Ulhøi, eds. *Handbook of qualitative research methods in entrepreneurship*. Cheltenham, UK Northampton, MA: Edward Elgar, pp. 49–74.

Borgatti, S.P. and Cross, R. (2003). A Relational View of Information Seeking and Learning in Social Networks. *Management Science*, 49(4), pp.432–445.

Bosma, N., Hessels, J., Schutjens, V., Praag, M. and Verheul, I (2012). Entrepreneurship and role models. *Journal of Economic Psychology*, 33(2), pp.410–424.

Boud, D., Keogh, R. and Walker, D. (2013). Promoting Reflection in Learning: A Model. In *Reflection Turning Experience into Learning.* Independence: Taylor and Francis. [online]. Available from: http://kcl.eblib.com/patron/FullRecord.aspx?p=1461054 [Accessed April 15, 2018].

Boyatzis, R.E. (1998). *Transforming qualitative information: thematic analysis and code development*. Thousand Oaks, CA: Sage Publications.

Braun, V. and Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), pp.77–101.

Breslin, D. (2015). Learning to evolve: Developing a practice- based evolutionary language of entrepreneurial learning. In *Entrepreneurial learning: new perspectives in research, education and practice*. [online]. Available from: http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=939425 [Accessed June 14, 2018].

Breslin, D. and Jones, C. (2012). The evolution of entrepreneurial learning. *International Journal of Organizational Analysis*, 20(3), pp.294–308.

Brett, V., Mullally, M., O'Gorman, B. and Fuller-Love, N. (2012). The role of action research in the development of learning networks for entrepreneurs. *Action Learning: Research and Practice*, 9(2), pp.125–143.

Cannon-Bowers, J.A. and Salas, E. (2001). Reflections on shared cognition. *Journal of Organizational Behavior*, 22(2), pp.195–202.

Carland, J.W., Hoy, F., Boulton, W.R. and Carland, J.A.C. (1984). Differentiating Entrepreneurs from Small Business Owners: A Conceptualization. *Academy of Management Review*, 9(2), pp.354–359.

Chiva, R., Grandío, A. and Alegre, J. (2010). Adaptive and Generative Learning: Implications from Complexity Theories: Adaptive and Generative Learning. *International Journal of Management Reviews*, 12(2), pp.114–129.

Cho, Y. and Marshall Egan, T. (2009). Action Learning Research: A Systematic Review and Conceptual Framework. *Human Resource Development Review*, 8(4), pp.431–462.

Chrisman, J.J., Bauerschmidt, A. and Hofer, C.W. (1998). The determinants of new venture performance: An extended model. *Entrepreneurship Theory and Practice*, 23, pp.5–30.

Clarke, J., Thorpe, R., Anderson, L. and Gold, J (2006). It's all action, it's all learning: action learning in SMEs. *Journal of European Industrial Training*, 30(6), pp.441–455.

Coetzer, A., Kock, H. and Wallo, A. (2017). Distinctive Characteristics of Small Businesses as Sites for Informal Learning. *Human Resource Development Review*, 16(2), pp.111–134.

Coghlan, D. (2012). Understanding insight in the context of Q. *Action Learning: Research and Practice*, 9(3), pp.247–258.

Cooney, T.M. (2005). Editorial: What is an Entrepreneurial Team? *International Small Business Journal*, 23(3), pp.226–235.

Cope, J. (2003). Entrepreneurial Learning and Critical Reflection: Discontinuous Events as Triggers for 'Higher-level' Learning. *Management Learning*, 34(4), pp.429–450.

Cope, J. (2011). Entrepreneurial learning from failure: An interpretative phenomenological analysis. *Journal of Business Venturing*, 26(6), pp.604–623.

Cope, J. (2005). Toward a dynamic learning perspective of entrepreneurship. *Entrepreneurship theory and practice*, 29(4), pp.373–397.

Cope, J., Jack, S. and Rose, M.B. (2007). Social Capital and Entrepreneurship: An Introduction. *International Small Business Journal*, 25(3), pp.213–219.

Cope, J. and Watts, G. (2000). Learning by doing - An exploration of experience, critical incidents and reflection in entrepreneurial learning. *International Journal of Entrepreneurial Behaviour & Research*, 6(3), pp.104–124.

Corbett, A.C. (2005). Experiential learning within the process of opportunity identification and exploitation. *Entrepreneurship Theory and Practice*, 29(4), pp.473–491.

Cowling, M. and Mitchell, P. (1997). The Evolution of U.K. Self-Employment: A Study of Government Policy and the Role of the Macroeconomy. *The Manchester School*, 65(4), pp.427–442.

Cull, J. (2006). Mentoring Young Entrepreneurs: What Leads to Success? *International Journal of Evidence Based Coaching and Mentoring*, 4(2), pp.8–18.

Dada, O. and Fogg, H. (2016). Organizational learning, entrepreneurial orientation, and the role of university engagement in SMEs. *International Small Business Journal*, 34(1), pp.86–104.

Daudelin, M.W. (1996). Learning from experience through reflection. *Organizational Dynamics*, 24(3), pp.36–48.

Deakins, D. and Freel, M. (1998). Entrepreneurial learning and the growth process in SMEs. *The Learning Organization*, 5(3), pp.144–155.

Deakins, D., O'Neill, E. and Mileham, P. (2000). The role and influence of external directors in small, entrepreneurial companies: Some evidence on VC and non-VC appointed external directors. *Venture Capital*, 2(2), pp.111–127.

Deakins, D. and Wyper, J. (2010). A Longitudinal and Dynamic Approach to Entrepreneurial Learning. *New Zealand Journal of Employment Relations*, 35(1), pp.35–47.

Delanty, G. and Strydom, P. eds. (2003). *Philosophies of social science: the classic and contemporary readings*. Maidenhead, England ; Phildelphia: Open University.

Diaz Andrade, A. (2009). Interpretive Research Aiming at Theory Building: Adopting and Adapting the Case Study Design. *The Qualitative Report*, 14(1), pp.42–60.

Dimov, D. (2007). From Opportunity Insight to Opportunity Intention: The Importance of Person-Situation Learning Match. *Entrepreneurship Theory and Practice*, 31(4), pp.561–583.

Drakopoulou Dodd, S. and Anderson, A.R. (2007). Mumpsimus and the Mything of the Individualistic Entrepreneur. *International Small Business Journal*, 25(4), pp.341–360.

Dugosh, K.L., Paulus, P., Roland, E. and Yang, H. (2000). Cognitive stimulation in brainstorming. *Journal of Personality and Social Psychology*, 79(5), pp.722–735.

Easterby-Smith, M., Thorpe, R. and Jackson, P. (2008). *Management research*. 3rd ed. Los Angeles ; London: SAGE.

Easterby-Smith, M., Thorpe, R. and Lowe, A. (2002). *Management research*. London ; Thousand Oaks: Sage Publications.

Eby, L.T. de T., Allen, T.D., Hoffman, B.J., Baranik, L.E., Sauer, J.B., Baldwin, S., Morrison, M.A., Kinkade, K.M., Maher, C.P., Curtis, S. and Evans, S.C. (2013). An interdisciplinary meta-analysis of the potential antecedents, correlates, and consequences of protégé perceptions of mentoring. *Psychological Bulletin*, 139(2), pp.441–476.

Edwards, R. and Holland, J. (2013). *What is qualitative interviewing?* London: Bloomsbury.

El Hallam, H. and St-Jean, É. (2016). Nurturing Entrepreneurial Learning Through Mentoring. *Journal of Developmental Entrepreneurship*, 21(02), pp.1–18.

Ellis, S., Mendel, R. and Nir, M. (2006). Learning from successful and failed experience: The moderating role of kind of after-event review. *Journal of Applied Psychology*, 91(3), pp.669–680.

Ensley, M.D. and Pearce, C.L. (2001). Shared cognition in top management teams: implications for new venture performance. *Journal of Organizational Behavior*, 22(2), pp.145–160.

Ensley, M.D., Pearson, A. and Pearce, C.L. (2003). Top management team process, shared leadership, and new venture performance: a theoretical model and research agenda. *Human Resource Management Review*, 13(2), pp.329–346.

Ensley, M.D., Pearson, A.W. and Amason, A.C. (2002). Understanding the dynamics of new venture top management teams: cohesion, conflict, and new venture performance. *Journal of Business Venturing*, 17(4), pp.365–386.

Eraut, M. (2004). Informal learning in the workplace. *Studies in Continuing Education*, 26(2), pp.247–273.

Eraut, M. (2000). Non-formal learning and tacit knowledge in professional work. *British Journal of Educational Psychology*, 70(1), pp.113–136.

Etikan, I. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), pp.1–4.

Fauchart, E. and Gruber, M. (2011). Darwinians, Communitarians, and Missionaries: The Role of Founder Identity in Entrepreneurship. *Academy of Management Journal*, 54(5), pp.935–957.

Fereday, J. and Muir-Cochrane, E. (2006). Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. *International Journal of Qualitative Methods*, 5(1), pp.80–92.

Fiol, C.M. and Lyles, M.A. (1985). Organizational Learning. *Academy of Management Review*, 10(4), pp.803–813.

Forbes, D.P., Borchert, P.S., Zellmer-Bruhn, M.E. and Sapienza, H.J. (2006). Entrepreneurial team formation: An exploration of new member addition. *Entrepreneurship Theory and Practice*, 30(2), pp.225–248.

Frankish, J.S., Roberts, R.G., Coad, A., Spears, T.C. and Storey, D.J. (2013). Do entrepreneurs really learn? Or do they just tell us that they do? *Industrial and Corporate Change*, 22(1), pp.73–106.

Gamage, H.R. and Wickramasiughe, A. (2014). Researching peculiarity of entrepreneurs: From positivism to social constructivism. *Journal of Entrepreneurship Education*, 17(2), pp.91–100.

Garrick, J. (1999). Doubting the philosophical assumptions of interpretive research. *International Journal of Qualitative Studies in Education*, 12(2), pp.147–156.

Gartner, W.B. (1988). 'Who is an entrepreneur?' is the wrong question. American Journal of Small Business, 12(4), pp.11–32.

van Gelderen, M., Karen, V. and Masurel, E. (2012). Introduction to 'Entrepreneurship in Context'. In *Entrepreneurship in context*. New York: Routledge, pp. 1–35. [online]. Available from: http://site.ebrary.com/id/10545392 [Accessed January 19, 2019].

van Gelderen, M., van der Sluis, L. and Jansen, P. (2005). Learning Opportunities and Learning Behaviours of Small Business Starters: Relations with Goal Achievement, Skill Development and Satisfaction. *Small Business Economics*, 25, pp.97–108.

Gibb, A. (2009). Meeting the development needs of owner managed small enterprise: a discussion of the centrality of action learning. *Action Learning: Research and Practice*, 6(3), pp.209–227.

Gibb, A.A. (1997). Small firms' training and competitiveness. Building upon the small business as a learning organisation. *International Small Business Journal*, 15(3), pp.13–29.

Gordon, I. and Jack, S. (2010). HEI engagement with SMEs: developing social capital S. Robinson, ed. *International Journal of Entrepreneurial Behavior & Research*, 16(6), pp.517–539.

Granovetter, M.S. (1973). The Strength of Weak Ties. *American Journal of Sociology*, 78(6), p.1360-1380.

Gray, D.E. (2007). Facilitating Management Learning: Developing Critical Reflection Through Reflective Tools. *Management Learning*, 38(5), pp.495–517.

Hamilton, E. (2011). Entrepreneurial learning in family business: A situated learning perspective. *Journal of Small Business and Enterprise Development*, 18(1), pp.8–26.

Hammersley, M. and Traianou, A. (2012). *Ethics in qualitative research: controversies and contexts*. [online]. Available from: http://site.ebrary.com/id/10827392 [Accessed August 8, 2017].

Harper, D.A. (2008). Towards a theory of entrepreneurial teams. *Journal of Business Venturing*, 23(6), pp.613–626.

Harrison, R.T. and Leitch, C.M. (2005). Entrepreneurial learning: researching the interface between learning and the entrepreneurial context. *Entrepreneurship Theory and Practice*, 29(4), pp.351–371.

Henwood, K.L. and Pidgeon, N.F. (1993). Qualitative Research and Psychological Theorizing. In M. Hammersley, ed. *Social research: philosophy, politics and practice*. London ; Newbury Park, Calif: Sage Publications, pp. 14–32.

Herbert, R.F. and Link, A.N. (1989). In search of the meaning of entrepreneurship. *Small Business Economics*, 1(1), pp.39–49.

Hlady-Rispal, M. and Jouison-Laffitte, E. (2014). Qualitative Research Methods and Epistemological Frameworks: A Review of Publication Trends in Entrepreneurship. *Journal of Small Business Management*, 52(4), pp.594–614.

Holcomb, T.R., Ireland, R.D., Holmes Jr, R.M. and Hitt, M.A. (2009). Architecture of Entrepreneurial Learning: Exploring the Link Among Heuristics, Knowledge, and Action. *Entrepreneurship Theory and Practice*, 33(1), pp.167–192.

Holstein, J.A. and Gubrium, J.F. (2005). Interpretive Practice and Social Action. In N. K. Denzin & Y. S. Lincoln, eds. *The SAGE handbook of qualitative research*. Thousand Oaks: Sage Publications, pp. 483–505.

Holstein, J.A. and Gubrium, J.F. (2004). The Active Interview. In D. Silverman, ed. *Qualitative research: theory, method and practice*. London ; Thousand Oaks, Calif: Sage Publications, pp. 140–161.

Hoover, J.D. and Giambatista, R.C. (2009). Why Have We Neglected Vicarious Experiential Learning? *Developments in Business Simulation and Experiential Learning*, 36, pp.33–37.

Hoover, J.D., Giambatista, R.C. and Belkin, L.Y. (2012). Eyes On, Hands On: Vicarious Observational Learning as an Enhancement of Direct Experience. *Academy of Management Learning & Education*, 11(4), pp.591–608.

Høyrup, S. (2004). Reflection as a core process in organisational learning. *Journal of Workplace Learning*, 16(8), pp.442–454.

Illeris, K. (2015). The Development of a Comprehensive and Coherent Theory of Learning: The Development of a Comprehensive and Coherent Theory of Learning. *European Journal of Education*, 50(1), pp.29–40.

Jack, S.L. (2005). The Role, Use and Activation of Strong and Weak Network Ties: A Qualitative Analysis*. *Journal of Management Studies*, 42(6), pp.1233–1259.

Jackson, R.L., Drummond, D.K. and Camara, S. (2007). What Is Qualitative Research? *Qualitative Research Reports in Communication*, 8(1), pp.21–28.

Johnson, P. and Duberley, J. (2000). *Understanding management research an introduction to epistemology*. London; Thousand Oaks: SAGE Publications. [online]. Available from: http://SRMO.sagepub.com/view/understanding-management-research/SAGE.xml [Accessed January 22, 2014].

Jones, K., Sambrook, S.A., Pittaway, L., Henley, A. and Norbury, H. (2014). Action learning: how learning transfers from entrepreneurs to small firms. *Action Learning: Research and Practice*, 11(2), pp.131–166.

Jordi, R. (2011). Reframing the Concept of Reflection: Consciousness, Experiential Learning, and Reflective Learning Practices. *Adult Education Quarterly*, 61(2), pp.181–197.

Jupp, V. ed. (2006). *The Sage dictionary of social research methods*. London ; Thousand Oaks, Calif: SAGE Publications.

Kamm, J.B., Shuman, J.C., Seeger, J.A. and Nurick, A.J. (1990). Entrepreneurial Teams in New Venture Creation: A Research Agenda. *Entrepreneurship Theory and Practice*, 14(4), pp.7–17.

Karatas-Ozkan, M., Anderson, A.R., Fayolle, A., Howells, J. and Condor, R. (2014). Understanding Entrepreneurship: Challenging Dominant Perspectives and Theorizing Entrepreneurship through New Postpositivist Epistemologies. *Journal of Small Business Management*, 52(4), pp.589–593.

Karataş-Özkan, M. (2011). Understanding relational qualities of entrepreneurial learning: Towards a multi-layered approach. *Entrepreneurship & Regional Development*, 23(9–10), pp.877–906.

Kayes, C. (2002). Experiential Learning and Its Critics: Preserving the Role of Experience in Management Learning and Education. *Academy of Management Learning and Education*, 1(2), pp.137–149.

Keith, N., Unger, J.M., Rauch, A. and Frese, M. (2016). Informal Learning and Entrepreneurial Success: A Longitudinal Study of Deliberate Practice among Small Business Owners: INFORMAL LEARNING IN ENTREPRENEURS. *Applied Psychology*, 65(3), pp.515–540.

Kirzner, I. (1999). Creativity and/or Alertness: A Reconsideration of the Schumpeterian Entrepreneur. *The Review of Austrian Economics*, 11(1), pp.5–17.

Kirzner, I. (1997). Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach. *Journal of Economic Literature*, 35(1), pp.60–85.

Kohn, N.W., Paulus, P.B. and Choi, Y. (2011). Building on the ideas of others: An examination of the idea combination process. *Journal of Experimental Social Psychology*, 47(3), pp.554–561.

Kolakowski, L. (1993). An Overall View of Positivism. In M. Hammersley, ed. *Social research: philosophy, politics and practice*. London ; Newbury Park, Calif: Sage Publications, pp. 1–8.

Kolb, D.A. (1984). *Experiential learning: experience as a source of learning and development*. Englewood Cliffs, N.J.: Prentice-Hall.

Krauss, S.. (2005). Research Paradigms and Meaning Making: A Primer. *The Qualitative Report*, 10(4), pp.758–770.

Kuratko, D.F. (2005). The Emergence of Entrepreneurship Education: Development, Trends, and Challenges. *Entrepreneurship Theory and Practice*, 29(5), pp.577–598.

Lans, T., Biemans, H., Verstegen, J. and Mulder, M. (2008). The Influence of the Work Environment on Entrepreneurial Learning of Small-business Owners. *Management Learning*, 39(5), pp.597–613.

Lave, J. and Wenger, E. (1991). *Situated learning: legitimate peripheral participation*. Cambridge [England] ; New York: Cambridge University Press.

Lechler, T. (2001). Social interaction: A determinant of entrepreneurial team venture success. *Small Business Economics*, 16(4), pp.263–278.

Lee, R. and Jones, O. (2008). Networks, Communication and Learning during Business Start-up: The Creation of Cognitive Social Capital. *International Small Business Journal*, 26(5), pp.559–594.

Lefebvre, V., Radu Lefebvre, M. and Simon, E. (2015). Formal entrepreneurial networks as communities of practice: a longitudinal case study. *Entrepreneurship & Regional Development*, 27(7–8), pp.500–525.

Leitch, C.M. and Harrison, R.T. (2016). Identity, identity formation and identity work in entrepreneurship: conceptual developments and empirical applications. *Entrepreneurship & Regional Development*, 28(3–4), pp.177–190.

Leitch, C.M., Hill, F.M. and Harrison, R.T. (2010). The Philosophy and Practice of Interpretivist Research in Entrepreneurship: Quality, Validation, and Trust. *Organizational Research Methods*, 13(1), pp.67–84.

Löbler, H. (2006). Learning entrepreneurship from a constructivist perspective. *Technology Analysis & Strategic Management*, 18(1), pp.19–38.

Lockett, N., Jack, S. and Larty, J. (2013). Motivations and challenges of network formation: Entrepreneur and intermediary perspectives. *International Small Business Journal*, 31(8), pp.866–889.

Lumpkin, G.T., Hills, G.E. and Shrader, R.C. (2004). Opportunity Recognition. In *Entrepreneurship: The Way Ahead*. Routledge, pp. 73–90. [online]. Available from: https://www.taylorfrancis.com/books/9780203356821 [Accessed December 4, 2018].

Marsick, V.J. and O'Neil, J. (1999). The many faces of action learning. *Management Learning*, 30(2), pp.159–176.

Marsick, V.J. and Volpe, M. (1999). The Nature and Need for Informal Learning. *Advances in Developing Human Resources*, 1(3), pp.1–9.

Marsick, V.J. and Watkins, K.E. (2001). Informal and incidental learning. *New directions for adult and continuing education*, 2001(89), pp.25–34.

Marsick, V.J. and Watkins, K.E. (1990). *Informal and incidental learning in the workplace*. London ; New York: Routledge.

Maxwell, J.A. (2012). *A realist approach for qualitative research*. Thousand Oaks: SAGE Publications.

Mayer, R., Davis, J. and Schoorman, D. (1995). An integration model of organizational trust. *Academy of Management Review*, 20(3), pp.709–734.

McEvily, B., Perrone, V. and Zaheer, A. (2003). Trust as an Organizing Principle. *Organization Science*, 14(1), pp.91–103.

McKeown, I. (2015). Entrepreneurial learning in small firm management teams. In *Entrepreneurial Learning: New Perspectives in Research, Education and Practice*.

Routledge. [online]. Available from: https://www.taylorfrancis.com/books/9781315857817 [Accessed March 29, 2018].

McPherson, M., Smith-Lovin, L. and Cook, J.M. (2001). Birds of a Feather: Homophily in Social Networks. *Annual Review of Sociology*, 27(1), pp.415–444.

Merriam, S.B., Caffarella, R.S. and Baumgartner, L. (2007). *Learning in adulthood a comprehensive guide*. San Francisco: Jossey-Bass. [online]. Available from: http://www.credoreference.com/book/wileyla [Accessed April 24, 2014].

Minniti, M. and Bygrave, W.D. (2001). A Dynamic Model of Entrepreneurial Learning. *Entrepreneurship Theory and Practice*, 25(3), pp.5–17.

Mitchell, R.K., Busenitz, L., Lant, T., McDougall, P.P., Morse, E.A. and Smith, J.B. (2002). Toward a Theory of Entrepreneurial Cognition: Rethinking the People Side of Entrepreneurship Research. *Entrepreneurship Theory and Practice*, 27(2), pp.93–104.

Morgan, G. and Smircich, L. (1980). The Case for Qualitative Research. *Academy of Management Review*, 5(4), pp.491–500.

Morris, J. (2011). Minding our Ps and Qs. In M. J. Pedler, ed. *Action learning in practice*. Farnham Burlington, Vt: Gower, pp. 35–43.

Morris, M.H. et al. (2012). Framing the Entrepreneurial Experience. *Entrepreneurship Theory and Practice*, 36(1), pp.11–40.

Morse, J. (2004). Purposive Sampling. In M. Lewis-Beck, A. Bryman, & T. Futing Liao, eds. *The SAGE Encyclopedia of Social Science Research Methods*. 2455 Teller Road, Thousand Oaks California 91320 United States of America: Sage Publications, Inc. [online]. Available from: http://methods.sagepub.com/reference/the-sage-encyclopedia-of-social-science-research-methods/n774.xml [Accessed August 2, 2017].

Morse, J.M. et al. (2002). Verification Strategies for Establishing Reliability and Validity in Qualitative Research. *International Journal of Qualitative Methods*, 1(2), pp.13–22.

Navis, C. and Glynn, M.A. (2011). Legitimate Distinctiveness and The Entrepreneurial Identity: Influence on Investor Judgments of New Venture Plausibility. *Academy of Management Review*, 36(3), pp.479–499.

Orb, A., Eisenhauer, L. and Wynaden, D. (2001). Ethics in Qualitative Research. *Journal of Nursing Scholarship*, 33(1), pp.93–96.

Osborn, A. (1963). *Applied Imagination: Principles and procedures of creative problem-solving*. 3rd rev. ed. New York: Scribner.

Packard, M.D. (2017). Where did interpretivism go in the theory of entrepreneurship? *Journal of Business Venturing*. [online]. Available from:

http://linkinghub.elsevier.com/retrieve/pii/S088390261730383X [Accessed August 2, 2017].

Packer, M.J. and Goicoechea, J. (2000). Sociocultural and Constructivist Theories of Learning: Ontology, Not Just Epistemology. *Educational Psychologist*, 35(4), pp.227–241.

Patton, M.Q. (1990). *Qualitative evaluation and research methods*. 2nd ed. Newbury Park, Calif: Sage Publications.

Pearce, D. (2011). Getting Started: An Action Manual. In M. J. Pedler, ed. *Action learning in practice*. Farnham Burlington, Vt: Gower, pp. 93–107.

Peneder, M. (2009). The Meaning of Entrepreneurship: A Modular Concept. *Journal of Industry, Competition and Trade*, 9(2), pp.77–99.

Petkova, A.P. (2009). A theory of entrepreneurial learning from performance errors. *International Entrepreneurship and Management Journal*, 5(4), pp.345–367.

Petty, N.., Thomson, O.. and Stew, G. (2012). Ready for a paradigm shift? Part 1: Introducing the philosophy of qualitative research. *Manual Therapy*, 17(4), pp.267–274.

Pittaway, L., Missing, C., Hudson, N. and Maragh, D. (2009). Entrepreneurial learning through action: a case study of the Six-Squared program. *Action Learning: Research and Practice*, 6(3), pp.265–288.

Pittaway, L. and Cope, J. (2007). Simulating Entrepreneurial Learning: Integrating Experiential and Collaborative Approaches to Learning. *Management Learning*, 38(2), pp.211–233.

Pittaway, L.A., Gazzard, J., Shore, A. and Williamson, T. (2015). Student clubs: experiences in entrepreneurial learning. *Entrepreneurship & Regional Development*, 27(3–4), pp.127–153.

Politis, D. (2005). The Process of Entrepreneurial Learning: A Conceptual Framework. *Entrepreneurship Theory and Practice*, 29(4), pp.399–424.

Politis, D. and Gabrielsson, J. (2009). Entrepreneurs' attitudes towards failure: An experiential learning approach. *International Journal of Entrepreneurial Behavior & Research*, 15(4), pp.364–383.

Prawat, R.S. and Floden, R.E. (1994). Philosophical perspectives on constructivist views of learning. *Educational Psychologist*, 29(1), pp.37–48.

Radu Lefebvre, M. and Redien-Collot, R. (2013). "How to Do Things with Words": The Discursive Dimension of Experiential Learning in Entrepreneurial Mentoring Dyads. *Journal of Small Business Management*, 51(3), pp.370–393.

Rae, D. (2005). Entrepreneurial learning: a narrative-based conceptual model. *Journal of Small Business and Enterprise Development*, 12(3), pp.323–335.

Rae, D. (2000). Understanding entrepreneurial learning: a question of how? *International Journal of Entrepreneurial Behaviour & Research*, 6(3), pp.145–159.

Rae, D. and Carswell, M. (2001). Towards a conceptual understanding of entrepreneurial learning. *Journal of Small Business and Enterprise Development*, 8(2), pp.150–158.

Rae, D. and Carswell, M. (2000). Using a life-story approach in researching entrepreneurial learning: the development of a conceptual model and its implications in the design of learning experiences. *Education + Training*, 42(4/5), pp.220–228.

Ram, M. and Trehan, K. (2010). Critical action learning, policy learning and small firms: An inquiry. *Management Learning*, 41(4), pp.415–428.

Ram, M. and Trehan, K. (2009). Critical by design: enacting critical action learning in a small business context. *Action Learning: Research and Practice*, 6(3), pp.305–318.

Ramoglou, S. (2013). On the Misuse of Realism in the Study of Entrepreneurship. *Academy of Management Review*, 38(3), pp.463–465.

Ramoglou, Stratos and Tsang, E.W.K. (2016). A Realist Perspective of Entrepreneurship: Opportunities As Propensities. *Academy of Management Review*, 41(3), pp.410–434.

Ramoglou, S. and Tsang, E.W.K. (2016). A realist perspective of entrepreneurship: opportunities as propensities. *Academy of Management Review*, 41(3), pp.410–434.

Ravasi, D. and Turati, C. (2005). Exploring entrepreneurial learning: a comparative study of technology development projects. *Journal of Business Venturing*, 20(1), pp.137–164.

Reich, R.B. (1987). Entrepreneurship Reconsidered: The Team as a Hero. *Harvard Business Review*, 65(3), pp.77–83.

Revans, R.W. (2011a). *ABC of action learning*. Farnham: Gower.

Revans, R.W. (2011b). Action Learning: Its Origins and Nature. In M. J. Pedler, ed. *Action learning in practice*. Farnham Burlington, Vt: Gower, pp. 5–13.

Reynolds, M. (1998). Reflection and critical reflection in management learning. *Management Learning*, 29(2), pp.183–200.

Reynolds, M. (2011). Reflective practice: origins and interpretations. *Action Learning: Research and Practice*, 8(1), pp.5–13.

Reynolds, M. (2009). Wild Frontiers—Reflections on Experiential Learning. *Management Learning*, 40(4), pp.387–392.

Reynolds, M. and Vince, R. eds. (2007). *The handbook of experiential learning and management education*. Oxford ; New York: Oxford University Press.

Rietzschel, E.F., Nijstad, B.A. and Stroebe, W. (2006). Productivity is not enough: A comparison of interactive and nominal brainstorming groups on idea generation and selection. *Journal of Experimental Social Psychology*, 42(2), pp.244–251.

Rigg, C. and Trehan, K. (2004). Reflections on working with critical action learning. *Action Learning: Research and Practice*, 1(2), pp.149–165.

Rispas, S. (1998). Towards an interdisciplinary theory of entrepreneurship. *Small Business Economics*, 10(2), pp.103–115.

Rubin, H.J. and Rubin, I. (2005). *Qualitative interviewing: the art of hearing data*. 2nd ed. Thousand Oaks, Calif: Sage Publications.

Saunders, M.N.K., Gray, D.E. and Goregaokar, H. (2014). SME innovation and learning: the role of networks and crisis events P. Maura Sheehan, ed. *European Journal of Training and Development*, 38(1/2), pp.136–149.

Scarmozzino, E., Corvello, V. and Grimaldi, M. (2017). Entrepreneurial learning through online social networking in high-tech startups. *International Journal of Entrepreneurial Behavior & Research*, 23(3), pp.406–425.

Scholz, G., Dewulf, A. and Pahl-Wostl, C. (2014). An Analytical Framework of Social Learning Facilitated by Participatory Methods. *Systemic Practice and Action Research*, 27(6), pp.575–591.

Seaman, J. (2008). Experience, Reflect, Critique: The End of the "Learning Cycles" Era. *Journal of Experiential Education*, 31(1), pp.3–18.

Secundo, G., Schiuma, G. and Passiante, G. (2017). Entrepreneurial learning dynamics in knowledge-intensive enterprises. *International Journal of Entrepreneurial Behavior & Research*, 23(3), pp.366–380.

van Seggelen-Damen, I.C.M. and Romme, A.G.L. (2014). Reflective Questioning in Management Education: Lessons From Supervising Thesis Projects. *SAGE Open*, 4(2), pp.1–13.

Sharma, P. and Chrisman, J.J. (1999). Toward a Reconciliation of the Definitional Issues in the Field of Corporate Entrepreneurship. *Entrepreneurship Theory and Practice*, 23(3), pp.11–27.

Short, J.C., Ketchen, D.J., Shook, C.L. and Ireland, R.D (2010). The Concept of "Opportunity" in Entrepreneurship Research: Past Accomplishments and Future Challenges. *Journal of Management*, 36(1), pp.40–65.

Sibley Butler, J. (2004). The science and practice of new business ventures: wealth creation and prosperity through entrepreneurship growth and renewal. In H. P. Welsch, ed. *Entrepreneurship: the way ahead*. New York: Routledge, pp. 43–54.

Silverman, D. (2014). *Interpreting qualitative data*. Fifth edition. London: SAGE.

Smilor, R.W. (1997). Entrepreneurship: Reflections on a subversive activity. *Journal of Business Venturing*, 12(5), pp.341–346.

Smith, J. and Firth, J. (2011). Qualitative data analysis: the framework approach. *Nurse Researcher*, 18(2), pp.52–62.

Soetanto, D. (2017). Networks and entrepreneurial learning: coping with difficulties. *International Journal of Entrepreneurial Behavior & Research*, 23(3), pp.547–565.

Spencer, L., Ritchie, J., Ormston, R., O'Connor, W. and Barnard, M. (2014). Analysis: Principles and Processes. In J. Ritchie et al., eds. *Qualitative research practice: a guide for social science students and researchers*. Los Angeles: SAGE Publications, pp. 269–293.

Stead, V. (2014). The gendered power relations of action learning: a critical analysis of women's reflections on a leadership development programme. *Human Resource Development International*, 17(4), pp.416–437.

Stead, V. and Elliott, C. (2013). Women's leadership learning: A reflexive review of representations and leadership teaching. *Management Learning*, 44(4), pp.373–394.

Stevenson, H.H. and Jarillo, J.C. (1990). A paradigm of entrepreneurship - entrepreneurial management. *Strategic Management Journal*, 11, pp.17–27.

St-Jean, E. and Audet, J. (2012). The role of mentoring in the learning development of the novice entrepreneur. *International Entrepreneurship and Management Journal*, 8(1), pp.119–140.

St-Jean, É. and Mathieu, C. (2015). Developing Attitudes Toward an Entrepreneurial Career Through Mentoring: The Mediating Role of Entrepreneurial Self-Efficacy. *Journal of Career Development*, 42(4), pp.325–338.

St-Jean, E., Radu-Lefebvre, M. and Mathieu, C. (2018). Can less be more? Mentoring functions, learning goal orientation, and novice entrepreneurs' self-efficacy. *International Journal of Entrepreneurial Behavior & Research*, 24(1), pp.2–21.

Sullivan, R. (2000). Entrepreneurial learning and mentoring. *International Journal of Entrepreneurial Behaviour & Research*, 6(3), pp.160–175.

Taylor, D.W., Jones, O. and Boles, K. (2004). Building social capital through action learning: an insight into the entrepreneur. *Education + Training*, 46(5), pp.226–235.

Taylor, D.W. and Thorpe, R. (2004). Entrepreneurial learning: a process of co-participation. *Journal of Small Business and Enterprise Development*, 11(2), pp.203–211.

Tseng, C. (2013). Connecting self-directed learning with entrepreneurial learning to entrepreneurial performance. *International Journal of Entrepreneurial Behavior & Research*, 19(4), pp.425–446.

Vaismoradi, M., Turunen, H. and Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study: Qualitative descriptive study. *Nursing & Health Sciences*, 15(3), pp.398–405.

Van den Bossche, P. et al. (2011). Team learning: building shared mental models. *Instructional Science*, 39(3), pp.283–301.

Vince, R. (1998). Behind and Beyond Kolb's Learning Cycle. *Journal of Management Education*, 22(3), pp.304–319.

Vince, R. (2008). 'Learning-in-action' and 'learning inaction': advancing the theory and practice of critical action learning. *Action Learning: Research and Practice*, 5(2), pp.93–104.

Waddill, D., Banks, S. and Marsh, C. (2010). The Future of Action Learning. *Advances in Developing Human Resources*, 12(2), pp.260–279.

Wang, C.L. and Chugh, H. (2014). Entrepreneurial Learning: Past Research and Future Challenges: Advancing Entrepreneurial Learning Research. *International Journal of Management Reviews*, 16(1), pp.24–61.

Ward, M. and Rhodes, C. (2014). *Small businesses and the UK economy*. [online]. Available from: www.parliament.uk/briefing-papers/sn06078.pdf.

Warren, L. (2004). A systemic approach to entrepreneurial learning: an exploration using storytelling. *Systems Research and Behavioral Science*, 21(1), pp.3–16.

Welter, F. (2011). Contextualizing Entrepreneurship-Conceptual Challenges and Ways Forward. *Entrepreneurship Theory and Practice*, 35(1), pp.165–184.

Welter, F., Baker, T., Audretsch, D.B. and Gartner, W.B. (2017). Everyday Entrepreneurship-A Call for Entrepreneurship Research to Embrace Entrepreneurial Diversity. *Entrepreneurship Theory and Practice*, 41(3), pp.311–321.

Wenger, E. (2000). Communities of Practice and Social Learning Systems. *Organization*, 7(2), pp.225–246.

Wiles, R. (2014). *What are Qualitative Research Ethics?* Bloomsbury Academic

Wing Yan Man, T. (2012). Developing a behaviour?centred model of entrepreneurial learning H. Matlay, ed. *Journal of Small Business and Enterprise Development*, 19(3), pp.549–566.

Yanow, D. (2006). Thinking Interpretively: Philosophical Presuppositions and the Human Sciences. In D. Yanow & P. Schwartz-Shea, eds. *Interpretation and method:*

empirical research methods and the interpretive turn. Armonk, NY: M. E. Sharpe, pp. 5–26.

Zepke, N. and Leach, L. (2002). Contextualised Meaning Making: One Way of Rethinking Experiential Learning and Self-Directed Learning. *Studies in Continuing Education*, 24(2), pp.205–217.

Zhang, J. and Hamilton, E. (2009). A process model of small business owner-managers' learning in peer networks. *Education + Training*, 51(8/9), pp.607–623.

Zheng, W., Xu, M., Chen, X and Dong, Y. (2017). Who is shaping entrepreneurial experience? A multiple case study of Chinese entrepreneurial learning. *Management Decision*, 55(7), pp.1394–1409.

Zuber-Skerritt, O. (2002). The concept of action learning. *The Learning Organization*, 9(3), pp.114–124.