

**Entrepreneurial Preparedness:
An Exploratory Case Study of Chinese Private Enterprises**

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Acknowledgements: We thank the Economic and Social Research Council, UK for their funding support for the project (Award No. RES-061-25-0023).

Wang, C. L., Rafiq, M., Li, X. and Zheng, Y. (2014). Entrepreneurial preparedness: an exploratory case study of Chinese private enterprises. *International Journal of Entrepreneurial Behaviour & Research*, 20(4), 351-374.

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Structured Abstract

Purpose: We aim to advance the conceptualisation of entrepreneurial preparedness (EP), and study how EP occurs in new venture creation and management.

Research design: We primarily draw evidence from an exploratory case study of two Chinese high-tech private enterprises operating in the healthcare industry in Beijing, following a two-stage sampling process: informal, purposive sampling; and formal, theoretical sampling. Qualitative data collected from multiple semi-structured interviews within each firm were analysed using a thematic analytical framework.

Findings: We advance the conceptualisation of EP as a cumulative, social and purposeful learning process. Accordingly, we highlight the roles of experiential learning, social learning and entrepreneurial goals (both performance and learning goals) as mechanisms that enable EP in entrepreneurial management.

Research limitations/implications: Our findings reveal idiosyncrasies of EP in a particular context. Future research may investigate different types of entrepreneurs or entrepreneurial firms. Furthermore, this study uses triangulation of retrospective interview data with concurrent interview and secondary data. Future research may

pursue concurrent longitudinal case study data to unpack real-time events in entrepreneurial management.

Practical implications: Our findings have practical implications for entrepreneurs and "would-be" entrepreneurs to better understand their learning needs and how they can prepare themselves for entrepreneurial challenges.

Originality: EP as an emerging concept within the entrepreneurial learning literature requires conceptual and empirical development. We advance the conceptualisation of EP, supported with empirical evidence. By articulating the cumulative, social and purposeful nature of EP, we contribute to the understanding of the human and social dynamics of entrepreneurial learning.

Keywords: Entrepreneurial preparedness, entrepreneurial learning, Chinese high-tech private enterprises, qualitative case study.

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Introduction

Entrepreneurial preparedness (EP) is an emerging concept within the entrepreneurial learning (EL) literature. It is broadly defined as "a cumulative learning process" (Cope 2005, p.378), emphasising the developmental nature of entrepreneurs. The concept can be traced back to Scherer et al. (1989), which argues that entrepreneurial (career) preparedness among business administration students consists of two dimensions: entrepreneurial task self-efficacy (i.e. confidence in entrepreneurial skills) and entrepreneurial education and training aspirations. Further, Festervand and Forrest (1993) develop a multi-stage model of EP by which an entrepreneurial aspirant can better prepare for an entrepreneurial career. Since then, whilst a handful of studies have touched on the concept (Harvey and Evans 1995; Jones and Tullous 2002; Johnsen and McMahon 2005; Dimov 2007; Lee and Jones 2008; Cooper and Park 2008), it is Cope (2005) who brings it to the forefront of the EL literature and places EP as a core concept within the EL literature (Pittaway and Thorpe 2012). However, Cope's (2005) work only focuses on the cumulative nature of EP - "learning history" that shapes EL, rather than a systematic development of the EP concept. Moreover, it is conceptual without empirical support. Therefore, more research is required to advance EP's conceptual and empirical development.

EP deserves more attention for two main reasons. First, entrepreneurship research recognises that the traditional traits approach focusing on entrepreneurs' psychological characteristics and personality traits has failed to address why some

individuals are more likely than others to start their own businesses (Brockhaus and Horwitz 1986; Sexton 1987; Wortman 1987). More attention is drawn to the role of a stock of experience and skills that individuals possess in their decisions to enter the start-up process (Reuber and Fischer 1999). Accordingly, how individuals acquire and accumulate knowledge, skills and experience to prepare for entrepreneurship, that is, the learning and developmental process has stimulated a great deal of scholarly interest (Wang and Chugh 2014). The fact that during the recession an increasing number of white collar employees turn into 'accidental entrepreneurs' - entrepreneurs by chance (Aldrich and Kenworthy 1999; Haynes et al. 1999; Shah and Tripsas 2007), is a testimony to the limitation of the traits approach, and to the importance of the changing entrepreneurial context as well as learning and development in entrepreneurial career. EP, essentially a learning process in which prior accumulated knowledge, skills and experience shape individuals' attitudes, beliefs and abilities, and prepare them for entrepreneurial career (Harvey and Evans 1995; Starr and Fondas 1992), offers a better scope to understand entrepreneurial behaviours and processes. However, more research is required to understand the processes by which individuals prepare themselves for entrepreneurial endeavours, and the context in which learning takes place.

Second, early work on EP is largely based on empirical evidence from student samples, examining students' entrepreneurial career choice (e.g. Scherer et al. 1989; Harvey and Evans 1995; Thandi and Sharma 2004). Whilst it offers insight into certain aspects of learning, such as vicarious learning from role models (Scherer et al. 1989) and prior education (Thandi and Sharma 2004), such research cannot offer insight into how real-life entrepreneurs learn as a 'lived experience' involving a cumulative series of independent events (Morris et al. 2012) or how learning occurs from moments in which

an entrepreneur is situated (Rae 2013a). The lived experience is deeply rooted in Cope's (2005) work, providing a critical understanding of how entrepreneurs make of their 'here-and-now' (Pittaway and Thorpe 2012: 840). Following Rae's (2013b) argument that EP is dependent on the specific situation that confronts the entrepreneur and the social groups to which the entrepreneur relates, more research is needed to understand how real-life entrepreneurs learn and prepare themselves for entrepreneurial challenges, and hence the human and social dynamics of entrepreneurship.

Given the importance of EP and its lack of conceptual and empirical development, our first objective is to advance the conceptualisation of EP with a particular emphasis on its role in the EL theory. Our conceptualisation goes beyond the cumulative nature of EP as defined by Cope (2005). Our second objective is to study the process of EP in new venture creation and management, and especially, what entrepreneurs learn, and how and under what conditions they learn to prepare themselves, drawing on evidence from an exploratory case study of two Chinese high-tech private enterprises founded and run by three Chinese entrepreneurs. This will illustrate the process of EP, taking into account the unique learning context (e.g. industrial and organisational factors in Chinese private enterprises) and personal characteristics of Chinese entrepreneurs. By pursuing these objectives, we intend to contribute to the EL theory through advancing the conceptualisation of EP and its role in the EL literature and providing empirical evidence of EP based on a micro-level contextual analysis, rather than generalised findings, of two Chinese high-tech private enterprises. Hence, we contribute to the understanding of human and social dynamics of entrepreneurship, as called for by scholars (Rae 2013b; Bygrave and Minniti 2000). Our findings have practical implications for entrepreneurs and "would-be" entrepreneurs to

better understand the learning needs of entrepreneurs and how they can prepare themselves for entrepreneurial challenges.

Theoretical background

EP is an emerging concept within the EL literature. EL is referred to as learning in the entrepreneurial process in general (Ravasi and Turati 2005; Politis 2005; Holcomb et al. 2009; Wang and Chugh 2014), whilst EP emphasises the cumulative nature of the learning process in prior literature (Cope 2005). Currently, there are only a handful of articles focusing on EP specifically (e.g. Scherer et al. 1989; Festervand and Forrest 1993), although a large body of EL literature exists to provide insight into how entrepreneurs learn from their own experience and the experience of others, and from not only successes but also failures (Cope 2011; Minniti and Bygrave 2001).

Within the limited EP literature, research has largely focused on how students learn to be more entrepreneurial and prepare themselves for an entrepreneurial career (e.g. Scherer et al. 1989; Harvey and Evans 1995; Thandi and Sharma 2004). In particular, Festervand and Forrest (1993) propose that EP builds on education, experience, and planning, and its outcome is 'entrepreneurial readiness' when the actual entrepreneurial activity takes place. Building on prior work, Cope (2005, p.378) articulates EP as "a cumulative learning process" - "a concept that encapsulates the immense complexity of accumulated learning that individuals bring to the new venture creation process." By this definition, Cope (2005) discerns the importance of "learning history" (Mezirow 1991; Boud et al. 1993): the way in which entrepreneurs perceive new situations and thereby experience learning is inextricably linked to their prior learning. Learning history defines the unique path and level of EP brought to start-up

(Cope 2005). This follows Harvey and Evans's (1995) call for entrepreneurs to actively assess their learned skills and abilities. Cope (2005) emphasises that, to assess skills and abilities, entrepreneurs must look backward (i.e. reflecting on the relevance of past experience), inward (i.e. assessing how ready they are to enter into entrepreneurship), outward (i.e. interacting with, and learn about, the wider environment) and forward (i.e. visualising how to make their business survive and succeed).

Despite the above contribution, EP in the existing literature is limited in three ways: first, its conceptual development focuses on its cumulative nature, without deeper understanding of other important aspects of EP; second, prior work largely focuses on how students prepare themselves for an entrepreneurial career, rather than how entrepreneurs learn; and third, EP is restricted to conceptual work with little empirical evidence on how and under what conditions EP takes place in new venture creation and management. Our study aims to help to fill this research gap. To advance the conceptualisation of EP, we further articulate the mechanism that underpins the cumulative nature of EP defined by Cope (2005). More importantly, we go beyond Cope (2005), and articulate two other key dimensions of EP - the social and purposeful nature of EP - the missing link in the conceptualisation of EP.

First, the cumulative nature of EP implies that experiential learning (Kolb 1984) is a most important mechanism for entrepreneurs to accumulate knowledge and prepare themselves for entrepreneurship. Experiential learning theory considers learning as “the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience” (Kolb, 1984, p.41). Entrepreneurs discover opportunities related to the knowledge they already possess; such prior knowledge creates a "knowledge corridor" that allows the

entrepreneur to immediately get interested in certain kind of information (Busenitz 1996), and to recognise certain opportunities (Venkataraman 1997). Shane (2000) identifies three major dimensions of prior knowledge that are important to the process of entrepreneurial discovery: prior knowledge of markets, of ways to serve markets, and of customer problems. Further, West and Noel (2009) argue that business-related knowledge has a positive impact on high-tech venture performance, whereas industry knowledge gained from prior experience does not have a significant impact suggesting that industry knowledge erodes very quickly in technology industries (Newbert, 2005). The experiential nature of EP determines that preparedness is path dependent. The learning history of each entrepreneur defines the unique process of EP brought to the creation and management of new ventures (Cope 2005). Empirical evidence supports that experienced entrepreneurs, such as serial and portfolio entrepreneurs, are more likely to learn over time leading to the identification of opportunities, compared with nascent entrepreneurs (Westhead et al. 2005).

Second, EP involves social learning - an important mechanism for individuals to prepare themselves for entrepreneurial endeavours (Scherer et al. 1988). Social learning theory posits that learning occurs through close contact with other people and observation and imitation of role model behaviours (Bandura 1977; Williams 2001). Behaviour is a function of both personal and environmental factors and in turn influences environment (Kreitner and Luthans 1984). Entrepreneurs' self-efficacy, managerial experience, business skills and education levels are all influenced by the socialisation process (Jones and Tullous 2002), and hence affected by the social groups to which the entrepreneur is related and the specific situation that confronts the entrepreneur (Cope 2005). This sentiment is echoed by Dimov (2007, p.578):

"...[entrepreneurial] preparedness is not universally instrumental, but is situated - it is effective only when the 'right' context comes along". Within the wider organisational learning literature, situated learning, which positions the learner within social, historical, and cultural contexts (Lave and Wenger 1991; Taylor and Thorpe 2004; Wenger 1998; Hamilton 2011), offers additional insight to understand the context-dependent nature of EP. Recently, research has gone a step further by arguing that learning occurs from moments in which an entrepreneur is situated (Rae 2013a). In other words, learning is a lived experience involving a cumulative series of independent events (Morris et al. 2012). Especially, critical events - significant, discontinuous events during the entrepreneurial process could trigger learning (Cope 2003). Critical events could well be dissatisfaction from past employment (Haynes et al. 1999) or venture failure (Cope 2011). Such critical events can trigger both double-loop learning (Argyris and Schön 1978) and transformative learning (Mezirow 1991); the former generates a renewed understanding or redefinition of organisational processes, while the latter has the capacity to trigger considerable personal changes in the entrepreneur's self-awareness (Cope 2003, 2005). Entrepreneurs may learn not only about themselves but also about the nature of networks and relationships which can increase their preparedness (Westhead and Wright 2011). However, little empirical research exists to reveal the different contexts in which entrepreneurs learn and prepare themselves for entrepreneurship.

Finally, EP involves purposeful or goal-oriented learning, emphasising the role of an entrepreneurial goal or aspiration in the learning process (Scherer et al. 1989). The knowledge accumulation process is directed by an entrepreneurial goal, and the cumulative learning process builds up to the point of entrepreneurial readiness to realise

the goal (Festervand and Forrest 1993). Generally, a goal helps individuals to direct attention towards actions that are relevant to the goal, adjust their effort to the difficulty level of the goal, and motivate them to persist in their effort until the goal is reached (Seijts and Latham 2005). However, attention should be paid to the effects of two different types of goals: learning goals that identify needs for skills and knowledge acquisition, and performance goals that specify outcomes (Seijts and Latham 2005). On a simple and straightforward task, a performance goal is associated with better outcomes, whilst a learning goal works better in a complex task situation (Winters and Latham 1996) and is particularly important for individuals to develop competences (Leonard 2008). Indeed, setting a specific challenging performance goal has a negative effect on an individual's effectiveness in the early stage of learning in a complex task situation (Kanfer and Ackerman 1989), where skills and knowledge acquisition and development is instrumental. Entrepreneurial activity by nature involves a high degree of uncertainty and risk-taking for individuals taking on entrepreneurial endeavours. Under such conditions, establishing learning goals would help individuals to identify needs for knowledge and skills development, as well as develop strategies to implement learning. In contrast, performance goals allow individuals to stay focused on the anticipated entrepreneurial outcomes without being overly distracted in the process of pursuing such endeavours. Therefore, a balance between learning and performance goals, depending on the individuals' prior knowledge, skills and experience and the complexity of the entrepreneurial task, is required for entrepreneurship.

We have further articulated experiential learning as a mechanism that underpins the cumulative learning process of EP as defined by Cope (2005). Moreover, we have identified and conceptualised social learning and purposeful learning as two other

important dimensions of EP, going beyond Cope's (2005) work. Accordingly, we define EP as a cumulative, social and purposeful learning process in preparing for, and undertaking, entrepreneurial activity (see Table 1). EP has a clear bearing on entrepreneurial goals in addition to its cumulative and social nature, differentiating the concept from the general concept of EL. In the empirical study below, we aim to explore how the cumulative, social and purposeful learning process of EP takes place in new venture creation and management.

Insert Table 1 here

Research method

Because EP as an emerging concept lacks theoretical and empirical development, our research used an exploratory case study approach recommended by Yin (2009) to extend our understanding of the concept of EP and reveal the idiosyncrasies of EP and its contexts in Chinese high-tech private enterprises. Our case study is based on data collected from two Chinese private high-tech ventures (hereafter SpinalFixture and LiverPharma to ensure anonymity) in the healthcare industry sector. Specifically, SpinalFixture designed, developed and manufactured bone fixtures (Class III medical devices); LiverPharma primarily researched in and developed liver disease diagnosis and treatment (pharmaceutical).

Background

Both the medical devices and pharmaceutical markets have experienced tremendous growth in recent years (e.g. 21.1% and 13.6% annual growth, Datamonitor

2008a, 2008b), due to the huge and increasingly ageing population, improved living standards, and swift urbanisation leading to improved consumer affordability and increased demand for drugs and medical treatment (Hu et al. 2007). The markets are characterised by their huge sizes, wide geographical span, immature regulatory regimes, and regional protection under the old state-controlled system that continues to shadow the development of national innovation systems and distribution channels. Consequently, the pharmaceutical market is fragmented, with the four leading pharmaceutical companies only accounting for about 10% of the market share (Datamonitor 2008a). The medical devices market is polarised: high concentration in the high-end market dominated by leading multinational companies; low concentration at the low-end market with a large number of domestic companies competing on price. Whilst such market conditions offer tremendous opportunities for new entrants, they also pose great challenges for incumbent firms to learn from external sources (including new start-ups) and upgrade their own technology, knowledge and skills.

State-owned organisations traditionally lacking incentives to invest in Research and Development (R&D) are increasingly under pressure to reform; consequently, many employees are encouraged or forced to take early retirement to make room for young talent. The Chinese government also encourages Chinese overseas scholars and students to return to set up high-tech private ventures or take up senior positions in existing high-tech ventures. Under such institutional environments, retiree entrepreneurs and overseas returnee entrepreneurs (Wright et al. 2008) are idiosyncratic phenomena in China. Nevertheless, the immature financial market, the lack of support systems for private enterprises and intense competition constrains the growth of private enterprises. Chinese private entrepreneurs have to demonstrate their entrepreneurial flair by constantly

looking for new opportunities and developing new skills and competences. Therefore, Chinese private healthcare firms provide an interesting context to study EP.

Case selection, data collection and analysis

Our chosen case study companies are located in Beijing, one of the most highly concentrated high-tech areas in China (Yam et al. 2004). A key challenge for researching in China is to gain research access, which can be time consuming, complex and extremely difficult (Zhao et al. 2006). In addition to cultural issues (Easterby-Smith and Malina 1999) and sensitivity and confidentiality issues, managers may not have time or see the value of, academic research (Hirsch 1995). Using personal contacts and social networks is often the main way of gaining full cooperative access to Chinese firms (Liang and Lu 2006). Once initial access is granted, continued access allowing the researcher to interact with the interviewees long enough in order to collect relevant and sufficient data poses another challenge (Gummesson 2000).

To overcome these challenges, we adopted a two-stage case selection process to conduct the case study in 2008 and 2009. The first stage informal sampling started with broad selection criteria: high-tech private enterprises operating in the health care sector located in Beijing. We followed personal recommendations - an efficient way of gaining access to Chinese firms (Liang and Lu 2006), and also used cold calls to a number of companies. As a result, four health care companies (including one in pharmaceutical and three in medical devices) agreed to take part. We conducted one to two initial interviews with all four companies in order to fully assess their suitability.

In the second stage formal sampling, we selected two firms (SpinalFixture and LiverPharma) from the four initial cases based on Yin's (2009) "two-case" case study

design. We believe that findings independently emerging from these two cases are more powerful than a single case study alone (Yin, 2009), although we are fully aware that our findings, whilst useful to reveal some idiosyncrasies of EP in Chinese private enterprises, may not be generalisable to other firms or research contexts. We applied theoretical sampling at this stage based on the following rationales: (a) Given the vastly diverse nature of Chinese new ventures, we held the geographical location and the year of start-up constant when selecting case studies to allow us to control the effect of regional policy on enterprises and improve between-case comparability; SpinalFixture and LiverPharma were both located in Beijing and were founded around the same time (Table 2); (b) Since EP is inextricably linked to the 'learning history' involving personal and interactive dimensions (Cope 2005), and transformative learning (Mezirow 1991) requires time for individuals to engage in critical reflection on their entrepreneurial experience (Pittaway and Thorpe 2012), we selected two established firms, SpinalFixture and LiverPharma, to provide rich historical and cultural contexts to study EP; (c) Given that our aim is to understand the idiosyncrasies of EP within the context of Chinese high-tech private enterprises, we chose two typical cases (akin to Yin's (2009) concept of the "average case" in a single case study design) to illustrate the typical learning challenges faced by the Chinese private ventures; and (d) SpinalFixture and LiverPharma offered contrasting situations in terms of the different personal background of the founding entrepreneurs and the different organisational contexts (see the Case Study Firms below). Additionally, ensuring continued access was a practical concern of our second stage sampling; the founders of both firms were not only personally willing to participate in the interviews but also allowed or even encouraged

employees to participate; such continued access was crucial for us to gain insights (Gummesson 2000).

Within each firm, we used purposive sampling (Lincoln and Guba 1985) to identify and select key informants who were most knowledgeable about the topical area (Saunders et al. 2009). Specifically, we selected the Founder(s) (i.e. entrepreneurs who created the new ventures and continued to seek and pursue entrepreneurial opportunities), who had knowledge about the new venture creation and management. Wherever appropriate, we also selected an R&D Manager, Production Manager, and Marketing Manager (see Table 2). These people were considered as having specific knowledge about entrepreneurial activity within the firms. For example, an R&D Manager and Production Manager had specific knowledge about product development - the inward-looking part of pursuing an entrepreneurial opportunity, whilst Marketing Manager had specific knowledge about taking the product to market - the outward looking part of pursuing an entrepreneurial opportunity. Interviewing people other than the Founders provided (a) rich information on the organisational contexts, especially at the operational level where the Founders might not be directly involved, and (b) triangulation of the data from the Founders' interviews. We conducted seven (including two follow-up) interviews with selected informants in SpinalFixture and five (including one follow-up) in LiverPharma; each interview was conducted by at least one researcher of the research team with an individual informant on the respective sites of the firms. The follow-up interviews were conducted when the particular interviewees offered especially relevant and useful insights that deserved further attention. Once we had conducted five interviews with SpinalFixture and four interviews with LiverPharma, additional insights from further interviews were marginal, indicating a point of

diminishing returns (Strauss and Corbin 1998). This suggested that the number of interviews we conducted in each firm was sufficient to reveal the contexts and processes of EP. These interviews were semi-structured and conducted face-to-face, each lasting from one to one and a half hours. All the interviews were recorded and transcribed for data coding and analysis.

Our case study is based on retrospective interview data (i.e. the new venture creation process), concurrent interview data (i.e. the new venture management process) and secondary published data. This data triangulation approach helps to mitigate risks involved in using only retrospective interview data. First, although researchers have warned that informants' recall of brief, episodic interactions may be inaccurate (Bernard et al. 1984), they are remarkably accurate in recalling typical interactions and important events (Freeman et al. 1987). Since this study focuses on the key milestones of the new venture creation process and critical events influencing learning, rather than trivial, insignificant matters, it is therefore reasonable to believe that the founders were able to accurately recall key events in new venture creation. In the case of LiverPharma, we interviewed both founders to triangulate their accounts of key events in new venture creation. Additionally, the founders' account of the impact of external contexts on firm development was consistent with the secondary data on the industry context. This provides additional support for the validity of the founders' recall of the new venture creation process. Second, data on the new venture management process are based on concurrent interviews with multiple informants from each firm. The consistency among interviewees from each firm strengthens the validity of the data. Additionally, the interviewees' account of the impact of external contexts on firm development was

consistent with the secondary data on the industry development. This supports the validity of the data regarding the new venture management process.

Triangulating data is often used by researchers (e.g. Gardet and Fraiha 2012) to improve the research validity. Especially, combining concurrent and retrospective data is valuable, because the concurrent data provide real-time understanding of events and retrospective data enable efficient data collection (Bingham and Davis 2012) as compared with the concurrent longitudinal case study approach. For instance, the high failure rate of start-ups means that any chosen case study firm could have failed, making it impossible to continue concurrent longitudinal case study data. Moreover, the difficulty of continued access means that any chosen case study firm could have withdrawn its co-operation, resulting in incomplete concurrent longitudinal case study data. Exceptionally, research may employ a longitudinal case study, but the data collected are often from a small number of venture team members over a short period of time. For example, Karataş-Özkan (2011) collected data from participant observation and in-depth interviews with five new venture team members over 10 months. Therefore, combining concurrent and retrospective data is an efficient and effective way of data collection.

Insert Table 2 here

The interview questions covered five broad categories in order to capture the complex context and process of EP: (a) the entrepreneur: the background, skills, knowledge, experience, personal values, motivations, personal events prior to setting up the new venture, and perception of the environment and the organisation; (b) the

entrepreneurial opportunity: how it was discovered, what and how learning occurred, and the key events leading to the new venture creation; (c) the organisational developmental process: the firm's historical account, key milestones of learning, current skills and competences; (d) the organisational context: ownership, structure, strategic orientation, management and leadership style, organisational values, and key entrepreneurial activity, etc.; and (e) the business environment: the firm's strategic position in the industry, target markets, perceived competition, approaches to dealing with competition, and ways to acquire new information and knowledge from external sources. Additionally, secondary data (e.g. company websites, industry reports, newspaper and magazine publications, and academic publications) were also gathered to understand the country-, industry-, market- and firm-specific information. Information on the individual entrepreneurs, the entrepreneurial firms, and the wider environment in which they operated in allowed us to study the multi-level relations involved in entrepreneurial learning and preparedness (Karataş-Özkan 2011).

A thematic content analysis was performed based on a preliminary analytical framework - a two-by-three matrix encompassing two key entrepreneurial stages (i.e. new venture creation and new venture management) as one axis and the three dimensions of EP (i.e. cumulative, social and purposeful) as the other axis. Within each case, data obtained from each informant were analysed using the matrix to identify the emerging themes of what was learnt and how and under what conditions (i.e. personal characteristics, organisational contexts, and external environment) EP occurred at different stages of new venture creation and management. The themes that emerged in each individual interview were compared across different interviews to build insights into the three dimensions of EP, namely cumulative, social and purposeful learning in

the two key stage of new venture creation and management. Building on individual case analysis, we conducted between-case comparisons, using the standard cross-case comparison techniques (e.g. Eisenhardt 1989; Miles and Huberman 1994). We not only looked for similar, but also different concepts and relationships between the two cases in order to understand EP in different contexts. This was then used to extend the theory of EP.

Research findings

Case study firms

SpinalFixture was founded in 1996 in Beijing (see Table 2), by a retiree entrepreneur who took early retirement from a state-owned aerospace organisation with secure pension and benefits. SpinalFixture focused on adapting foreign bone fixture technology to the requirements of Chinese patients. Since its start-up, SpinalFixture pursued organic growth through self-finance. In early 2000s, facing increasing market pressure due to price-based competition, SpinalFixture focused on increasing efficiency and capacity. To achieve this, it moved into a large rural site in 2005, and transformed its ad-hoc workshop-style management to a formal, functional management structure to achieve efficiency and standardisation. However, since 2009 SpinalFixture faced intensified domestic competition in the low-end market and international competition in the high-end market, and the Founder realised that the opportunity lay in the mid-range domestic market. However, SpinalFixture needed to improve its R&D capability, change the employee mindset and break down 'organisational silos' caused by functional management in order to create an innovative culture. The Founder wanted to transform

SpinalFixture into an employee-owned organisation with effective reward systems for innovation.

LiverPharma was founded in 1994 in Beijing (see Table 2), by two overseas returnees -Founder A and Founder B who used to be doctor colleagues in a state-owned hospital. Founder A returned to China after obtaining a Master in Public Administration in the US, whilst Founder B returned to China from Indonesia with family relocation. Founder A quit her secure medical profession due to dissatisfaction caused by control in state-owned hospital, and set up LiverPharma with the help of her husband, a renowned doctor specialising in Hepatitis B. Subsequently, Founder B left his secure job due to in-fighting and the lack of intellectual freedom in the state-owned hospital, taking his research on Hepatitis B diagnosis and treatment to join LiverPharma. Unlike SpinalFixture, LiverPharma could not pursue organic growth due to high R&D investment (about 50% of sales annually) required for developing its technology. This was exacerbated by the lack of external finance due to the financial crisis, the immature capital market, and the lack of government support for private enterprises in China. Consequently, LiverPharma in parallel developed over-the-counter skincare products through licensing-in technology from a state-owned hospital; its revenue was re-invested in the R&D of Hepatitis B. Compared with its peers, LiverPharma had strong R&D capability and a culture that respected learning. Founder A aspires to build a vertically integrated pharmaceutical company in the future, with a better R&D centre and more scientists working on new drugs, manufacturing facilities, and a hospital for training and clinical trials.

EP during venture creation

First, there was clear evidence of the cumulative nature of EP during venture creation. We found that prior knowledge, skills and experience of the founders/entrepreneurs was instrumental to EP in both firms. For example, the Founder of SpinalFixture commented: *"I have expertise in designing aerospace products using titanium, the same material for bone fixtures [...] However, I didn't have medical knowledge, so I informally learnt medical knowledge from experts, and combined such knowledge with my engineering knowledge of aerospace design with titanium accumulated over the past 30 years."* In LiverPharma, the two founders' prior knowledge, skills and experience complemented each other: Founder A gained clinical trial expertise through working in a state-owned hospital and management knowledge and skills through an MPA study in the US; Founder B developed expertise in basic medical research whilst working in a state-owned hospital and subsequently gained international reputation. This provides evidence to support the importance of a stock of experience and skills that entrepreneurs possess in their decisions to enter the start-up process (Reuber and Fischer 1999), and hence the experiential nature of EP (Kolb 1984). Moreover, our findings go a step further to suggest that, although the founders' different personal characteristics and background alone (i.e. a retiree entrepreneur in SpinalFixture, who perceived himself as 'conservative', and the two returnee entrepreneurs in LiverPharma, who portrayed themselves as 'unconventional thinkers') are not the determining factors in entrepreneurial start-ups, they are associated with the different learning paths and processes in which entrepreneurs take. Entrepreneurs' prior knowledge and personal characteristics interact to shape their learning paths leading to the identification of business opportunities (McMullen and Shepherd 2006).

Second, the social nature of EP was evidence. For instance, there was clear evidence that the founders' family members and close social groups (e.g. friends and ex-colleagues) played a major role in new venture creation. For example, close social groups were instrumental to the Founder of SpinalFixture in identifying the business opportunity: *"After I took early retirement, I talked to the Head of a [state-owned] hospital, who is a friend of mine. He told me that there was a good opportunity to develop bone fixtures"* Similarly, Founder A of LiverPharma received crucial support from her husband and formed a business partnership with an ex-colleague: *"My husband was a famous doctor in Hepatitis. He said 'we[I] really should establish a research company and do better research' [as he felt that the control in state-owned hospitals was stifling research]. In fact, both of us were doctors, and also did clinical trials."* In LiverPharma, Founder B's passion for, and expertise in, Hepatitis B diagnosis and treatment, helped to acquire new knowledge through networking among the wider expert community, as Founder A recounted, *"he [Founder B] travels a lot, giving lectures and seminars, attending conferences, and training people and doctors [...] He could always find new information from Internet, books, or other sources [...] He is my teacher providing us information."* Our findings support the idea that the social groups to which entrepreneurs are associated are influential factors, and EP is embedded in socialisation (Cope 2005; Scherer et al. 1989). Moreover, our findings go a step further by suggesting that entrepreneurs' prior knowledge helps to define the parameters of socialisation, which in turn provides opportunities for knowledge acquisition and upgrade. This mutually reinforcing process of prior knowledge and socialisation shapes the learning history of each entrepreneur, which defines the unique process of preparedness brought to new venture creation and management (Cope 2005).

Third, we found that the purposeful nature of EP evolved over time, as noticeably marked by critical events. In SpinalFixture, the Founder's early retirement guaranteeing him a secure pension and benefit package was an important turning point of preparedness. Conversely, both founders of LiverPharma were dissatisfied with the lack of intellectual freedom and respect for research under the state-controlled system and disheartened by internal conflicts and in-fighting. Subsequently, both founders of LiverPharma quit secure jobs and took risks in setting up their own enterprise. For example, Founder B recalled his frustration in a state-owned hospital: "*I presented a paper on Hepatitis at a US conference [in 1983], and it was very well received [...] During the coffee break, someone [a leading international expert] approached me and asked me to carry on with my research... He also invited me to collaborate with him on his [Hepatitis] technology [...] I promised to work on it. However, when I got back to work, the Head of the Hospital did not allow me to work on it. I was furious and hurt, shouting at him and also banging the table [...] Later on, I informally and secretly worked with a colleague on the project.*" Dissatisfaction with employment could provide a major motivation for entrepreneurship (Haynes et al. 1999).

Before these critical events, the entrepreneurs were explicitly driven by learning goals, which were instrumental in the accumulation of knowledge, skills and experience, whilst the pursuit of performance goals (i.e. setting up a new venture) was implicit. The critical events were turning points where performance goals were brought to the fore and learning became driven by performance goals. Our findings revealed that it was after the critical events that the entrepreneurs' networking activities were characterised by deliberate socialisation with a particular purpose in mind (i.e. looking for an opportunity) accompanied by active information seeking. These findings go

beyond Cope (2005) by explicating the important role played by critical events in prioritising and balancing entrepreneurial goals (between learning and performance goals) and triggering deliberate socialisation with entrepreneurial goals in mind.

EP during venture management

Throughout venture management, although the founders continued to play a major role in EP, the organisational context under the founders' leadership was vital. SpinalFixture and LiverPharma experienced different growth patterns and hence had different strategic priorities. SpinalFixture went through fast, organic growth based on their core technology of spinal fixtures. Therefore, the Founder was not particularly looking for new opportunities in order to concentrate on the existing technology to achieve efficiency and scale. Conversely, suffering from financial constraints, LiverPharma could not stay focused on its core technology; instead, while Founder B carried on working on the Hepatitis B research, Founder A constantly sought other opportunities to quickly gain much-needed revenues to re-invest in Hepatitis B research. The different organisational contexts affected learning priorities.

First, the nature of experiential learning was manifested differently in the firms. To achieve efficiency and scale, SpinalFixture adopted functional management and focused on employees' learning to comply with regulations and practices: "*Our employees tend to stay with the company. When someone joins our company, s/he must learn the procedures and regulations, and the manufacturing requirements [...]* Everyone must comply with the industry and company standards." (the Founder). In line with the functional management that promoted standardisation, SpinalFixture instilled a culture that favoured consensus seeking: "... *our company focuses on convergent*

thinking that promotes harmony and consistency..." (R&D Manager). The Marketing Manager echoed this sentiment: "I place a great emphasis on developing group spirit. Our sales and marketing staff are all recent university graduates. It is important to imbue the company's management mindset among them and develop the group spirit of a marketing and sales team". Such traditional functional management and organisational culture was associated with the Founder's personal characteristics and hence his management mindset, as the Production Manager commented: "Many new enterprises have expanded very fast and overtook our company, and their bold management style is a key contributing factor to fast expansion. Our President (the Founder) is old and conservative, which explains why our company prefers a steady growth. If our President were younger, we might have a more aggressive expansion plan."

Conversely, Founder A of LiverPharma championed and facilitated a team-based approach to learning, based on her experience of management training in the US. Its focus was to develop unconventional thinking and learn from international management practice, as Founder A commented: *"I don't want to follow tradition just because our managers are not happy with certain decisions; I am using the [Harvard Business School] material to organise seminars for managers to discuss the case studies, initially monthly and subsequently every fortnight [...] I hope that they can train their own departmental staff too in the future."* Additionally, the R&D Manager commented on LiverPharma's culture: *"First, as a pharmaceutical company, our priority is to save people's lives. Second, we encourage due diligence despite limited resources and hardship. Third, regardless of our size and resources, our key motivation is to advance technology. We invest a lot in R&D, and have just built a new R&D lab".*

The Production Manager added to LiverPharma's organisational culture: "*Our organisational culture is influenced by our General Manager (Founder A) who read an MPA at a US university... She encourages all the employees to come up with more and better ideas*". Our findings suggest that, while organisational contexts define learning and hence EP, it is founders' background, knowledge and skills that help to shape organisational contexts. The interaction between founders' personal background, knowledge and skills and the organisational contexts shapes EP during the venture management. Founders who are also owner-managers are often involved in all the key dimensions of entrepreneurial decision-making (Wang and Altinay 2012), and hence their conspicuous influence on the organisational contexts and what and how employees learn.

We also found that whilst LiverPharma was still pursuing growth in its core technology, SpinalFixture realised the need for a strategic transition towards becoming an innovative company in the light of intensified domestic and international competition. The Founder identified the problem with the current functional management and employee mindset: "*[Over time] these functions have become isolated, each blaming the other functions whenever problems occur. [...] we need to develop 'team spirit' among top management who are responsible for making decisions, planning for implementation and actual executing the plan [...] We also need to have effective reward systems in place to encourage employees to contribute their new ideas [...] I also want to turn this to an employee-owned company, but this is not possible at the moment. Some people are selfish; they want dividends from profits rather than investing profits for future growth.*" These findings suggest that learning history could

well hinder new learning in the face of new challenges. EP is effective only when the 'right' context comes along; organisational contexts may well impede EP (Dimov 2007).

Second, what and how social learning took place differed in the firms. SpinalFixture focused on learning from doctors and foreign companies to adapt existing technology to the requirements of Chinese patients, as its Founder stated: "*Our sales people discuss with the doctors in hospitals about the disease and the device required to treat the disease. They will then bring the information back into the company. We will then look at what new technology is available in foreign countries.*" In stark contrast, LiverPharma faced financial constraints, as Founder B commented that, "*we are so constrained by finance. If we were given resources similar to those of a stated-own research institute, we would have achieved much more than a state-owned research institute would with the same resources.*" To cope with the constraints, LiverPharma focused on learning to develop creative solutions to problems and developed 'ambidextrous' capability: on the one hand developing Hepatitis B diagnosis and treatment, and on the other hand working with a reputable medical university to jointly develop skincare products to generate much needed revenues to re-invest into research on the liver disease treatment: "*We always work with this university to find new ideas. We buy the technology [from the university], develop it and then share the profit together.*" Our findings suggest that organisational contexts (especially strategic priorities) play a key role in shaping what to learn, how to learn, and from who to learn. The findings highlight the importance of studying EP in real-life situated context (Cope 2005; Dimov 2007; Morris et al. 2012; Rae 2013a).

Moreover, both firms had different learning experiences about developing social capital in the wider community. SpinalFixture had positive experience, according to the

Founder: *"Our social capital is a resource advantage. We are approved by the government; we have received many awards including Harmonious Labour Relationship Award; we have the Union, the Communist Party Unit, and Communist Party Youth Unit in place [...] Provincial and city level project bidding often requires a statement of social capital. For example, in our last bidding in Inner Mongolia, our Harmonious Labour Relationship Award earned us extra points."* In contrast, LiverPharma learnt from negative experience according to Founder A: *"Corruption puts extra financial constraints on small businesses. We have to use connections with people [...] We have a third partner since four years ago; he used to work in a government body and has strong connections with government agents [...] Even with his help, we could not obtain a patent for our treatment, as we did not have enough money to pay [for corruption]."* Interestingly, the Founders' personal characteristics and background appeared to be associated with their experience of learning. In particular, the Founder of SpinalFixture was more willing to conform to traditions and the existing norms, whilst the Founders of LiverPharma endeavoured to break away from traditions and norms.

Additionally, both firms learned vicariously from failures of other companies. For example, the Founder of SpinalFixture said, *"Everyone knows about San Lu [a milk powder manufacturer]; this company's reputation is ruined, domestically and internationally. We have learned [from San Lu's mistake] that customers are always first and quality is fundamental"*. Similarly, Founder A of LiverPharma stated, *"A hospital accidentally transferred their technology with their trademark to a company in Jiangsu Province. Now the hospital is not allowed to use their own trademark. We have learnt to protect our own brand."* These findings provide evidence of vicarious learning

(Bandura 1977; Scherer et al. 1989), and move on to highlight the effect of negative role models in positive learning.

Third, it was evident that goals were established in both firms. However, performance goals (e.g. efficiency and scale) took priority in SpinalFixture. Accordingly, SpinalFixture focused on learning to improve efficiency through putting in place functional management, and improve quality through complying with different trading standards: "*We comply with ISO9001 as part of our effort to improve product quality and management processes and to establish our brand reputation*" (the Quality Control Manager). In contrast, performance (e.g. revenue generation) and learning goals (e.g. developing unconventional thinking and creative problem-solving solutions) were both given priority in LiverPharma. For example, to overcome the problem of the lack of R&D investment, LiverPharma learned from Boeing in self-financing R&D: "*Boeing was trying to develop a new aerospace technology. They spent a huge amount of money and nearly went bankrupt. They had to stop [developing this technology] and started to design furniture to make some money and then went back to continue the aerospace technology. This inspired us. If we cannot afford something, we can do something else instead to make money and re-invest in what we really want to do.*" (Founder A). These findings are consistent with Winters and Latham (1996), who argue that a performance goal is associated with better outcomes in a simple and standardised organisational context (e.g. SpinalFixture) and a learning goal is more effective in a complex and innovative environment (e.g. LiverPharma). Table 3 summarises the key findings.

Insert Table 3 here.

Discussion

Prior literature specifically focusing on EP, either conceptually or empirically, is few and far between. Our study contributes to the EL literature by advancing the conceptualisation of EP and providing much needed empirical evidence on how EP takes place in real-life entrepreneurial context. Specifically, we go beyond Cope's (2005) conceptualisation of EP as a cumulative process of learning, and articulate the social and purposeful learning process of EP. These three dimensions of EP deepen the understanding of how EP takes place and the mechanisms that enable them. Moreover, prior EP research focuses on career preparedness of entrepreneurial students (e.g. Scherer et al. 1989; Harvey and Evans 1995; Thandi and Sharma 2004), providing little insight into how real-life entrepreneurs learn and prepare themselves for entrepreneurial endeavours. In this study, we illustrate how a cumulative, social and purposeful learning process takes place in real-life learning context through a case study of two Chinese private enterprises. In particular, our study has the following theoretical implications (also summarised in Table 3).

First, in terms of the cumulative nature, our findings show that experiential learning is ongoing and builds on prior knowledge, skills and experience gained well before and leading up to start-ups in our case study. These findings provide evidence for the conceptual work on the cumulative nature of EP (Cope 2005). Entrepreneurs' personal characteristics and prior knowledge, skills and experience shape the learning history and paths of EP, although personal characteristics alone are not the sole determinants of entrepreneurial start-ups. This broadly supports the view that interaction between prior knowledge and the personal characteristics enables entrepreneurs to identify opportunities (McMullen and Shepherd 2006). More importantly, our findings

warn that the unique learning history could well hinder new learning in the light of environmental change. How firms can break away from outdated learning history and embracing a new learning path deserves further attention in future research.

Second, with regard to the social nature, although the extant literature argues that preparedness is "situated" (Dimov 2007, p.578), little empirical evidence exists to illustrate how learning contexts influence EP. We found that family members and close social groups to which entrepreneurs are associated are vital in shaping EP. These findings are broadly in line with the situated nature of EP (Dimov 2007) and the theory of situated learning in general (Lave and Wenger 1991; Taylor and Thorpe 2004). Most importantly, we found that it is entrepreneurs' prior knowledge, experience and background that helps to define the parameters of socialisation and general networking in new venture creation. This suggests that the cumulative and social nature of EP interacts and mutually supports each other in the EP process, and that the cumulative nature of EP cannot be fully understood without taking into account its social context.

The interaction between the cumulative and social nature not only occurs in new venture creation but continues throughout the venture management where the accumulation of knowledge is dependent on a range of organisational factors. For example, different growth patterns, strategic directions and management approaches are associated with different learning priorities. Moreover, as the owner-managers, the founders' personal characteristics, knowledge, skills and experiences influence their approaches to managing the firms and hence continue to shape the organisational contexts. Such findings are consistent with the argument that entrepreneurs are instrumental to firms' decision making and hence influence the entrepreneurial behaviours and practice of their firms (Wang and Altinay 2012). Finally, our findings

highlight that negative role models have a strong impact on positive learning. This finding deserves further attention as prior vicarious learning has largely overlooked this aspect. Overall, these findings support the view that preparedness is dependent on the specific situations (Cope 2005; Dimov 2007). Our findings add new insight of the real-life learning contexts (Morris et al. 2012), complementing prior EP literature that focuses on how entrepreneurial students learn and prepare themselves for an entrepreneurial career (e.g. Scherer et al. 1989; Harvey and Evans 1995; Thandi and Sharma 2004).

Third, our findings highlight the importance of entrepreneurial goals, and hence the purposeful nature of EP. Although EP builds on prior knowledge well before the new venture creation, the early stage learning is primarily driven by learning goals to acquire knowledge and skills, which could be implicit in the performance goal (e.g. setting up a new venture). It is at the moment of critical events that experiential and social learning becomes explicitly driven by the performance goal. Moreover, whilst the entrepreneurs' prior knowledge helps to define the parameters of socialisation in general, it is after the critical events that the entrepreneurs' networking activities are characterised by deliberate socialisation with a particular business focus in mind and deliberate search for information relevant to the identified opportunities. Therefore, our findings have gone a step further to highlight the role of critical events in transforming entrepreneurs' experiential and social learning with an entrepreneurial goal. The presence of such a goal motivates the entrepreneurs to concentrate on the tasks at hand and persist in their effort (Seijts and Latham 2005).

Conclusion

Our study advances the conceptualisation of EP as a cumulative, social and purposeful learning process. Accordingly, we articulate how experiential and social learning as well as entrepreneurial goals can act as mechanism to enable EP. More importantly, our findings reveal that the social and purposeful nature of EP is an integral part of EP that is interwoven in the cumulative learning process. The three dimensions of EP deepen our understanding of how and under what conditions EP takes place in new venture creation and management. Practically, our findings alert entrepreneurs to pay attention to the double-edged role (positive and negative) of prior experience especially when context has changed; to reflect on the extent to which their personal background influences their firms development and break away from their own constraints in the changing business environment; and to keep a balanced approach to learning and performance goals taking into account the needs of firm development.

Our study is exploratory in nature, based on qualitative data from two Chinese high-tech private enterprises. While our findings reveal idiosyncrasies of EP in this particular context (involving one retiree entrepreneur and two overseas returnee entrepreneurs), future research may investigate different types of entrepreneurial firms (e.g. non-high tech private enterprises or state-owned organisations) or different types of entrepreneurs in China (e.g. the rising middle-class entrepreneurs with high formal education and prior professional experience often in multinational companies, second-generation entrepreneurs, and entrepreneurs running a management buyout or spin-off of a state-owned organisation). Given that EP is specific to personal, organisational, institutional, and socio-cultural contexts, another fruitful avenue would be for future research to study how the changing market, socio-cultural, and institutional

environment affects EP over time, especially in an international comparative setting. Finally, our study uses triangulation of retrospective interviews data with concurrent interview and secondary data to mitigate the risks involves in retrospective interview data only. Future research may pursue concurrent longitudinal case study data to unpack real-time events in the new venture creation and management processes.

References

- Aldrich, H.E. and Kenworthy, A. (1999). "The accidental entrepreneur: Cambellian antinomies and organizational foundings". In Baum, J.A.C. and McKelvey, B. (eds) *Variations in Organizational Science: In Honor of Donald T. Campbell*. Newbury Park, CA: Sage, pp. 19–33.
- Argyris, C. and Schön, D. A. (1978). *Organisational learning: A theory of action perspective*. Reading, MA: Addison-Wesley Publishing Co.
- Bandura, A. (1977). *Social Learning Theory*. New Jersey: Prentice Hall.
- Bernard, R.H., Killworth. P., Kronenfeld, D. and Sailer, L. (1984). "The problem of informant accuracy: The validity of retrospective data". In Siegel, B.J. (Ed.), Beals, A.R. and Tyler, S.A. (Associate Eds.), *Annual Review of Anthropology*, Vol.13, pp.495-517. Palo Alto, CA: Annual Reviews.
- Bingham, C.B. and Davis, J.P. (2012). "Learning sequences: their existence, effect, and evolution". *Academy of Management Journal*, Vol.55 No. 3, pp.611–641.
- Boud, D., Cohen, R. and Walker, D. (1993). Introduction: Understanding learning from experience. In Boud, D., Cohen, R. and Walker, D. (Eds), *Using experience for learning*. Buckingham: SRHE & Open University Press, pp.1-18.

- Brockhaus, R.H. and Horwitz, P.S. (1986). "The psychology of the entrepreneur". In Sexton, D.L. and Smilor, R.W. (eds) *The Art and Science of Entrepreneurship*. Cambridge, MA: Ballinger Publishing Company, pp. 25-48.
- Busenitz, L.W. (1996). "Research on entrepreneurial alertness: sampling, measurement, and theoretical issues". *Journal of Small Business Management*, Vol.34, No.4, pp.35-44.
- Bygrave, W. and Minniti, M. (2000). "The social dynamics of entrepreneurship". *Entrepreneurship Theory and Practice*, Vol.24 No. 3, pp.25-36.
- Cooper, S.Y. and Park, J.S. (2008). "The impact of 'incubator' organizations on opportunity recognition and technology innovation in new, entrepreneurial high-technology ventures". *International Small Business Journal*, Vol.26 No. 1, pp. 27-56.
- Cope, J. (2003). "Entrepreneurial learning and critical reflection: discontinuous events as triggers for "higher-level" learning". *Management Learning*, Vol. 34 No. 4, pp.429-450.
- Cope, J. (2005). "Toward a dynamic learning perspective of entrepreneurship". *Entrepreneurship Theory and Practice*, Vol. 29 No. 4, pp.373-397.
- Cope, J. (2011). "Entrepreneurial learning from failure: an interpretative phenomenological analysis". *Journal of Business Venturing*, Vol.16 No. 6, pp. 604-623.
- Datamonitor (2008a). *Industry Profile: Pharmaceutical Industry in China*, Datamonitor: London.
- Datamonitor (2008b). *Industry Profile: Healthcare Devices in China*, Datamonitor: London.

- Deakins, D. (1996). *Entrepreneurship and Small Firms*. Maidenhead: McGraw-Hill.
- Dimov, D. (2007). "From opportunity insight to opportunity intention: the importance of person-situation learning match". *Entrepreneurship Theory and Practice*, Vol.31 No. 4, pp.561-583.
- Easterby-Smith, M. and Malina, D. (1999). "Cross-cultural collaborative research: toward reflexivity". *Academy of management journal*, Vol.42 No.1, pp.76-86.
- Eisenhardt, K.M. (1989). "Building theories from case study research". *Academy of Management Review*, Vol.14 No.4, pp.532–550.
- Festervand, T.A. and Forrest, J.E. (1993). "Entrepreneurial preparedness: a multi-stage model". *Journal of Business and Entrepreneurship*, Vol. 5 No. 3, pp.65-77.
- Freeman, L.C., Romney, A.K. and Freeman, S.C. (1987). "Cognitive structure and informant accuracy". *American Anthropologist*, Vol.89 No.2 , pp.310-325.
- Gardet, E. and Fraiha, S. (2012). "Coordination modes established by the hub firm of an innovation network: the case of an SME bearer". *Journal of Small Business Management*, Vol.50 No . 2, pp.216–238.
- Gummesson, E. (2000). *Qualitative Methods in Management Research*. London: Sage Publications.
- Hamilton, E. (2011). "Entrepreneurial learning in family business: a situated learning perspective". *Journal of Small Business and Enterprise Development*, Vol.18 No. 1, pp.8-26.
- Harvey, M. and Evans, R. (1995). "Strategic windows in the entrepreneurial process". *Journal of Business Venturing*, Vol.10 No.5, pp.331-347.
- Haynes, P.J., Becherer, R.C., Helms, M.M. and Jones, M.A. (1999). "The accidental entrepreneur: when dissatisfaction is the primary motivation for

- entrepreneurship". *Journal of Business & Entrepreneurship*, Vol.11 No.2, pp.89-104.
- Hirsch, P.M. (1995). "Tales from the field: learning from researchers' accounts". In Hertz, R. and Imber, J. B. (eds). *Studying Elites Using Qualitative Research*, London: Sage Publications, pp. 72-79.
- 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*, Vol.33 No. 1, pp.167-192.
- Hu, Y., Geng, F., Bian, Y. and Wang, Y. (2007). "The Chinese pharmaceutical market: perspectives of the health consumer". *Journal of Medical Marketing*, Vol. 7 No. 4, pp.295-300.
- Johnsen, G.J. and McMahon, R.G.P. (2005). "Owner-manager gender, financial performance and business growth amongst SMEs from Australia's business longitudinal survey". *International Small Business Journal*, Vol.23 No.2, pp. 115-142.
- Jones, K. and Tullous, R. (2002). "Behaviors of pre-venture entrepreneurs and perceptions of their financial needs". *Journal of Small Business Management*, Vol.40 No.3, pp.233-249.
- Kanfer, R. and Ackerman, P.L. (1989). "Motivation and cognitive abilities: an integrative/aptitude-treatment interaction approach to skill acquisition". *Journal of Applied Psychology*, Vol.74 No.4, pp.657-690.
- Karataş-Özkan, M. (2011). "Understanding relational qualities of entrepreneurial learning: Towards a multi-layered approach". *Entrepreneurship & Regional Development: An International Journal*, Vol.23, pp.9-10), pp.877-906.

- Kolb, D.A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs, NJ: Prentice Hall.
- Kreitner, R. and Luthans, F. (1984). "A social learning approach to behavioral management: radical behaviorists "mellowing out". *Organizational Dynamics*. Vol.13 No. 2, pp.47-65.
- Lave, J. and Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. New York, NY: Cambridge University Press.
- Lee, R. and Jones, O. (2008). "Networks, communication and learning during business start-up: the creation of cognitive social capital". *International Small Business Journal*, Vol.26 No.5, pp.559-591.
- Leonard, D. C. (2008). "The impact of learning goals on emotional, social and cognitive intelligence competency development". *Journal of Management Development*, Vol.27 No. 1, pp.109-128.
- Liang, B. and Lu, H. (2006). "Conducting fieldwork in China: observations on collecting primary data regarding crime, law, and the criminal justice system". *Journal of Contemporary Criminal Justice*, Vol. 22 No.2, pp.157-172.
- Lincoln, Y. and Guba, E. (1985). *Naturalistic Inquiry*. Beverly Hills, CA: Sage.
- McMullen, J.S. and Shepherd, D.A. (2006). "Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur". *Academy of Management Review*, Vol.31 No. 1, pp.132-152.
- Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco: Jossey-Bass.
- Miles, M.B. and Huberman, A.M. (1994). *Qualitative Data Analysis*. Sage, Thousand Oaks, CA.

- Minniti, M. and Bygrave, W. (2001). "A dynamic model of entrepreneurial learning". *Entrepreneurship Theory and Practice*, Vol.25 No. 3, pp.5-16.
- Morris, M.H., Kuratko, D.F., Schindehutte, M. and Spivack, A.J. (2012). "Framing the entrepreneurial experience". *Entrepreneurship: Theory and Practice*, Vol.36 No. 1, pp.11-40.
- Newbert, S.L. (2005). "New firm formation: a dynamic capability perspective". *Journal of Small Business Management*, Vol.43 No.1, pp.55–77.
- Pittaway, L. and Thorpe, R. (2012). "A framework for entrepreneurial learning: A tribute to Jason Cope". *Entrepreneurship & Regional Development: An International Journal*, Vol.24 No.9-10, pp.837-859.
- Politis, D. (2005). "The process of entrepreneurial learning: a conceptual framework". *Entrepreneurship Theory and Practice*, Vol.29 No.4, pp.399-424.
- Rae, D. (2013a). The contribution of momentary perspectives to entrepreneurial learning and creativity, *Industry & Higher Education*, Vol. 27 No. 6, pp.407–420.
- Rae, D. (2013b). Editorial. *International Journal of Entrepreneurial Behaviour & Research*, Vol.19 No. 1.
- Ravasi, D. and Turati, C. (2005). "Exploring entrepreneurial learning: a comparative study of technology development projects". *Journal of Business Venturing*, Vol. 20 No.1, pp.137-164.
- Reuber, A.R. and Fischer, E. (1999). "Understanding the consequences of founders' experience". *Journal of Small Business Management*, Vol.37 No.2, pp.30-45.
- Saunders, M.N.K., Lewis, P. and Thornhill, A. (2009) *Research Methods for Business Students* (5th Edition), Harlow, FT Prentice Hall.

- Scherer, R.F., Adams, J.S. and Wiebe, F.A. (1988). "Social learning theory as a conceptual framework for entrepreneurship research: the role of observational learning". In Roberts, G.B., Lasher, H. and Maliche, E. (eds) *Entrepreneurship: New direction for a Global Economy. Proceedings of the International Council for Small Business*, pp.243-249.
- Scherer, R.F., Adams, J.S., Carley, S.S. and Wiebe, F.A. (1989). "Role model performance effects on development of entrepreneurial career preference". *Entrepreneurship Theory and Practice*, Vol. 13 No.3, pp.53-71.
- Seijts, G.H. and Latham, G.P. (2005). "Learning versus performance goals: when should each be used". *Academy of Management Executive*, Vol.19 No 1, pp.124-131.
- Sexton, D.L. (1987). "Advancing small business research: utilizing research from other areas". *American Journal of Small Business*, Vol.11 No.1, pp.25-30.
- Shah, S.K. and Tripsas, M. (2007). "The accidental entrepreneur: the emergent and collective process of user entrepreneurship". *Strategic Entrepreneurship Journal*, Vol.1 No 1-2, pp.123-140.
- Shane, S. (2000). "Prior knowledge and the discovery of entrepreneurial opportunity". *Organization Science*, Vol.11, pp.448-469.
- Starr, J.A. and Fondas, N. (1992). "A model of entrepreneurial socialization and organization formation". *Entrepreneurship Theory and Practice*, Vol.17 No.1, pp.67-76.
- Strauss, A. and Corbin, J. (1998). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, 2nd Edition. Thousand Oaks, CA: Sage.

- Taylor, D.W. and Thorpe, R. (2004). "Entrepreneurial learning: a process of co-participation". *Journal of Small Business and Enterprise Development*, Vol.11 No.2, pp.203-211.
- Thandi, H. and Sharma, R. (2004). "MBA students' preparedness for entrepreneurial efforts". *Tertiary Education and Management*, Vol.10, pp.209-226.
- Venkatarman, S. (1997). "The distinctive domain of entrepreneurship research". In Katz, J. and Brockhaus, R. (eds). *Advances in Entrepreneurship, Firm Emergence, and Growth*. JAI Press, Greenwich, CT, pp.119-138.
- Wang, C. L. and Chugh, H. (2014), "Entrepreneurial learning: past research and future challenges". *The International Journal of Management Reviews*, Vol.16 No.1, pp.24-61.
- Wang, C.L. and Altinay, L. (2012). "Social embeddedness, entrepreneurial orientation and firm growth in ethnic minority small businesses in the United Kingdom". *The International Small Business Journal*, Vol.30 No.1, pp.3-23.
- Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity*. New York: Cambridge University Press.
- West, G.P. and Noel, T.W. (2009). "The impact of knowledge resources in new venture performance". *Journal of Small Business Management*, Vol.47 No.1, pp.1-22.
- Westhead, P. and Wright, M. (2011). "David Storey's optimism and chance perspective: a case of the Emperor's new clothes?" *International Small Business Journal*, Vol.29 No.6, pp.714-729.
- Westhead, P., Ucbasaran, D. and Wright, M. (2005). "Decisions, actions, performance: do novice, serial, and portfolio entrepreneurs differ?" *Journal of Small Business Management*, Vol.43 No.4, pp.393-417.

- Williams, A.P.O. (2001). "A belief-focused process model of organizational learning". *Journal of Management Studies*, Vol.38, No.1, pp.67-85.
- Winters, D. and Latham, G. (1996). "The effect of learning versus outcome goals on a simple versus a complex task". *Group & Organization Management*, Vol.21 No.2, pp.236-250.
- Wortman, M.S. (1987). "Entrepreneurship: an integrating typology and evaluation of empirical research in the field". *Journal of Management*, Vol.13, pp.259-279.
- Wright, M., Liu, X., Buck, T. and Filatotchev, I. (2008). "Returnee entrepreneurs, science park location choice and performance: an analysis of high-technology SMEs in China". *Entrepreneurship Theory and Practice*, Vol. 32 No.1, pp.131-155.
- Yam, R.C.M., Guan, J.C., Pun, K.F. and Tang, E.P.Y. (2004) "An audit of technological innovation capabilities in Chinese firms: some empirical findings in Beijing, China". *Research Policy*, Vol.33 No.8, pp.1123-1140.
- Yin, R.K. (2009). *Case Study Research: Design and Methods*, 4th Edition. Thousand Oaks, California: Sage Publications, Inc.
- Zhao, X., Flynn, B.B. and Roth, A.V. (2006). "Decision sciences research in China: a critical review and research agenda—foundations and overview". *Decision Sciences*, Vol.37 No.4, pp.451-496.

Table 1. A Conceptualisation of Entrepreneurial Preparedness

Key Dimension	Definition	Implications
The cumulative nature	The process of EP is experiential in nature, building on prior knowledge.	<ul style="list-style-type: none"> • Entrepreneurs discover opportunities related to knowledge they already possess (Busenitz 1996). • Different knowledge, such as business or industry knowledge (West and Noel 2009) and knowledge of markets, ways to serve markets and customer problems (Shane 2000) may have different impact on how entrepreneurs learn. • EP is <i>path dependent</i>; the learning history of each entrepreneur defines the unique process of EP (Cope 2005).
The social nature	The process of EP is situated in the learning context (i.e. peer groups, social, historical, cultural context, and critical events).	<ul style="list-style-type: none"> • What and how an entrepreneur learns is influenced by both personal and environmental factors (Kreitner and Luthans 1984). • Vicarious learning through observing and imitating others is interwoven in the EP process (Bandura 1977; Williams 2001). • Learning is a lived experience involving a cumulative series of independent events (Morris et al. 2012); such critical events could well be dissatisfaction from employment (Haynes et al. 1999) or venture failure (Cope 2011). • EP is <i>context dependent</i>, and takes place in social, historical and cultural contexts (Lave and Wenger 1991).
The purposeful nature	The process of EP is inspired and directed by entrepreneurial goals.	<ul style="list-style-type: none"> • Entrepreneurial goals help individuals to accumulate knowledge related to the goals, and the cumulative learning process builds up to the point of entrepreneurial readiness to realise the goal (Festervand and Forrest 1993); the cumulative nature and the purposeful nature support each other in the EP process. • Learning and performance goals play different roles: the former helps to identify needs for skills and knowledge acquisition, and the latter specifies performance outcomes (Seijts and Latham 2005). A balance between learning performance goals is required, as the former works better in a complex task situation, while the latter helps to improve performance on a simple and straightforward task (Winter and Latham 1996). • EP is <i>goal dependent</i>, and is influenced by the complexity of the entrepreneurial task.

Table 2. The Profiles of the Case Study Firms

	SpinalFixture	LiverPharma
Industry sector	Medical devices (developing and manufacturing internal and external spinal fixture)	Primarily pharmaceutical (development of liver disease diagnosis and treatment)
Start-up year	1996	1994
Ownership	Independent, private	Independent, private
Founder(s)	One founder (a retiree entrepreneur and ex-employee from a state-owned organisation)	Two founders (both overseas returnees and ex-employees from a state-owned hospital)
No. of employees in 2009	About 150 employees; 20 in R&D; Self-perceived as a small business	About 50 employees; 9-10 employees in R&D; Self-perceived as a small business
Sales turnover in 2009	About RMB¥30 million	About RMB¥20 million
R&D intensity ratio and R&D staff ratio	10%; 13%	50%; 20%
Interviewees	<ol style="list-style-type: none"> 1. Founder (also President) (1st interview) 2. R&D Manager (1st interview) 3. Production Manager 4. Quality Control Manager 5. Marketing Manager 6. R&D Manager (2nd interview) 7. Founder (also President) (2nd interview) 	<ol style="list-style-type: none"> 1. Founder A (also General Manager) 2. Founder B 3. R&D Manager (1st interview) 4. Production Manager 5. R&D Manager (2nd interview)

Table 3. Main Research Findings

Key Dimensions of EP	New Venture Creation	New Venture Management
The cumulative nature	<ul style="list-style-type: none"> • The founders' prior knowledge, skills and experience was instrumental to the discovery of opportunities and hence EP in both firms. Especially, the co-founders' complementary knowledge, skills and experience was instrumental to LiverPharma. • The founders' different personal characteristics and background is not determining factor in entrepreneurial start-ups, but are associated with the different learning paths and hence the process of EP. 	<ul style="list-style-type: none"> • Experiential learning was manifested differently in the two firms due to their different growth patterns and strategic priorities, although team and organisational learning took priority in both firms: SpinalFixture focused on learning best practices to comply with regulations and product quality standards through functional management, while LiverPharma adopted a team-based approach to learn from international management practice and develop unconventional thinking. • The founders' personal background, knowledge and skills shape the organisational contexts, which in turn shape the way employees learn. • Learning history could well hinder new learning in the face of new challenges.
The social nature	<ul style="list-style-type: none"> • The founders' family members and close social groups (e.g. friends and ex-colleagues) played a major role in identifying the business opportunities (in SpinalFixture), and in forming a business partnership (in LiverPharma). • Furthermore, the founders' prior knowledge helps to define the parameters of socialisation, which in turn shapes knowledge acquisition and upgrade in both firms. • Critical events, such as the founder's early retirement and the founders' dissatisfaction with employment and 	<ul style="list-style-type: none"> • Social learning differed in the firms due to their different growth patterns and strategic priorities: SpinalFixture focused on learning from doctors and foreign companies to adapt existing technology to the requirements of Chinese patients, while LiverPharma focused on learning from reputable medical university to develop new products and identify creative solutions to problems. • The founders' different personal background, knowledge and skills shape the focus of social learning in their firms: the founder of SpinalFixture encouraged employees to conform with traditions and norms, while

	in-fight within a state-owned organisation, provided a major motivation for the entrepreneurial start-ups.	the founders of LiverPharma endeavoured to break away from traditions and norms. <ul style="list-style-type: none"> • Vicarious learning took place in both firms, and negative role models have a strong positive effect on learning in both firms.
The purposeful nature	<ul style="list-style-type: none"> • The purposeful nature of EP evolved over time, rather than constant and unchanging. • The critical events (i.e. the founder's early retirement in SpinalFixture and the founders' dissatisfaction with employment and in-fight within a state-owned organisation) were turning points for EP: learning goals dominated prior to the critical events, and performance goals (i.e. creating a new venture) overtook the learning goals after the critical event. • Different goals as marked by the critical events influenced the way in which the founders socialised with others. Especially, the performance goal was associated with the founders' deliberate socialisation and active information seeking with a particular goal in mind. 	<ul style="list-style-type: none"> • Learning and performance goals were given different levels of attention in the firms due to their different growth patterns and strategic priorities: SpinalFixture focused on performance goals - learning to improve efficiency and improve quality standards, while LiverPharma balanced learning and performance goals - learning to develop unconventional thinking and creative solutions and learning to be 'ambidextrous' in order to generate income for re-investment in R&D. • The emphasis of learning and performance goals were constrained by organisational contexts, such as organisational culture, structure and employee mindset. Especially, SpinalFixture's vision to transform into a more innovative company was constrained by its organisational contexts.

Note: The findings highlighted in bold are new findings towards theory development, whilst the others provide much needed empirical evidence to the existing theory.