

Department of Marketing and Management  
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# **How do Entrepreneurs Learn?**

## **The Role of Critical Reflective Practice**

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for the degree of Master of Research

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## **Candidate Statement**

I certify that the work in this thesis entitled “How do Entrepreneurs Learn? The Role of Critical Reflective Practice” has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree to any other university or institution other than Macquarie University.

I also certify that this thesis is an original piece of research and it has been written by me. Any help and assistance that I have received in my research work and the preparation of the thesis itself have been appropriately acknowledged.

In addition, I certify that all information sources and literature used are indicated in the thesis.

The research presented in this thesis was approved by Macquarie University Ethics Review Committee with reference number: 5201400648 on 15/07/2014.

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## **Abstract**

This thesis discusses the role of Critical Reflective Practice (CRP) in Entrepreneurial Learning. Education and entrepreneurship literature is reviewed and discussed in light of empirical findings from research into entrepreneurs' learning experiences. Eight serial and portfolio entrepreneurs were interviewed in two-part semi-structured interviews. This study finds that experienced entrepreneurs use CRP in their learning, especially in the process of accumulating entrepreneurial knowledge and improving entrepreneurial capabilities. A set of reflective lenses are introduced and are found to be used in the entrepreneurial learning process. The qualitative data suggests three frameworks related to CRP and entrepreneurial learning. The first framework suggested is that entrepreneurial experience is accumulated through CRP; the second framework indicates that a lack of entrepreneurial experience in entrepreneurial activities such as problem solving and decision making triggers the CRP process; and the third framework links entrepreneurial learning and specific lenses in the CRP process, suggesting that the autobiography lens is the most important while being supported by other lenses. These three frameworks are used to interpret and explain behaviours in Entrepreneurial Learning, such as learning by doing, experience accumulation, and group learning. The research findings indicate that CRP may be an important process for entrepreneurial learning, and help entrepreneurs improve their entrepreneurial capabilities. CRP could also be a valuable part in entrepreneurship education. Further research on entrepreneurial learning that extends the exploratory findings of this thesis will help to better understand how entrepreneurs learn and how they might be taught or trained more effectively.

## Introduction

Cope (2005) suggests that Entrepreneurial Learning could be an important domain to be studied as a new dynamic learning perspective. Currently, however, Entrepreneurial Learning is not only poorly understood but also lacks sufficient theory development (Cope & Watts 2000; Minniti & Bygrave 2001; Rae & Carswell 2000; Wang & Chugh 2014). Some researchers suggest that in order to understand Entrepreneurial Learning, there must be an analysis of the learning experiences and behaviours of entrepreneurs at the time of their learning (e.g. Cope 2000; Krueger 2007; Morris et al. 2012). Previous researchers have interviewed entrepreneurs in order to understand their experiences within the context of real life (Cope 2003; Thompson, Locander & Pollio 1989). This paper explores the learning experiences of entrepreneurs with a goal to find frameworks between Entrepreneurial Learning and Critical Reflective Practice (CRP).

CRP has been developed in teaching and learning in higher education as an important tool to enhance experiential learning (Brookfield 1995). CRP has been adopted in many professional education settings, such as medical training and pre-service teaching (Mann, Gordon & MacLeod 2009). Guided by an existential phenomenological paradigm, Cope (2003) was one of the first researchers to suggest that entrepreneurs critically reflect on events in their own life as a key aspect of their learning. Cope investigated many aspects of Entrepreneurial Learning and proposed new concepts and frameworks of Entrepreneurial Learning theories before his tragic death in 2010 (Pittaway & Thorpe 2012).

Cope (2005) proposed many possible research questions on the possible relationship between CRP and Entrepreneurial Learning, such as factors which trigger entrepreneurs to reflect and how do entrepreneurs behave if and when they do reflect. Unfortunately, these questions have been left largely unexplored since then. This thesis extends Cope's research through a focus on three research questions:

- 1) How do entrepreneurs learn?*
- 2) What is the relationship between CRP and Entrepreneurial Learning?*
- 3) What are the lenses of CRP used in Entrepreneurial Learning?*



The three research questions are inter-related. The first research question is an introductory question in order to lead the finding of the second the research question, and the main focus of this research is on the third research question. To get into the first research question, the researcher has to do exploration research in order to get into the real experience or stories in the learning process of the experienced entrepreneurs, therefore how to collect an unbiased data is critical important.

In order to answer these questions, a two-part qualitative interview has been designed to collect understand the learning processes of serial and portfolio entrepreneurs. The first interview involved questions about Entrepreneurial Learning before the concept of CRP was introduced to the interviewee. The second interview involved an initial explanation of CRP followed by questions which examined particular links between CRP and Entrepreneurial Learning.

This research involves a two-part interviewing research method to improve validity in the research of learning experiences of entrepreneurs. Three frameworks are drawn from the analysis of the data. These frameworks will help to explain the role CRP plays in entrepreneurial experience accumulation; the conditions where CRP is triggered and the lenses entrepreneurs use in conducting CRP.

Although this is only a pilot study, it will contribute to our understanding of Entrepreneurial Learning with an emphasis on how reflection must occur in conjunction with experience. The three frameworks will guide novice and experienced entrepreneurs to better understanding themselves and their venture, and to hopefully achieve success or at least avoid serious failure. These frameworks also provide an initial foundation for further empirical testing and theory building.

## **Literature Review**

According to Cope (2005), three major schools of thought have been developed to understand the nature of entrepreneurship. The first is the functional perspective with theories related to the economic functions of entrepreneurship. The second is the personality perspective with theories related to psychology. The third is the behavioural perspective whose theories relate to the behaviour of entrepreneurs mainly on venture creation (Stevenson & Sahlman 1989). Cope (2005) suggests that entrepreneurship can be better understood through a clear understanding of Entrepreneurial Learning. This raises the question, 'why is Entrepreneurial Learning so important?'

### **Entrepreneurial Learning**

With the increased popularity of entrepreneurial education in higher education, there has been increased scholarly and pedagogical interest in the Entrepreneurial Learning process. However, the Entrepreneurial Learning process is often seen to lack suitable explanatory theories or conceptual frameworks (Cope & Watts 2000; Minniti & Bygrave 2001) and this appears to still be the case (Karataş-Özkan 2011; Wang & Chugh 2014). So far, there are two major developmental areas of Entrepreneurial Learning. The first is from the epistemological and cognition perspective where researchers focus on individual entrepreneur's learning (Cope 2005; Cope & Watts 2000; Kolb 2014; Minniti & Bygrave 2001) and is normally associated with small and medium enterprise (SME) learning (Anderson, V & Skinner 1999; Clarke et al. 2006; Deakins & Freel 1998). The second area is the entrepreneurial process theory (Bygrave & Hofer 1991) which focuses on the learning behaviours and experiences during different activities, such as opportunity exploration and new venture creation (Harrison & Leitch 2005; Holcomb et al. 2009; Rae 2005; Roscoe, Discua Cruz & Howorth 2013).

Along with these two areas, there are also many other researchers who study Entrepreneurial Learning by focusing on particular aspects, such as the role of metaphors in helping entrepreneurial learning (Anderson 2005; Krueger 2007; Lundmark & Westelius 2014; Matlay & Wing Yan Man 2006) and behaviour patterns in entrepreneurial learning (Matlay & Wing Yan Man 2006). However these studies are mostly fragmented without forming a systematic research

area (Wang & Chugh 2014).

While some researchers focus on learning during venture creation, other researchers suggest that the entrepreneurial process does not stop after the venture is created but instead continues throughout the life of the company. From the latter perspective, research on Entrepreneurial Learning should continue throughout the entrepreneurial process beyond the establishment of the new venture (Cope & Watts 2000; Reuber & Fischer 1999). This involves the need to explain how the entrepreneur learns as an individual as well as how the venture acquires knowledge as an organisation (Wang & Chugh, 2014). This needs to cover learning before, during and after the new venture is formed and how learning continues until the exit of the entrepreneur.

CRP plays an important role in the development of higher education particularly in professional education such as medicine (Branch 2000; Janssen, MacLeod & Walker 2008; Kenny, Mann & MacLeod 2003). Given the similarities between learning in higher education and Entrepreneurial Learning, it is worth exploring the link between CRP and Entrepreneurial Learning.

### **Critical Reflective Practice (CRP)**

Reflective practices have been widely studied in higher education including investigations into the role of reflection in student learning (Ash & Clayton 2004; Eyler 2002; Harvey & Baumann 2012; Richardson & Maltby 1995). According to Boud, Keogh and Walker (1989, p18) “Reflection is a form of response to the learner’s experience” and “Experience consists of the total response of a person to a situation or event: what he or she thinks, feels, does and concludes at the time and immediately thereafter. Reflection can be seen as “an important human activity in which people recapture their experience, think about it, mull it over and evaluate it” (Boud, Keogh & Walker 1989, p19). The reflection process can be illustrated in [Figure 1](#) on the following page. This process framework suggests that reflection helps people to change their behaviour by forming new perspectives from their experience. Although more recent work goes beyond the work of Boud, Keogh and Walker (1989) in terms of applicability in pedagogical settings, the basic principles of the importance of reflection on experience, including behaviours, ideas and feelings, have been supported by such research (e.g. Beard, 2009).

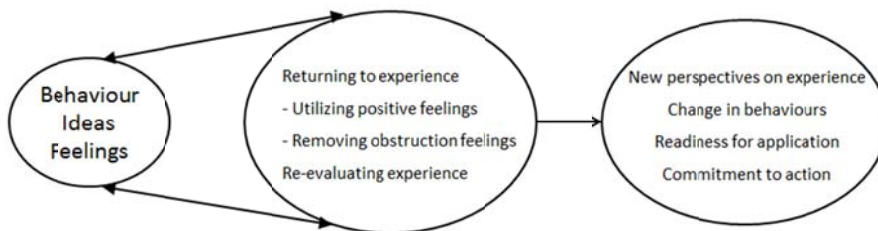


Figure 1 The reflection process in context (Boud, Keogh & Walker 1989)

Reflection has been seen as broadly beneficial to student learning. Even so, higher education scholars have called for learners to move beyond simple reflection towards deep, critical and holistic reflection (Bleakley 1999; McArdle & Coutts 2003; Smith 2011). Critical reflection moves beyond just reflective thoughtfulness and considers “wider historic, cultural and political values or beliefs in framing and reframing practical problems to which solutions are being sought” (Hatton & Smith 1995, p. 539). Brookfield (2000) suggests that critical reflection originates from four traditions of criticality: ideology critique, identification and reappraisal of inhibitions acquired in childhood as a result of various traumas, analytic philosophy and logic, and the role people play in constructing or deconstructing their own experiences and meanings.

Critical reflection is not about simply feeling what has been experienced, evaluating it and rebuilding the understanding of it. Rather, it is about purposely and critically researching and reevaluating the so-called generally accepted ideologies, concepts, theories, beliefs and common truths. By critically reflecting, one can achieve a new, deeper, and better understanding of the issue. Definitions of critical reflection and the particular reflective practices that can be considered as critical are still contestable. The differences between simple reflection and critical reflection are also often unclear. Even so, the following definition from Brookfield, S (1998, p197) has been widely used in the scholarly literature and will be used as a consistent definition throughout this thesis:

*“Critically reflective practice is a process of inquiry involving practitioners in trying to discover, and research, the assumptions that frame how they working.”*

### **Teachers conducting CRP through four lenses**

Conducting CRP is not an easy job, because “no matter how much we may think we have an accurate sense of ourselves, we are stymied by the fact that we are using our own interpretive filters to become aware of our own interpretive filters” (Brookfield, S 1998, p197). Therefore, “to become critically reflective, we need to find some lenses that reflect back to us a stark and differently highlighted picture of who we are and what we do.” (Brookfield, S 1998, p197)

According to Brookfield (1998), these lenses are explained in the following synthesis:

- a) Our autobiography as a learner of practice: reflect on how our own learning experience is formed in order to guide teaching practice.
- b) Our learners’ eyes: feedback and comments from students’ learning experience in order to improve how we teach.
- c) Our colleagues’ experiences: engagement with other teachers and the sharing of teaching experiences in order to achieve a better understanding of teaching by mirroring the actions of other good teachers.
- d) Theoretical literature: understanding theories of teaching in order to enhance our entire understanding of teaching as a field of knowledge.

Though the concept of reflective lenses was originally only designed for the specific context of CRP by teachers, the framework and the concept could be extended to explain CRP by entrepreneurs during entrepreneurial learning. Using lenses in doing CRP does not only give the user a more direct guidance in how to get the reflection started in the learning activities, but also a system structure of using different lenses in getting a much deeper and wider understanding. However, the applicability of a lenses-based framework for entrepreneurial learning requires further development.

### **Reflection in entrepreneurial learning**

There has been no systematic research as yet which demonstrate links between Entrepreneurial

Learning and CRP. However, there is initial evidence that reflection and 'reflexivity' play a role in Entrepreneurial Learning. Scholars have started to explore how reflection influences Entrepreneurial Learning, but have not looked holistically at CRP. Higgins, Smith and Mirza (2013) note the value of reflexivity for entrepreneurship education and defined reflexivity as a constant process of questioning one's own ideas and assumptions as well as others' ideas and assumptions. Easterby-Smith and Malina (1999) suggest that reflexivity moves beyond merely reflecting on the past as it involves actively considering the implications of observation for future practice. However, reflection and reflexivity are not as deep thinking as CRP.

For entrepreneurs, Cope (2003) emphasises the importance of additional reflection and distinguishes a type of reflection which may be more efficacious for entrepreneurs as "reflection that was fundamental and deeply challenging and, therefore, significantly different from more routinised or 'simple' reflection." (Cope 2003, p. 444). Cope (2003) recommends that critical reflection is particularly important and unique in Entrepreneurial Learning, especially as "during the early stages of business growth the entrepreneur and the business are inextricably linked." (Cope 2003, p. 429).

Using critical incident theory, Cope and Watts (2000) investigate the role of experience and reflection for small business owners. They found that entrepreneurs need proactive reflection in order to interpret critical incidents and learn how to learn, thereby advancing the entrepreneur to higher levels of learning. Start-up entrepreneurs and small business owners as well as entrepreneurs leading independent innovative projects within corporations are therefore recommended to focus on critical reflection of opportunities and problems in the entrepreneurial process (Cope 2003). Marsick and Volpe (1999) suggest that critical events for entrepreneurs are the 'jolts' from the internal or external environment that lead to heightened awareness and reassessment of their situation that may also lead to new learning which inform action. A jolt, in the context of organisational learning, is "new regulation, a new competitor, market downturns, new technology, customer dissatisfaction or new demands, a new idea, a new vision, or some other change in the status quo" (Watkins 1996, p. 92). The trigger for such a jolt, for example, could be a new taxation law which creates a crisis for an entrepreneur who must reflect on previous failures and successes and also on the adjusted environment in order to change their

behaviour (Deakins & Freel 1998).

### **Critical points for reflection: mistakes, crises and failures**

Several scholars suggest that failure is an important source of learning for entrepreneurs (Callander 2011; Cope 2005; Shepherd 2003; Smilor 1997; Sosna, Trevinyo-Rodríguez & Velamuri 2010) and such notions seem to resonate with the views of entrepreneurs (Bricklin 2001; Politis & Gabrielsson 2009). Furthermore, there is some initial evidence that reflection facilitates such learning (Politis 2008; Politis & Gabrielsson 2009). Cope (2005) finds that entrepreneurs take a restoration-orientation approach to failure which is predicated on reflective action. Instead of taking a loss orientation, which can be overly introspective and unhelpful, by reflecting, entrepreneurs foster a generative and re-energising outcome. Shepherd (2003) suggests that entrepreneurs can recover from failure and maximise the learning value of the failure through grief recovery strategies such as articulating grief, recognising grief symptoms, and recovering with oscillation between grief and restoration orientations.

Just as with complete business failure, entrepreneurs' day-to-day failures involved with trial and error may also involve critical reflection. Trial and error involves learning from both failures and successes and for entrepreneurs this may involve a similar process to a product development example explained by Callander (2011) and depicted in Figure 2 below. This is described by Blank (2013) as a process of understanding customers' inputs "testing redesigned offerings and making further small adjustments (iterations) or more substantive ones (pivots) to ideas that aren't working." (Blank 2013, p. 67).

Although Blank (2013) sees this as more akin to scientific hypothesis testing, this may instead be seen as more similar to the Entrepreneurial Learning process described by Erikson (2003, p.108) of active and reflective learning where "new experience is gathered through exposure followed by observation and reflection, which leads to generalizations and cognitive propositions, which, again, are, tested in future settings.". This process of experimentation and exploration may last many years such as the five-year trial-and-error process examined by Sosna, Trevinyo-Rodríguez and Velamuri (2010) which was then followed by a high-growth opportunity exploitation and internationalisation process.

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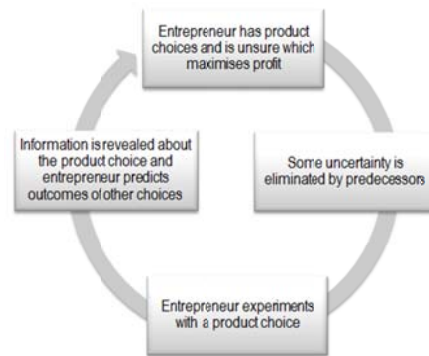


Figure 2 Reflection in entrepreneurial product development (Adapted from Callander, 2011)

### Collaborative reflection by entrepreneurs

Though the entrepreneur is often depicted as an individualistic and isolated maverick, there is increasing support showing the significance of social interactions and mechanisms (Anderson Park & Jack 2007; Dodd & Anderson 2007; Ulhøi 2005). This involves two social dimensions: (1) entrepreneurs as a product of their social environment in terms of being conditioned by the environment and perceiving opportunities based on their social background; and, (2) economic activities of each entrepreneur's business situated in a social web (Anderson, Park & Jack 2007). This involves seeing even the individual reflections of entrepreneurs as having a social character (Taylor & Thorpe 2004) which may also be an important focus in investigations of reflective managers (Pavlica, Holman & Thorpe 1998).

The internal social web in an entrepreneur's firm can involve employees collaborating in 'action learning sets' to solve problems for the business through questioning, reflection and commitment to action (Anderson, Park & Jack 2007; Jones-Evans, Williams & Deacon 2000; Marquardt 2000; Ram & Trehan 2010). Among other entrepreneurs experiencing similar sets of problems, an entrepreneur could also establish 'critical reflection networks' (Clarke et al. 2006). Other networks of entrepreneurs may be based around shared reflection such as the women's network of owner-managers studied by Warren (2004) who critically reflected through sense making and



storytelling.

In terms of expanding the social web of the entrepreneur, networking has been found as a mechanism for learning and an important way of finding partners and resources (Brokaw 1995). There is some support for entrepreneurs having a balanced skill mix across many fields of expertise (Åstebro & Thompson 2011; Backes-Gellner & Moog 2013; Silva 2007) but entrepreneurs must still draw from their contacts to “gather firsthand information about the external environment and develop an intimate understanding of their businesses.” (Lee & Tsang 2001, p. 588). Strong networks are potentially of vital importance during both the venture creation process and, later, during entrepreneurial growth (Anderson, Park & Jack 2007).

In terms of deriving opportunities from networks, Taylor and Thorpe (2004) recommend a social and conversational experiential learning model for entrepreneurs to follow within their personal networks. This social web may also include role models as a source of inspiration and learning which guides and motivates entrepreneurs in their exploration of opportunities (Engle et al. 2010; Fayolle 2008; Van Auken, Fry & Stephens 2006). Role models, learning and critical reflection have been studied together but the majority of this research is from medical education (Branch 2000; Janssen, MacLeod & Walker 2008; Kenny, Mann & MacLeod 2003). In Entrepreneurial Learning, role models have also been investigated by Kempster and Cope (2010) who also warn that role models can sometimes be negative and mimicry of some role models is inadvisable.

Mentors or other people in an entrepreneur’s network such as friends or family members can also act as role models for novice entrepreneurs (Engle et al. 2010). Mentors may not always function like role models as they can also play roles such as teachers, coaches, trainers, protectors and sponsors (Schein & Schein 1978), helping protégés to become autonomous professionals able to critically reflect and solve problems. Mentors may be particularly helpful in encouraging those without start-up experience to develop entrepreneurial intentions (Engle et al. 2010; St-Jean & Audet 2013). For those entrepreneurs who have recently started their first business, a mentor can, according to Sullivan (2000, p.163), “enable the entrepreneur to reflect on actions and, perhaps, to modify future actions as a result; it is about enabling behavioural and attitudinal change.”

With the current entrepreneurial learning theories, it is agreed that the entrepreneurs learn by

doing; and through doing, they accumulate experience. But that does not support that more experiencing equals more learning (Cope 2005), otherwise the more experience a person has then the more learning is done. We know that is not true, as experiencing does not equalize with learning (Beard, 2009). This is problematic, For example, we cannot assume that the team has similar learning outcomes as the individual entrepreneur, although they might go through similar experiencing. So, there must be a process that person uses to accumulate learning during experiencing and this process is different from person to person, this might be particularly valuable in entrepreneurial learning through doing.

Exploration on the process of learning that records the learning process or experience of the entrepreneurs is needed. After this step, we can look into the difference in learning process that entrepreneurs are behaving which might be different from others.

In this case, if we could find that some tools that entrepreneurs are using during this learning exercise, then it will contribute to our understanding of entrepreneurial learning. When CRP has helped many other practical professionals on learning, then we have a strong reason to explore the relationship between CRP and Entrepreneurial learning.

The above literature review discussed how reflection plays a role in learning including in the context of entrepreneurial learning. Gaps in the literature still exist in terms of better understanding reflective practices with a critical character. Despite notable progress of scholars such as Cope, a number of questions remain unanswered. The first is whether entrepreneurs actually use CRP. If they do, we must then understand the relationship between CRP and Entrepreneurial Learning. Finally, if we can adapt the lenses introduced by Brookfield for teachers to entrepreneurs, questions arise on which lenses entrepreneurs use and how each lens contributes to learning.

## **Research Methods**

With the understanding that the experience of Entrepreneurial Learning can be studied to reveal the entire learning journey from venture preparation to exit, this research interviews serial and portfolio entrepreneurs during their learning processes. As research on CRP in Entrepreneurial Learning is still scarce, qualitative research is useful for initial exploratory work and theory building (Norman & Yvonna 2008). Furthermore, the research questions focus on “how” and “what” rather than “how much” or “how many” further underlining a qualitative approach. Interviews with entrepreneurs are often used to understand entrepreneurial behaviours, although there is considerable variance in how researchers analyse interview data. In this Research Methods chapter, the sampling methods are outlined and justified. Then, the interview, data analysis and coding procedures are explained.

### **1) Selection of the sample**

Although there are different definitions of who can be defined as an actual entrepreneur, in this research, only experienced entrepreneurs have been investigated. A simple and consistent definition of ‘experienced entrepreneurs’ was used to avoid arguments about whether the sample actually represent entrepreneurs. Baron and Ensley (2006, p. 1332) see ‘experienced entrepreneurs’ as repeat entrepreneurs in terms of being “persons who have started several new ventures”. Such entrepreneurs are likely to provide richer data on learning, as they have accumulated knowledge from multiple ventures and have learned in different contexts. The experienced entrepreneurs in the sample can be further divided into ‘portfolio entrepreneurs’ who simultaneously manage two or more businesses which they at least partly own, and ‘serial entrepreneurs’ who have started more than one business, but may not currently be involved as an owner (Westhead, Ucbasaran & Wright 2005).

The participants were recruited through the researcher’s contacts in two investor networks (Sydney Angels and Wholesale Investor). In addition, the researcher also recruited participants from his personal network of acquaintances who are entrepreneurs. All of this sample were male and no female entrepreneurs were involved in the study which is a limitation of the research design. Although the researcher is acquainted with two of these respondents, none of them are

close friends which helped to build trust and rapport without overly biasing the interpretation of the findings. The interviews focused on each respondent's experience and the interviewer did not base the questions on any prior knowledge about the entrepreneur or his or her ventures. Nevertheless, the researcher's prior experience of entrepreneurial activity and knowledge about the respondent's and their ventures may constitute factors that may create bias. However, such knowledge and experience may also constitute a strength in that the researcher as an interviewer has an understanding of the context in which the respondents operate. Thus, this type of familiarity potentially has both positive and negative consequences and both were reflexively assessed in the interpretation of the data and the results. In addition, the computer-assisted qualitative data analysis software NVivo (Windows Edition Version 10, QSR International) was used to assist with coding and to enhance the validity of data analysis (Siccama & Penna 2008).

A sample of eight experienced entrepreneurs were interviewed in Australia. Among them, one is an American, one is a British and the others are Australian-born. These entrepreneurs have experience across many types of ventures across multiple industries. ~~Table 1~~Table 1 below, provides a brief of introduction to each interviewee and assigns a pseudonym to ensure confidentiality.

Item	Pseudonym	Brief Profile
1	Rob	Australian. Serial and portfolio entrepreneur and professional business valuer. His entrepreneurial experience includes start-ups, take-overs and mergers. He owns and manages multiple diversified companies in Australia.
2	Graeme	Australian. A trained nurse and inventor who has developed two start-ups by commercialising his own invention.
3	Gavin	Australian. A trained chemist and sales representative. Started his own factory 30 years ago from his garage, then grew the business by acquiring customers, developing products and acquiring other businesses. Grew the company into a group of companies with operations in many international markets.
4	Kevin	Australian. Started his entrepreneurial practice by helping his father. Later on registered his own business with other partners. He specialises in purchasing businesses then growing and developing them, and then selling them. He is currently working on an Australian public company he bought few years ago.
5	Cameron	US born entrepreneur who immigrated to Australia. Involved with online start-ups and currently focusing on a new start-up based in Brisbane.
6	Charles	Australian. Joined a sales team selling navigation devices soon after school. Set up his first venture in supplying the mining industry. Sold the business and set up a new business with a food recycling technology.
7	Ryan	Australian who immigrated to the USA. Initially set up Australia operations for multi-national companies. Thereafter, involved with a few start-ups in America. Currently, working on his new start-up in the USA.

8	Bill	British born entrepreneur who immigrated to Australia. Worked in the IT industry, and set up his venture in providing services to many large organisations. Sold the first business before immigrating to Australia. Now working on a new venture he owns which focuses on lean start-ups.
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Table 1 Profile of the interviewees

This exploratory study initially aimed to recruit a sample size of ten respondents, with the understanding that the number of samples may be adjusted up or down depending on the richness of the data gathered (Mason 2010). After the eighth interview, the researcher found there were fewer new themes being mentioned in the interview. This suggested a possible point of data saturation so a sample of eight respondents was seen as sufficient given the exploratory nature of the research questions.

It is worth noting that all the interviewees are male, Caucasians and most of them (except one) had tertiary education. Thus the sample is not representative of the general population. However, the sample is meant to represent experienced entrepreneurs and the composition of the sample is a result of the recruitment of the interviewees. The discrepancy between the sample and the general population may to some degree reflect that the serial and portfolio entrepreneurs in Australia are disproportionately male Caucasians with tertiary education. It is important to keep the composition of the sample in mind when interpreting the results. As a pilot research project our sample may still provide insights into entrepreneurial learning, even though such findings may not apply to all serial entrepreneurs, let alone entrepreneurs in general.

## 2) Interviewing approach and protocol

One of the research design limitations is the issue of retrospective bias. As Carter et al. (2003) suggest in their study of entrepreneurs, retrospective reminiscences may be subject to bias and inaccuracy. What actually occurred in people's experiences may not be fully recounted whereby interviewees rationalise their stories retrospectively. These rationalised stories do not represent what exactly happened during the time they were experiencing it. This issue could be exacerbated because each entrepreneur was primed on the purposed of the interview before it took place (that is, told that the research relates to reflection and learning).

To partially overcome the limitation of retrospective bias and improve the reliability of each

recount, the researcher interviewed entrepreneurs on two separate occasions. The first interview focused on the entrepreneur's own accounts of their learning experiences without priming them about any specific techniques or processes. Similar to a phenomenological approach, the interview aimed for an unbiased account by asking 'why' or 'how' questions (Thompson, Locander & Pollio 1989). Then, the second interview specifically focused on CRP. This included questions on whether CRP related to past Entrepreneurial Learning from each interviewee's perspective. If CRP was relevant, questions were asked to determine specific links between CRP and learning. Both interviews were semi-structured, but the involvement of the interviewer differed markedly between the two interviews.

One of the difficulties in researching entrepreneurs is the limited availability and access to any data. Performing research on serial entrepreneurs is even more of a challenge as most have busy schedules to be interviewed over two sessions. Most of the interviews were conducted face-to-face for the first part of the interview, with an average interview time of 1.5 hours. Most of the second interviews were done via teleconference, with an average time of 1 hour.

The first interview focused on the following four questions with sub-questions arising depending on the interviewee's responses as is common in semi-structured interviews.

- 1) Could you please tell me about your learning experience during your time as an entrepreneur?
- 2) Could you please tell me about the most important insights you have made during your time as an entrepreneur?
- 3) Could you please tell me about the events that led you to those insights?
- 4) Could you summarise the main points that you have learned from experience?

The style in which the interview was conducted, involved the researcher only asking these questions and further probes or clarification questions. This involved an aim to minimise talking from the interviewer, avoiding interrupting the interviewee, and refraining from being drawn into a conversation by giving feedback to the interviewee and to not turn the interviewee's description

of an experience into a discussion of the interviewee's experience. Therefore, the researcher did not speak unless the interviewee stopped speaking and a new question needed to be initiated (Thompson, Locander & Pollio 1989) so that many learning experiences could be explained by the interviewee.

After the first interview, the interviewee received a brief description of CRP (see Appendix). The second interview focused specifically on the elements of CRP starting with an initial discussion to determine whether the respondent understood the basic concepts of CRP and to explain the types of reflective lenses that might be used. Additional explanation was provided by the interviewer if necessary.

The second interview focused on the following two questions followed by further sub-questions used for clarification and probing:

- 1) Do you believe there are links between CRP and Entrepreneurial Learning?
- 2) What lenses, if any, of CRP did you use in your Entrepreneurial Learning?

The second interview was also informed by the first. Additional questions were asked to clarify the respondents' view of how learning took place. For example:

*During last week's interview you said that you learned [example from previous interview]. What processes and events supported that learning? Did elements of CRP influence that learning?*

### **3) Analysis of the data**

A professional transcription company helped to ensure that each transcription was prepared very soon after each interview. This allowed for initial coding of the data to occur while observations from the interview were still easily remembered. The first stage analysis of the data was conducted with open coding based on the transcriptions. This stage involved coding information which related to: general attitude; comments on Entrepreneurial Learning; the knowledge and skills mentioned; the sources of knowledge and skills including people they learned from; and recounts of particular learning processes. During this stage, the researcher read and coded using pen and paper and followed the procedure of reading, coding, thinking, rereading, recoding and

finally comparing the coding from different transcriptions. This exercise gave the researcher an opportunity to rethink the relationship among learning subjects, entrepreneurs and the process of conducting the learning in order to get a better understanding of what the interviewee was saying and the meaning of this.

#### **4) Coding the CRP statements**

To clarify whether a learning process involved reflection, simple thinking was not coded as thinking may not actually generate new knowledge. The reflection process coded in this research only involves thinking if combined with assessment, and sense making activities which result in a new or improved knowledge and skills.

Borrowing four lenses from Brookfield, S (1998), responses were coded for reflection using autobiography, theory and peers lenses (the fourth lens of student feedback was not applicable). Additional lenses applicable to the entrepreneurial context, such as team, group, customers, family and friends emerged out of the coding process.

It is noticed that Brook's use the lenses to denote whose perspective the reflective party is adopting. For example, the student's perspective is mainly to see the learning experience from the students point of view, which does not necessarily require the teacher to engage directly with the students as the teacher could use student feedback or even indirect accounts of student views as a starting point. While it is important to recognise the theoretical distinction between with whom the person reflecting interacts and whose perspective he or she adopts, the empirical material highlighted the interaction over the adopted view. From the learning stories the interviewees had provided, none of them were what they had been told or acquired from third parties. They were all came from the entrepreneur's personal interactive with their actions they took in person. The "hands-on" approach adopted by the entrepreneurs in this sample resonate with what is found in other research on experienced entrepreneurs (Sarasvathy, 2001).

The autobiography lens applies to the learning and reflection process involving the entrepreneurs themselves without interaction with other people or resources. For example, the following statement about an interviewee who visited Japan was coded to the autobiography lens of CRP:



*“They were honouring me by doing what they were doing and I didn't appreciate that until the fourth or fifth day that I was there. When I learnt that then I learnt to sit back and watch them and just appreciate what they were doing towards me and I could reciprocate in kind.”*

The theory lens refers to the learning of the entrepreneur when they engage with written theories in order to gain new and higher levels of understanding of a business-related issue. An example of a quote coded to the theory lens of CRP is as follows:

*“Online you can draw knowledge from tutorials that were posted two hours ago from an intelligent lecturer in Harvard that had a particular interest on something. So you're kind of using the end point of where knowledge is today as your starting point for what you're about to do.”*

The peer lens asserts that entrepreneurs engage with other peer entrepreneurs to get other entrepreneurs' perspective. Team lens asserts that entrepreneurs engage their team purposely in order to get what the team see from their perspective, to reach a deeper understanding of an issue or to find a solution to a new problem. An example of a quote coded to the peer lens of CRP is as follows:

*“That team approach has been able to deliver great results in a very short time. We can quickly just go through a whole pile of things in an afternoon and say that'll work, that won't work, and that'll work and narrow it down and then go on the path. It's been a great technique for dismissing stuff, from making sure that the important stuff is what goes forward.”*

After the initial coding of all transcripts, there were some clear trends that appeared from these individual interviews, even though the entrepreneurs had experiences across many different industries and types of businesses. There were also clear links between the type of knowledge, source of knowledge and the process of learning. To get a more accurate and clear analysis of the data, the transcripts were processed by NVivo 10 (QSR International) for a second round of analysis.

In the second round of the data analysis, the computer-assisted qualitative data analysis software NVivo was used to organise coding structures and to group similar themes. These themes were then used in finding the comments from the entrepreneurs which related to the three research questions. NVivo helps to minimise human bias in terms of the accuracy of the interpretation of the data. NVivo also increases the transparency of the analysis. Nvivo is a good tool used to

organise the data as well as assisting in analysing the main themes and discovering the relationship among them.

## Research Findings

### Results from the first round of interviews

The purpose of the first interview with each experienced entrepreneur was to collect learning experiences and stories about learning. In this part of the interview, the researcher did not mention reflection. This was to see if there was evidence for CRP before making specific inquiries about how it is used. In this first interview, the focus was broad and aimed to address RQ1. RQ2 and RQ3 will be mostly discussed in relation to the second interview.

### RQ1: How do entrepreneurs learn?

The eight experienced entrepreneurs demonstrated a considerable breadth of knowledge and skills involved in entrepreneurial practice. [Table 2](#) is a sample of the learning stories and sources of knowledge.

Pseudonym	Knowledge/ skill learned	Source of knowledge	Learning process
Rob	Observing what other companies were doing wrong will not guarantee success but may help avoid failure	Employment	Self-reflection when working in business valuation
Rob	Practice analytical thinking	University	Learned critical analysis when doing a law degree
Graeme	How to deal with Chinese suppliers without going to China	Entrepreneurial practice	Self-reflection and talking to peers who buy from China including failure stories
Graeme	Get the job done with limited resources	University & working in emergency department	University training received when doing a postgraduate nursing degree
Gavin	Respect different cultures when operating in international markets	Employment	Self-reflection with experience when working as a sales manager in an international market
Gavin	Appreciate and impress the customer in the first two minutes	Employment & entrepreneurial practice	Self-reflection and team reflection while a manager and entrepreneur
Gavin	Realise people do business with people	Entrepreneurial practice	Self-reflection and teaching the team
Kevin	How to assess a business	From father	Learning by working for father
Kevin	There is always something out of your control	Entrepreneurial practice	Self-reflection on failure of first venture because of changes in the foreign exchange rate
Cameron	Find the right people working for you. Promote and motivate team	Employment	Self-reflection when struggled to do everything by himself. Late on rethink of working with a team

Cameron	Know when to stop; Passion is not enough. Sometime you need to be brutal	Employment	Self-reflection on the entrepreneurs who kept on investing good money in a non-promising project.
Charles	Bad personal skills result in loss of good people and limited business growth	Employment	Observe the previous employer and through self-reflection
Charles	It is the first five minutes to catch people's attention	Employment	Self-reflection during the time doing sales
Charles	Prepare to learn from people around you and make sure you are surrounded by good people	Entrepreneurial practice	Self-reflection and interactive with professionals on the issues encountered in managing the venture
Charles	Not to respond emotionally. Sleep on it	Entrepreneurial practice	Self-reflection on dealing with all sorts of problems especially with customers
Ryan	Management skills. IP strategy in particular	From MBA	Postgraduate training in University
Ryan	Maximise the opportunity revenue-wise. Long term strategy results in good revenue	Entrepreneurial practice	Self-reflection on the exploration of business opportunities
Bill	Corporate corruption	Employment	Observation and self-reflection
Bill	Customer feedback	Entrepreneurial practice	Interaction with customers and the process of discussing and resolving issues in a team

Table 2 Sample of stories about learning

The above samples just showed a very small part of the learning experience the interviewees talked during the interview. The transcription has recorded very single learning stories the entrepreneurs had experienced and most importantly the learning process it took while they experiencing it. The learning stories cover a wide range not limited to personal life, management, venture creation and philosophy.

The data shows that these interviewees work in different areas of business and, therefore, cover a very wide range of entrepreneurial activities. Different as they are, the interviewees have some very similar comments on themes of Entrepreneurial Learning. These themes are discussed below.

#### *Interviewees' comments on Entrepreneurial Learning*

The learning stories collected from experienced entrepreneurs showed support to the dynamic learning perspective of entrepreneurship, with evidence that entrepreneurs learned throughout the entire entrepreneurial process. Entrepreneurial Learning is interrelated with all the issues involved in entrepreneurship, such as the opportunity, the stakeholders, the available resources,

and overall the characteristics of the social context (Cope 2005).

A summary of some of the comments from the interviewees are presented in Table 3 on the following page. These comments represent the entrepreneurs' personal beliefs on what Entrepreneurial Learning is about. These comments may have been rationalised by the experienced entrepreneurs, and as a result, it might represent more about what they believe it should be than what they are actually doing. The researcher believes that these comments do provide a good reference on the possible best practice on Entrepreneurial Learning.

All the interviewees strongly expressed their enthusiasm and passion for learning. They expressed that they are curious about learning new things, they are not worried about getting into totally strange areas, and are prepared to take risks in order to learn beyond their current capacity of knowledge. They also expressed that as a frequent learner, they are learning almost every day. It might be reading a book or magazine, talking to other people, or learning from internet searching and browsing.

Pseudonym	Quotes
Rob	I think you just - you're building and you're putting a gloss on and another gloss and another gloss, and then, like I was saying with that painting analysis; at some point in time you've got enough glosses, that something causes you to stop and think, oh that's just changed the game for me now - now I see something that I hadn't perhaps understood
Graeme	You essentially have to learn how to do it yourself and I think on reflection, that's what separates a lot of the entrepreneurs from the 'wantrepreneurs'. It is the ability to do the hard yards and sit down and learn the accounting, learn how to do design and be quite dynamic in my skill set. But yeah everything I had to learn to get through to this point is kind of a story like that. It was just that the need presented and I had to essentially learn how to do it and execute it.
Gavin	If you're restless and you want to be better tomorrow, you will learn and that's what drives me. I want to be a better person tomorrow than I was today - than I was yesterday. That restlessness drives me to strive to achieve.
Kevin	Life is about recognising opportunity, when you make a mistake and if anyone says they're not making a mistake they're lying. Everyone makes mistakes, everyone will make a serious error but you've just got to learn from that error and understand it and put that into your equations going forward.
Cameron	I think that being an entrepreneur is a constant learning process.
Charles	I guess the funniest thing to becoming an entrepreneur, maybe it's always within who you are somewhat. I think you have to be a person with a certain amount of passion and fire for learning and wanting to experience what is in the world, I think that differentiates people from the people who just want to work in a company rather than create a company.
Ryan	I think this is all about having the drive to be curious and wanting to learn. That's what I think entrepreneurship is about and seeking those things out. Over time you build this experience.
Bill	The stuff you learn at school, at university, and then there's real life. Real life is very different from university.

Table 3 Summary of the comments on learning

The table 3 recorded what the interviewee's personal view towards learning in entrepreneurial

context. These comments related to different aspects of learning were strongly believed by the individual entrepreneurs although it might not be accepted as the same level by others. All these reflect the difference of themselves which could be different knowledge, believing, owning of resources etc. However, there is one thing in common that is these believes have been strongly held by the entrepreneurs. From the analysis of the data, these believes had been repeatedly proven by their own practice, and most importantly through their reflection during the learning experience.

The interviewees' perspective on learning is that it is not work or a set task; rather it is enjoyable and about fulfilling their curiosity. These sorts of learning activities are almost a natural part of their lives. In the business world, it might not be appropriate to claim that experienced entrepreneurs are the only group of lifelong learners, but it seems that experienced entrepreneurs are a subset of lifelong learners.

Another important theme that emerged from the interviewees comments was their attitude towards their mistakes. They look at mistakes as a learning opportunity, which includes acceptance of failure and preparedness to look into the mistakes they made in a critical way in order to learn from it and make sure they do not make similar mistakes(Cope 2005). What seems to drive these experienced entrepreneurs is learning from the experience in order to move forward into the future; towards the goals they set for themselves.

#### *What sort of knowledge are they acquiring?*

The interviewees have a wide range of learning experiences. The interviewees reported knowledge relating to philosophy, industrial knowledge, social science, finance, marketing, sales, strategy, people skills, training, leadership, law etc. For the purpose of doing the group coding, the researcher categorised these knowledge topics and skills into the groups in Table 4.

Knowledge or skill	Description
Managerial skills	Skills creating or managing a company in employment
Entrepreneurial capabilities	The entrepreneurial skill in the creation and development of a new venture
Philosophy of life	Particular views and beliefs about what life should be
Professional knowledge	Knowledge learned in their university, training or self-learned in a profession.

Table 4 Knowledge and skills coded in transcripts

Within the knowledge and skills presented in the table4, the transcription recorded also detailed comments to these knowledge of skills from each interviewee, what is important and interesting is to find that different entrepreneurs have different believes about the knowledge that relates to their own entrepreneurial practice.

For example, one of the interviewees prefers family ownership, which does not take the outsiders into the ownership although allowing joint decision making. He strongly believes that family business is the way to go with his success of business. While other interviewees do not prefer family ownership or are even against it. It seems that going through different experience with different reflection process results in different believes. Although these believes could be different, but it is definitely 'TRUE' to the individual entrepreneurs who tested them separately.

In the interviews, the focus was mostly on new venture creation. The skill of creating new ventures may be distinct from other entrepreneurial capabilities, as from the self-reporting of the interviewees, the researcher realized that people have significantly different behaviours when operating as an owner in comparison to an employee. Therefore, the ownership of a new venture makes a significant difference in people's behaviour in new venture creation.

To deal with such a wide variety of knowledge and skills, how could these entrepreneurs possibly learn all of them? With this question in mind, the researcher performed further analysis with the data and discovered the following observations related to how entrepreneurs are efficient in learning and acquiring knowledge and skills.

- a) Although each interviewee in the group works in very different industries and projects, and their tertiary education and knowledge learned from universities is different from each other, they have one element in common - that their business is very closely associated with their tertiary education. It is either in exactly the same area, or they could apply most of what they learned at university into their business (Shane 2008). – *entrepreneurs avoid extra learning required if they were to choose an industry which is far from their education background.*

- b) All interviewees have done sales work which has helped them to develop good people skills and a good attitude and appreciation of people around them. These people are usually additional sources of learning. – *the people and problem solving skills learned from dealing with customers helps entrepreneurs develop and learn managerial skills.*
- c) The interviewees all mentioned that they would rather not learn another professional skill by themselves, if they could afford to employ a staff member or engage with someone who has the knowledge or skill needed. They also emphasise the importance to have a capable team, partners and management board — *by having this, the entrepreneurs would be able to organise a very wide range of knowledge and skills, therefore, reduce the demands of personal learning*

#### *Where do entrepreneurs learn?*

From the interviews, all except one entrepreneur studied at university and received tertiary education with their prime professional knowledge. The one person who did not have a tertiary education studied a diploma of business management after high school, while doing his entrepreneurial practice.

Most of the interviewees reported that what they learned in school provided a framework and theory of guidance, which they learned again from real life experience. Therefore, there is good reason to believe that education does contribute to the success of entrepreneurs (Shane 2008). One of the most important areas all the interviewees reported was actually learning through doing or performing tasks, which happened both in their employment and their entrepreneurial practice. Lundmark and Klofsten (2014) looked at large R&D-driven projects in multinational firms and found out that learning is also caused by resolving problems, and problem solving is reported as the most important skill an entrepreneur has to have and be very effective and efficient with it.

From the data, it shows that entrepreneurs normally learn their professional knowledge from their tertiary education, although some of them also received managerial training in university or at work. Those (three interviewees) who received managerial training reported positively about



the managerial knowledge in helping their work and entrepreneurial practice. Most of the experienced entrepreneurs reported that they learned many critical managerial and entrepreneurial knowledge and skills through employment. They did it by doing lots of observation and thinking during their work as an employee. These experiences are both positive and negative, but it seems what they remembered the most are the negative ones, which they definitely try to avoid in their own businesses.

The interviewees reported that they are surrounded by good and capable people, who they can work and learn from. From the data, it showed that in terms of learning, the entrepreneurs are not lonely learners. They interact and learn from family, friends, peers, professional colleagues and mentors.

Another interesting finding is that these experienced entrepreneurs use the internet quite a lot as a learning resource. On the internet, they are able to read professional, managerial and entrepreneurial theories, follow the life stories of some role models, and discuss issues with people from all over the world who they do not know and will probably never meet in their life. They can also join in discussions, exchange ideas, make comments and ask for advice. Therefore, there is good reason to believe that the internet is an important resource where entrepreneurs learn.

#### *What procedure do entrepreneurs follow in learning?*

‘Procedure’ in this section means the entire learning system used in acquiring knowledge or a skill. As expected, the interviewees reported on their learning process during their tertiary education as well as their learning from doing in their work and entrepreneurial practice. The data captured many comments from the interviewees reflecting on the types of activities they were doing, and how often they engage with critical reflection during their work and entrepreneurial practice. These comments were coded with CRP shown from all the interviewees. The comments are supported by stories captured in their recount on the issues they faced and the analysis and reflection they did, as well as the changes they made after the learning experience. This research found the same evidence as Cope (2003), indicating that entrepreneurs engage with critical reflection when they are facing critical or disruptive events.

The data also showed that the experienced entrepreneur will use the autobiography lens when, for example, they recall their personal experiences in their critical reflection on what other people did wrongly, and the negative feeling that they and their colleagues felt as a consequence of the poor performance of the business. With this lens, they learned not to do something similar in their own business. Of course, they also use this lens to critically reflect on their own mistakes. There is also evidence that experienced entrepreneurs will use the theory lens, by coming across relevant theories from various written materials such as online articles or newspapers, and the peers lens when reflecting with other professionals, mentors and friends. They might also engage in reflection with their team which falls into the concept of the team lens.

### **Results from the second round of interviews**

The second round of interviews were conducted two weeks after the first. By doing this, the interviewees had enough time to read the three page brief on Critical Reflective Practice (see Appendix) and had time to think about CRP and its relationship to their personal entrepreneurial experience. This part of the research focuses on RQ2 and RQ3.

### **RQ2: What is the relationship between CRP and Entrepreneurial Learning?**

#### *Understanding of CRP*

Most of the interviewees had never heard about the concept of CRP, however once informed about the concept of CRP, all the experienced entrepreneurs pointed out that they had actually been using CRP to support their Entrepreneurial Learning. All of them could describe episodes when CRP had been used in their own learning experiences. Kevin stated that:

*“This is the first time I’ve actually read the details of what is defined as critical reflective learning, but to my way, what it has described is stuff that I was doing. Someone’s obviously taken the trouble to put a reasoned framework around the process.”*

Not only showing that they are familiar with the use of CRP, they also refer to the importance of using CRP as a framework on Entrepreneurial Learning. Rob noted that:

*“I perhaps - I never was taught that as a process, but found that many of the aspects of what [CRP] suggests are actually the tools that I would and was and have been using in looking at opportunities ... like most frameworks, it's useful because it actually can then direct you to do that sort of thinking.”*

Other experienced entrepreneurs also shared their experience of using CRP during their entrepreneurial practice. This is detailed in Table 5 which is detailed below.

Pseudonym	Quotes
Rob	<p>“I find that a lot of my reflection might actually not be that conscious or necessarily fully direct, what people call that fully focused view where you actually are sitting down and having really deep concentrating thought about is this going to work or not.”</p> <p>“I know that my way of thinking, I don't think that way. I would not go through - I mean, you certainly would iterate a thought and a concept, but I wouldn't necessarily be going through this, oh I'm going to keep on going down this path until I find a way that it works. I'd be more, I think I've got a solution - now I'm going to test it - oh, no it doesn't work - why doesn't it work - oh, it doesn't work because of this - okay well then how do I do it?”</p>
Cameron	<p>“If you're blowing up a round balloon each experience is the breath you push in and each critical reflection is the breath you take in, in order to blow it into the balloon. So think of it as breathing: the inhale is critical reflection, the exhale is experience. But you have to take a leap of faith. If you have a balloon that has no air in it, the very first thing you have to do is inhale and inhale is a leap of faith. You exhale into the balloon, that's your experience. You pinch the balloon, you critically reflect, then you inhale while you're critically reflecting and then you exhale into the balloon again and you blow it up and you keep blowing it up, keep blowing it up.”</p>
Kevin	<p>“There's no doubt I use it, I don't think I've ever sat down and said well I'm going to do some critical reflection now. Reading that paper I thought it's just what you do all the time, you're constantly reviewing, reflecting whatever you want to call it, where you're at, what your outcomes you wanted to be, are you on track. It's all part of a feedback loop to me that is just part of my normal thinking process.”</p> <p>“You've just got to constantly be doing this because that what makes you hit your target that you're - that you've set for yourself that's what makes you successful, that's what makes you get it done is you've got to be doing all this sort of thing”</p>
Gavin	<p>“What I didn't realise until I read your notes, until we discussed it, is I do it intuitively, I do it all the time but I just didn't have a word for it.”</p>
Ryan	<p>“I wouldn't say - I don't allocate time for that but I do it more on an ad hoc basis. But yeah, so it happens on an ad hoc basis and it generally happens either first thing in the morning or last thing at night.”</p>

Table 5 Comments from the experience of using CRP

It is interesting that all the interviewees emphasised that CRP was a tool that they were familiar with and had been using in their entrepreneurial life, even though they had never heard about it. All of them reported that they engaged in different levels of reflection frequently, and as one participant mentioned “I reflect often, as in daily”. If what experienced entrepreneurs claimed is true, then there is quite possibly a valuable link between entrepreneurship and CRP. Alternatively, there is a high possibility that CRP helps develop entrepreneurial capabilities as much as it does with other types of professional learning.

CRP is a very important learning tool for many professionals in terms of having a better and more in-depth learning and understanding of knowledge (Brookfield, S 1998; Kolb 2014). If CRP plays an important role in the learning experiences for entrepreneurs, then more evidence on how to trigger CRP in entrepreneurial practice is required. The data collected in RQ3 using the self-reporting interview of the experienced entrepreneurs sought to provide this evidence.

### **RQ3: What are the lenses of CRP in Entrepreneurial Learning?**

From self-reporting, it is observed that entrepreneurs use many lenses during their CRP activities. These lenses are listed in Table 6 ranked by how frequently they occurred from the NVivo analysis, together with the number of respondents who reported using each lens.

Item	Lens	Frequency in NVivo	Number of respondents
1	Autobiography	98	8
2	Theory	65	7
3	Team	44	8
4	Customer	38	7
5	Peers	33	6
6	Mentor	24	7
7	Professional	22	6
8	Family or friends	21	8
9	Others (including suppliers)	14	8

Table 6 Frequency usage of CRP lenses

#### *Autobiographic reflection*

This was the most reported type of reflection by the experienced entrepreneurs. It is about how we see things from our personal perspective. The autobiography lens involves reflecting on personal experience including learning from one's own mistakes and it also includes observation and reflection on other people's mistakes.

##### *a) Reflection on personal mistakes*

Personal experience is a very important source of learning, as the entrepreneurs continue to reflect with their understanding on past events. It is surprising to see how well the experienced entrepreneurs have used CRP, although they had no prior formal knowledge on CRP. Kevin explained that:

*"I think part of it is you make sure you learn from your mistakes because that's as valuable an input as learning from the good times. It's - it just evolves over time, it's nothing - no one's taught me to be reflective, it's just the way my thought process is. I have a strong mathematical background, that probably leads - that might say "well he'll be more logical" and reflection won't be part of it. Many mathematical problems have feedback loops in them. You think in that logical sort of thought process it is very sensible that you take a feedback loop and reflect on things and why it went wrong and right and therefore to improve for the next time."*

Graeme uses different reflection types before and after making decisions. Graeme stated that:

*"As I say if it's before then it's obviously contemplative reflection; if it's after it's more analytical; if it's during then it's a bit of analytical and contemplative."*

*"But then used in conjunction with that is the contemplative reflection, so where you kind of imagine something you're going to do; what the outcomes might be; and then gather knowledge and data that's in existence from previous people that have tried or done the same things; and then try and apply that to what you're going to do to pre-empt the response you've got. So contemplatively reflect on that's going to happen, what you're going to do and then once you've done it obviously analytically reflect on it. They're probably the two that I used continuously and still do to this day."*

Self-reflection helps people learn from their mistakes and as a result they have a better understanding and knowledge on what they are doing, and become more capable.

#### *b) Reflection on other people's mistakes*

Research shows that entrepreneurs not only reflect on their own experience, but often reflect on other people's experience, especially on their bad experience. Most experienced entrepreneurs reported their story of observation of the bad and really destructive behaviours and mistakes from other people they know in their employment and entrepreneurial practice. Rob noted that:

*"I'd often say - you ask, do you learn how to run a business - I'd be more inclined to say, no actually I think I learn how not to run a business. I didn't necessarily learn the right way - I saw an awful lot of wrong ways, and from the wrong way I suppose you then have to ask yourself, well if that's how you don't do it - it's in double negatives here - that's how you don't do it - well, what do you have to do to add value?"*

Reflection with other people's experience is to observe the people around them, reflecting particularly on the behaviours they perceive to be wrong and then ensuring those same mistakes are not made. Graeme summarised this by stating:

*“This leads me into a saying... a smart person learns from their own mistakes but an even smarter person learns from other’s mistakes.”*

#### *Reflection with theories and explicit knowledge*

The theory lens is probably better described as a lens of ‘explicit knowledge’, which is a more common term among researchers. It covers all the collective knowledge and wisdom that has been expressed as theory or fact.

Entrepreneurs tend to read widely and frequently. What they read may or may not be business related, however there is one common feature in that it is something new or something they sought to learn more about. Reading is a way of knowledge accumulation especially using online channels. Gavin stated that:

*“All the time, I read voraciously. I’m looking for wisdom, I’m looking for guidance, and I’m looking for past experiences, for some other people to guide me through my life - personal and business life.”*

#### *Reflection with teams*

Reflection with the team is a popular reflection reported by the experienced entrepreneurs. It is about getting the team involved in order to get their views about a particular issue. Reflection with a team is easier to organise and it also gives an opportunity to entrepreneurs to understand if the team is cohesive or not. The main issue is to create an environment that encourages the team to speak out about what they believe. It is important to the business where there is a hierarchy from either the company structure or culture. When been asked how often discuss with the team, Ryan said:

*“Pretty often, actually. I think I had a very talented team which I was pleased about. Yeah, not often enough. It was like once a month or once a week. Yeah, it wasn’t as precise as that but all I would say is that I did learn from them on a regular basis.”*

Experienced entrepreneurs report a very wide range of topics that they often discuss with their team. Bill stated that:

*“That would cover everything from how’s our development progress going, what should be in the*

*next version of the product, what our customers are asking. What feedback we're getting, how the bug fixes are going, are we having any critical errors coming up, is it more than usual or less than usual?"*

Experienced entrepreneurs believe that reflection with their team not only gives quicker results, but also promotes group learning and reduces confusion within the organisation.

#### *Reflection with customers*

Experienced entrepreneurs reported that they maintain a very close personal relationship with their customers. This is understandable, as it is good way to know how entrepreneurs see their performance, but it is also important to know how exactly customers see their performance. Direct interaction with customers in person would give entrepreneurs the most critical feedback, which might be about their products, price, service, and provide information about market trends as well as their competitors. Bill discussed this theme in two occasions:

*"Probably - it was always sporadically if I was going to a conference or anything like that, I'd talk to them. If - we went and did formal trips out to ... and we'd always make a point of seeing as many customers as possible in as many different places as possible."*

*"We went and saw Ferrari as one of our customers as well. Again sat down and said what do you think, where are you going, and what do you need? Then just listened to what came out."*

Experienced entrepreneurs reflect with their customers, as the feedback or information might result in improved sales, development of a new product range or modification of an operational model, perhaps even a strategic change for their company. To get this valuable information, entrepreneurs need to develop their interpersonal skills. Bill stated that:

*"I think certainly when you look at things like doing meetings with customers, following on with - doing the critical questions afterwards works really well."*

The data also showed that all the experienced entrepreneurs in this research had developed good people skills and were very experienced in sales. The experience in sales could give them the benefit of coordinating with customers while learning from them. Learning from customers and maintaining a personal connection with them can help the business grow. Gavin explained that:

*“It's just not business for business sake. It's very much personal relationships I've developed around the world. I don't do it because I want the order. I do it because I genuinely enjoy people and as part of that enjoyment process I help them, they help me and our business succeeds and prospers.”*

### *Reflection with peer entrepreneurs*

Experienced entrepreneurs engage with other entrepreneurs to try and expand their understanding of entrepreneurship by exchanging ideas and finding areas of commonality or difference. It will guide them to understand why they are similar and in what way they are different. Kevin stated that:

*“The people that I talk to in terms of my private group, yeah they're similar, and they're similar beasts. They are entrepreneurial, they'll have some thoughts that are different to mine, they've had successes themselves and they know things that are worthwhile tapping into. They're not legal or accountancy things, they're entrepreneurial things - technology things.”*

Different from reflection with team and mentors, the peer reflection does not necessarily have a specific topic to start with, but it will always lead to some valuable and quality discussion. Kevin noted that:

*“It's always informal, it's always over lunch, it's always just a chat and a particularly topic that I want to discuss with them and is never the only topic we discuss; it's always in a broader concept.”*

Experienced entrepreneurs are capable of using peer entrepreneurs as a mirror to examine their own business. Ryan stated that:

*“We sat down. I talked through what I'd been up to and what I'm doing and, you know, he was giving me his thoughts on my area of focus, on whether I should be focusing on [...] or whether I should be focusing on [...], because he thought it was a greater point of difference, which I thought was interesting.”*

Other than people that entrepreneurs know, there are also many entrepreneurial groups and forums that provide an opportunity for entrepreneurs to reflect with. Kevin explained one forum when stating that:

*“In the executive world now there are plenty of groups you can join, Executive Connection etc.[...] I've never been part of those because I have a view that my peer group are people that I work with and will understand the problem a bit deeper and that. I'm sort of - even within our company where*



*we're a very small group. We have a few people that are around the periphery that - whose knowledge we value and whose discussion we trust."*

### *Reflection with mentors*

Not every interviewee has had the opportunity to have a mentor, but most of them expressed their desire to have one if they could. The ones who have mentors raised the importance of having a mentor to bounce off ideas. Gavin does not have a mentor, but is actually mentoring his own son on his learning to be an entrepreneur. It is probably a stroke of luck or a luxury to have a mentor alongside an entrepreneur. Ryan stated that:

*"I think one when I was trying to do my first start-up, [...] we had a very experienced executive as a mentor for us who helped introduce us to people that provided us with lessons around what we were developing."*

The reason people become mentors is that they have the experience as they have 'been there and done that'. Therefore, they could raise "big questions". To answer these "big questions", entrepreneurs have to reflect deeply. Mentors influence entrepreneurs both emotionally and rationally in order to help entrepreneurs remain focused and on track. Ryan suggested:

*"Generally they provide an objective sounding board which gives people clarity in times of high stress or in urgency, which I think is very helpful. [...] it also keeps them on the straight and narrow in terms - if in case they're swaying off, forgetting the mission of whatever it is that they're doing. I think it's not only a good sounding board but also someone that helps guide the ship in the right direction, make sure it doesn't change course."*

A good mentor does not make decisions for the entrepreneur but provides valuable advice to help the entrepreneur navigate their individual circumstances. Charles noted:

*"A good mentor is somebody who mentors and not tries to tell somebody what to do; it's try to allow that person to make their own decisions [...] Isn't that a reflection in making the person reflect and then saying, well what decision would be the decision that you'd make based on the reflection of what happened last week, you know?"*

### *Reflection with professionals*

The purpose of engaging with professionals is to get their advice on some issues related to their

profession, normally outside of the entrepreneur's knowledge area. But surprisingly, professionals are not the most preferred group entrepreneurs engage with for learning. Kevin explained reflection with experts when he explained that:

*"We have, as I said a group of - outside of our team we have a group of experts that we've used and were carefully selected I suppose (1) because they're, dare I say it, kindred spirits, they think the way we think and (2) they have a technical knowledge that is really useful. It's something we don't have so they complement the inner team [...] There's an inner team and an outer team, if you like, and we talk to the outer team less, obviously, but they're all part of the process."*

The reason that experienced entrepreneurs engage with professionals might mainly be to seek a solution and not really to acquire new knowledge, although they would learn from professionals during the course of the engagement. Another reason could be that entrepreneurs have limited funds, and these professionals are rather costly, especially lawyers and accountants. Kevin noted that:

*"The professionals that I use are people with a science and technology background and a way of thinking that makes them worthwhile to talk to. I certainly don't talk to lawyers; I tend to find lawyers are not very useful except for legal matters. Accountants much the same, there's very few accountants that will have a lot to offer for what we're doing and where we've come from in the last two years to what we've achieved. The professionals I talk to are not those sorts of professionals."*

#### *Reflection with family and friends*

Experienced entrepreneurs reflect with their family and friends in order to get their feedback, and hopefully this is useful to enrich the understanding of a particular issue. They might have a higher level of trust in them and the relevant knowledge or insights they might possess. Kevin stated that:

*"I have a few mates that I like to discuss things with that have got good experience. They're not part of our team but I'll go to lunch with them and have a chat with them about certain things. Each of those will be selected for the skill they bring on various matters. I won't talk about all matters with all people."*

#### *Reflection with other groups and individuals*

There is also some evidence that experienced entrepreneurs have a wide range of people they

reflect with. These people may not be familiar to them, or may be unrelated to their ventures. For example, one interviewee reported their conversation with a stranger on the way to Australia from overseas. Experienced entrepreneurs are often “putting out their feelers”, in case something interesting comes to them which aids their reflection cycle.

Engaging with reflection with someone they are not familiar with is probably not easy for entrepreneurs, as before entrepreneurs make a decision as to who they are going to talk to, they have to consider how trustworthy they are or whether they know someone who has the answer.

### **Online as a new resource for reflection**

One of the new sources for reflection is online. Entrepreneurs found this is an overwhelming rich source of information. By using online resources, entrepreneurs not only acquire new knowledge and theories, but also reflect with other people in order to improve their knowledge and skills in entrepreneurship. It is difficult to classify this concept as a lens, but it is important to acknowledge the reflection through online resources is a combination of autobiography, theory and others lenses.

By engaging in online activities, it gives entrepreneurs the benefit of utilising other people’s experience, especially to avoid the same mistakes that other entrepreneurs made or discover possible solutions once they made the same mistake as other entrepreneurs had. This provides a tool to minimise the level of risk when exploring new opportunities. Graeme explained the usefulness of online tools as follows:

*“It was more so lectures or tutorials or articles online from people that I didn't know or wasn't in communication with. That would have been predominantly the large majority of my learning and reflection.”*

Online reading gives entrepreneurs the richness of the knowledge they need. Another advantage is that it is current with the latest developments in entrepreneurship as well as industrial knowledge. Graeme noted that:

*“I think the online learning provides you with something that a degree or something can't and that is just a vast range of a huge amount of information that's extremely now - won't say up-to-date or relevant, but now.”*

Online learning is a way to discover what other people have done and come to a conclusion which is like an individually justified truth. Graeme stated that:

*“So I think a lot of people that go out there and try and reinvent the wheel, relearn, remake all the same mistakes, won't make it any further than what the rest of the world is doing ... So you're kind of using the end point of where knowledge is today as your starting point for what you're about to do.”*

*“I certainly use the personal lens, [...] you try and canvass what is out there and certainly the internet and Google searches are a wonderful window to the world of what's out there [...]. Information is the key to a lot of this and that's why you're tapping into those other people because they will have information you don't have.”*

Entrepreneurs do appreciate the information they get from the internet, as sometimes it is just so convenient and valuable to them. Kevin explained that:

*“Information is valuable, and information as to failure is valuable, things that don't work, it's as good to know things that don't work than things that do work. [...]. Certainly you look at what you can find out from the written word through the internet.”*

The online platform gives people the benefit in selecting the readings which are close or exactly what they are interested in reading. Kevin stated that:

*“I have a couple of news sources via the net that give me information on my particular field.”*

Additionally, Ryan stated that:

*“It's also people through different digital channels that are of influence to me and proactively present ideas and thoughts around certain topics. Which sometimes coincide with a topic I'm facing or an issue I'm facing, so I certainly utilise that to help inform my decisions and thinking?”*

In response to the question, “why are you following these two or three people on their personal blogs? Do you seek more of their professional advice or more on their sort of entrepreneurial spirit [inspiration]?”, Ryan responded:

*“Well they do a bit of everything. So [Seth and James] are about more around entrepreneurial spirit, philosophy and thinking. [Thomas] is a venture capitalist who provides interesting information around broad technology trends and funding insights.”*

Although it is a free resource, there is an issue of validity when reading online. Graeme discussed a method to judge the validity of what is read:

“Normally I would look into the references or any study or cases that they refer to. So a combination of I just guess analysing where they got their data from but also what position they may hold or their past resume - so their success rate, things they've achieved, the position they might hold.”

## Discussion

This chapter will discuss the results of the eight interviews in the context of relevant education and entrepreneurship literature. The discussion explains how entrepreneurs learn, the role of critical reflective practice (CRP) in this learning and how different lenses of CRP are used in this learning. This discussion chapter will be followed by conclusions and implications for managers and entrepreneurs.

### **RQ1: How do entrepreneurs learn?**

*Willingness to acquire knowledge and apply knowledge to capabilities and experience*

From the analysis of the data, experienced entrepreneurs have been found to have a strong willingness to accumulate new knowledge and improve capabilities through the pursuit of new experiences. The intention to learn showed a strong motivation for lifelong learning. The entrepreneurs' willingness to learn motivates them to explore new business opportunities, helps them build new knowledge, tests previously held assumptions, and applies knowledge to actual practice (Cope 2011). Through experiences, the entrepreneurs test and refine their own beliefs and insights by looking at their own worldview, and constantly add to their knowledge base. Knowledge is also leveraged to improve entrepreneurial capabilities. Specific capabilities give entrepreneurs their own unique entrepreneurial behaviours. Capabilities are required to exploit the tacit knowledge which is embedded (Nonaka, Toyama & Nagata 2000) within the entrepreneur.

*Knowledge and capabilities as a resource of entrepreneurship*

From the Timmons' model of entrepreneurship, we can distinguish three major components in the entrepreneurial process. They are: opportunity, resource and team (Spinelli, Adams & Timmons 2015, p. 109). Although this research did find support to this model by finding that opportunity, resource and team are the main parts which comprise entrepreneurship, further analysis of this research data showed that this model missed a critical part of the entrepreneurial process, which is knowledge and capabilities. Ronstadt (1990) stated that one of the main

reasons that entrepreneurs do not start a new venture is lack of relevant knowledge. Entrepreneurial education serves to enhance students with entrepreneurial knowledge (Ronstadt 1990, Spinelli et al 2015, Fayolle 2008). Therefore, knowledge and capabilities can be seen as a distinct component of entrepreneurship and needs to be developed and acquired by the entrepreneur including through the hiring of new personnel to address skills gaps or knowledge gaps.

Entrepreneurs need both financial and non-financial resources. One of the most important non-financial resources is human resources (Spinelli et al 2015). From this study, entrepreneurs appear to be looking to employ people to carry out the actual work but more importantly are looking for the best combination of knowledge and skill from the team in order to fulfil the requirements of their venture. The knowledge and skill must align well with the needs of the business and the team must learn to accumulate and advance knowledge. This will likely play a role in determining the success or failure of the business in the future. The entrepreneur who loses the ability to acquire appropriate knowledge and skill severely threatens the ability for their business to adapt to the changing market.

Appropriate knowledge and capabilities can contribute to the healthy operation of the business (Timmons & Spinelli 1994). It is the entrepreneur's job to get the knowledge and capacity organised. They also have to foster a good environment in the business in order to get the entire team to be able to learn and form this very special resource. The research showed that experienced entrepreneurs pay attention to group learning and pay attention to staff training. One of the key aspects entrepreneurs have when initially forming their team is the knowledge and capabilities of the team. There is enough reason to suggest that the capability of ongoing learning and the efficiency in accumulating knowledge and capabilities would contribute to the success or failure of the venture both in start-up and growth stages.

#### *Entrepreneurial Learning*

Although entrepreneurs can acquire knowledge by employing staff and engaging with professionals, entrepreneurs in the start-up stage might not have all the resources they need. Given the wide amount of knowledge required, it is impossible for entrepreneurs to learn

everything. They have to become efficient learners and effective organisers of knowledge with constrained resources.

Faced with a rapidly changing marketplace, entrepreneurs must be continuous learners to prevent their business from being overtaken. The interviewed entrepreneurs emphasised the importance and frequency of learning experiences and appear to be efficient and effective learners. Entrepreneurs need both a wide knowledge of different business functions and a significant depth of product and market knowledge. But we know that the ability to accumulate knowledge by one person is limited. From the interviewees' self-reports, knowledge appears to be tied to experiences and practice is the main site for learning to take place. Managerial training in combination with professional education and learning during practice may contribute positively to performance in entrepreneurial practice (Spinelli et al 2015). Though it is a small sample, the research data also suggests that experienced entrepreneurs are likely to operate in an industry very closely related to their tertiary education or professional training.

Gaining professional knowledge is resource intensive and time consuming. The research showed that although experienced entrepreneurs are keen to learn new professional knowledge, they also treat professional knowledge as a resource which could be acquired by engaging with people who have such knowledge, which could be more likely if it is affordable. This is also the reason entrepreneurs get professional people such as industry experts, lawyers and accountants. However, it is acknowledged that learning some industry specific concepts can make it easier to work with these professionals.

While acknowledging the importance of formal education, the experienced entrepreneurs also noticed that learning in school or university is different from learning in real life. Entrepreneurs have to apply and test the concepts or theories they learned in higher education in the entrepreneurial practice. This requires particular individualized capabilities to translate educational knowledge into entrepreneurial practice. For example, some interviewees expressed the importance of forming a partnership, and others prefer family control of the business.

One of the most difficult tasks in entrepreneurial practice is to acquire and retain customers. The fact that these experienced entrepreneurs all have sales experience and good people skills might



be the reason they continue to successfully get orders from their customers and achieve continuous growth in their business.

The data shows also the using of internet as a source of learning. The internet is a relatively new resource that entrepreneurs learn from. Some of the benefits of this include: it is a free resource, it has a large knowledge base of topics and skills; it is flexible and convenient to learn from; and it provides a good resource to reflect openly given partial anonymity. However, the internet has some negatives such as: unreliable information; information overload; difficulty finding the right information; and people giving advice without guarantees to resolve specific problems. Therefore, the entrepreneur who uses the internet has to be able to distinguish good sources from the bad and rely on their own reflection and judgment on others' comments online.

Entrepreneurs are the main drivers of the business. Not only do they have to organise the acquisition of knowledge and development of business capabilities, they have to learn to have a much deeper understanding of the business world. Further, they must maintain the quality of their learning in order to guide the business to a much higher level or a much larger scale. This research suggests CRP would be a useful tool for entrepreneurs to learn from their experience and refine their capabilities.

Establishing and growing a business would demand much knowledge and skill, and to learn these skills the successful entrepreneur must be an efficient learner, and be effective in organising their knowledge within their limited financial resources. To achieve this, entrepreneurs have to acquire the right amount of quality knowledge and skills. This could be the reason why Entrepreneurial Learning is a dynamic learning process (Cope 2005). The willingness to learn shown by experienced entrepreneurs explains how entrepreneurs prepare themselves to cope with learning demands. Enjoyment of learning and looking critically at mistakes (Shepherd 2003) might be an aspect important enough to distinguish entrepreneurs from others.

The research showed that the majority of experienced entrepreneurs have their business within the industry aligned to their tertiary education studies. Compared to people new to an industry, this gives them the advantage of not only saving their efforts in learning core industry

knowledge, but also provides them easy access to information and professionals within the industry. Learning knowledge from another profession is very time consuming, which could explain why experienced entrepreneurs in this research intend to engage with professionals from other industries rather than attempting to acquire the knowledge themselves.

Most of the managerial and Entrepreneurial Learning captured in the research was acquired both whilst the subjects were employed as well as in entrepreneurial practice. It is important to note that experienced entrepreneurs learned from their previous employment, especially lessons on what not to do which formed a very important part of their experience and principle of operation. Through employment, a person can also refine what they have learned in school by applying this to business practice, especially in developing people skills that are used when interacting with customers. There are many resources that entrepreneurs could use including the Internet, which provides substantial and up to date information.

## **RQ2: What is the relationship between CRP and Entrepreneurial Learning?**

The research data clearly revealed the CRP activities that experienced entrepreneurs have done and the important role that CRP played in their Entrepreneurial Learning. Further analysis shows that CRP activities are associated with experience accumulation, problem solving, opportunity exploration and risk management.

### *CRP and experience accumulation*

The literature review shows that entrepreneurs accumulate experience, which plays an important role in venture creation and growth management (Morris et al. 2012). The literature review also shows that entrepreneurs learn by doing (Cope & Watts 2000), but the question arises as to how this action is transferred into experience itself. In order to define Entrepreneurial Experience, the idea of knowledge has been adapted from Nonaka, Toyama and Nagata (2000) and we define Entrepreneurial Experience as:

*“A dynamic human process of justifying personal belief toward the ‘truth’ within entrepreneurial practice.”*

With this definition, entrepreneurship is more individualised and the experience accumulated is very personal (Morris et al. 2012). Therefore, generally accepted knowledge can be separated from Entrepreneurial Experience. The concept that CRP is very closely associated with experience (Boud, Keogh & Walker 1989; Beard 2009) was verified in this research. Given that people use CRP to validate the meaning of experience (Mezirow 1990), I then propose the following relationship framework in Figure 3 could explain the experience accumulation process.



Figure 3 Relationship between CRP and Entrepreneurial Experience accumulation

This framework explains how entrepreneurs apply their knowledge or assumptions on to their operations during their entrepreneurial practice. They sense the accumulation process by collecting feedback, comparing the results and reflecting on the input and output. With this process, entrepreneurs will understand what works for them and what does not. These practices, which have worked for them, then form part of their entrepreneurial experience which they will continue to apply unless evidence of more effective practices becomes apparent. As each entrepreneur will only add a “justified” truth into the entrepreneurial experience, this explains why each entrepreneur behaves differently. This framework helps us to explain some behaviour (such as forming a partnership) that one entrepreneur may engage in, but may not be justified by other entrepreneurs.

This framework explains why and how entrepreneurs learn by doing. It is a process that entrepreneurs use whilst practicing entrepreneurship, and through CRP entrepreneurs can refine their understanding of a particular issue, thereby forming their own individual belief of the ‘truth’ through testing and self-reflection. This type of learning process has been found in most of the

learning experience from the data. The strong belief Gavin has on the important on “respecting the culture” in doing international business was acquired through his personal visiting to Japan. Contrary to the original instruction from his boss, he found his personal justified truth of “respecting culture” through his interactivities with the Japanese customers and his throughout reflection and testing with the Japanese customers. He then did further tests with his many other customers in Russia, Vietnam, China etc. this learning activities were done together with a series of reflections. Only after these testing and reflection, he then drew the conclusion on that “respect culture” is the most important tool in international marketing. He also made efforts to pass his beliefs on too his, family and staff. They might not, however, agree with him, or they may share his beliefs but believe in them less strongly. What important to see that similar learning experience showed in many learning stories from the interviewees and these personal “justified truth” are found in marketing, customers, working with media, dealing with negative behaviours from customers’ staff, partnership and many more.

This framework might further enable us to explain tacit capabilities (Nonaka, Toyama & Nagata 2000), referring to some of the skills entrepreneurs have not yet been able to clearly articulate. With an understanding of the relationship between CRP and Entrepreneurial Experience, there is a good reason to assume that an entrepreneur’s tacit capabilities come from the interaction between their experience and a particular issue through CRP. With the discussion above, I can draw the first proposition that:

*“CRP is a tool that entrepreneurs use to refine their experience into Entrepreneurial Experience.”*

#### *The impact of CRP on problem solving and decision making*

Brookfield (1994) showed that adults trigger the critical reflection when they face contradiction, dilemma or are confronted with anomaly. The research data also shows that CRP activities are highly associated with problem solving and decision making. The data demonstrated that experienced entrepreneurs did reflect extensively before, during and after a problem solving and/or decision making experience. These problems or decisions could be new opportunities, new customer requirements, or a new challenge or even a risk to their organisation.

This is quite understandable, as entrepreneurs are facing many issues each day (Spinelli et al 2015). To keep their business growing, they have to resolve both internal and external problems which are normally associated with decision making requirements. Cope (2003) found that entrepreneurs engage in reflection as a result of critical event ‘jolts’. The research supports this claim however the data also captured CRP actions that entrepreneurs also engaged in when there is no ‘jolt’.

What seems different from the normal understanding of critical reflection which is a purposely conducted deep thinking and investigation, some of the reflections the interviewees reported are rather a slow and long process. One of the interviewees reported that a trigger of the reflection took about a couple of years, before he reached the conclusion when he was cooking beside a BBQ in a party. It is obviously a critical one as it affect his operation in his business much, but it takes much longer time and smaller scale in each step.

Looking into the feedback the experienced entrepreneurs reported, the research found that the triggers of critical reflection related to the relevance of the experience. It seems that the entrepreneurs did not engage with critical reflection if they already had enough experience in dealing with the problem or issue. Critical reflection tended to be initiated when they found they had a lack of experience in resolving a problem or issue. The initiation of critical reflection can be shown in the framework in [Figure 4](#) on the following page.

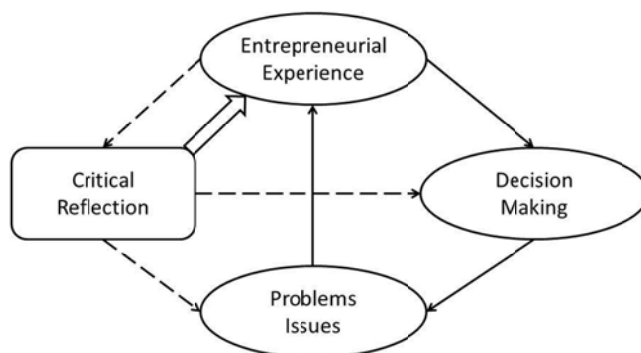


Figure 4 Conditions that trigger the Critical Reflection Process

This type of process is showed also in most interviewee's learning stories. For example, Graeme business is built on his effort in protecting the medical staff from cut when opening glass containers. His whole learning stories were combined with problem, reflection and decision making. Kevin could not forget the mistakes he made in setting up a wine business targeting American market. This mistakes came into his thinking from time to time when he facing new business opportunities. Rob mentioned his conversation with his life-long friend in testing if his decision making is fair to other parties.

This framework shows that when there is a problem or issue, the entrepreneur will perform an assessment to see if their existing experience is sufficient to resolve the problem. If it is, then they quickly go to the decision making phase and reflection does not happen unless the problem cannot be resolved. However, if the entrepreneurs feel that they do not have sufficient experience, a critical reflection process is started. The result of the critical reflection process is the formation of a new entrepreneurial experience. This framework supports additional frameworks presented later to show the relationship of CRP with Entrepreneurial experience. From this framework, I draw the second proposition that:

*"The CRP process starts in problem solving or decision making, when entrepreneurial experience is insufficient."*

#### *CRP and entrepreneurial risk management*

There is not enough data in this research to support the statement that CRP has a close relationship with entrepreneurial risk management. However, one experienced entrepreneur reports that the way business risk is managed is through careful reflection on the possible outcomes. The researcher believes it is valuable to explore whether CRP helps entrepreneurs to manage risks.

#### **RQ3: What are the lenses of CRP in Entrepreneurial Learning?**

The data showed that experienced entrepreneurs have a very wide scope of lenses that they can use to reflect with. In saying this, the autobiography lens is the most frequently used. It is also the most important lens that experienced entrepreneurs use in their final stage of entrepreneurial

experience accumulation.

In summary, the theory lens is important for entrepreneurs as a way to enhance their knowledge and capabilities. The customer lens brings benefits to entrepreneurs in the short and long term and therefore reflection with customers is always a priority, although they have less interest in reflection with suppliers. Reflection with the team lens happens mainly at an operational level. The only time reflection with the professional lens occurs is when dealing with particular problems or issues. Entrepreneurs will also tend to take much more time and effort in conducting reflection when dealing with business opportunities, and a much wider range of lenses might be used when reflecting with key trusted sources such as mentors, family, friends, and peer entrepreneurs.

As discussed previously, the entrepreneurs engage directly with the different groups in order to get the direct feedback from them. This is different slightly from the definition of lenses of Brookfield, which is more from who's view it is, not who is engaged (Brookfield 1998).

Brookfield's critical reflective lenses are used almost parallel with each other (Brookfield 1998), however, this research found that the autobiography lens is the hub for reflection. Through autobiographical reflection, the entrepreneur refines their ideas, assesses opportunities, analyses business risks, and makes key decisions. The entrepreneur will almost always engage with autobiographical reflection, and choose other lenses when dealing with specific problems or opportunities. A framework of reflection lenses that apply to Entrepreneurial Learning is shown in [Figure 5](#). This framework supports the first framework and gives an estimation of how CRP is used by entrepreneurs.



Figure 5 Entrepreneurial Critical Reflection Lenses

With this framework, I have drawn the third proposition that:

*“Autobiographical reflection is the most important lens entrepreneurs use, with the assistance from other lenses.”*

CRP in Entrepreneurial Learning is also a continuous process to challenge a previous belief or existing knowledge, and may involve multiple lenses depending on how the critical reflection is triggered.



## Conclusion

The research design involving two-part interviews provided rich data to answer the research questions. The results provided further support to the existing Entrepreneurial Learning theories, this paper found the support of Cope's claim that Entrepreneurial Learning is a dynamic learning process (Cope 2005). Successful entrepreneurs are not only naturally willing to engage in, but also maintain a passion for, learning throughout their entrepreneurial life. These learning activities are motivated by the results of applying prior learning and knowledge into their entrepreneurial practice. Understanding how to effectively and efficiently coordinate the learning process would contribute significantly to the success or failure of the entrepreneur.

The data suggests that the knowledge acquired by entrepreneurs and team may be an independent aspect of entrepreneurship to be considered in addition to teams, resources and entrepreneurs. The capacity to learn might contribute to the success or failure of the venture in both start-up and growth stages. The learning capability is also more critical to entrepreneurs in their start-ups than for those in well-established corporations (Nonaka, Toyama & Nagata 2000).

Through critical reflection, experienced entrepreneurs determined what does or does not work for them. As a result, a new entrepreneurial experience is formed, and by incorporating the new experience into their practice, it should enhance their entrepreneurial capabilities. Therefore, CRP is a critical learning tool for entrepreneurs, experienced and new. By engaging in CRP, entrepreneurs not only enhance their ability to learn, but also accelerate the accumulation of entrepreneurial experience, therefore contributing to the performance and success of their ventures.

There are many CRP lenses entrepreneurs could use in order to develop their learning more effectively and efficiently. Entrepreneurs need to choose the lens that is most suitable to a particular learning activity. Another important resource of reflection is engaging with online resources. Findings in this paper could benefit entrepreneurs by guiding their learning activities. It is always a challenge to design an effective and successful program into the entrepreneurial education (Warhuus & Basaiawmoit 2014) but entrepreneurship educators may benefit from the inclusion of CRP in their syllabus and their teaching activities.

### **Managerial implications**

With the findings and analysis, there are good reasons to say that Entrepreneurial Learning is a dynamic learning process, people who are not ready to engage with this learning process should not engage with entrepreneurship. While it is accepted that entrepreneurs learn from doing, it is also necessary to learn from other entrepreneurs, in particular from their mistakes. Learning from other people's mistakes is a way of entrepreneurial preparation (Cope 2011).

By using the new entrepreneurial experience into their practice, it should enhance their entrepreneurial capabilities, therefore should contribute to the success of the venture. Therefore, CRP is a critical learning tool for entrepreneurs – both experienced and new - in order to maintain their learning ability, accumulate experience, and develop capabilities that contribute to the success of new ventures and business performance. The findings from this research provide some suggestions toward entrepreneurship education and practice.

Firstly, it is strongly supported that proper education in university is a fundamental base for the new generation of entrepreneurs. A small but well-publicised group of entrepreneurs drop out of university and still make great ventures. Even so, a sound tertiary education can give industry-specific skills such as in an engineering degree or management skills offered in a business degree. Secondly, the professional training in skills or knowledge especially with management is important to young entrepreneurs, who need to cement these skills either through work experience or entrepreneurial practice. Finally, using the definition of Entrepreneurial capabilities, entrepreneurs can only obtain entrepreneurial skill through their own entrepreneurial practice. To do this effectively and efficiently, they should use Critical Reflective Practice as a vital tool and engage with people and resources as a way to enhance their knowledge and capabilities.

### **Limitations and future research**

As a pilot study, the findings need to be further investigated with a much larger sample size. There is also a need to investigate female entrepreneurs as research access in this study was only granted by male entrepreneurs. This thesis proposed three frameworks explaining the role of CRP in Entrepreneurial Learning. These three frameworks need to be further tested with larger

sample sizes of experienced entrepreneurs. It might be more valuable to compare experienced entrepreneurs with novice entrepreneurs or professional managers in the text of applying CRP. Other lenses of reflection may also prove useful for study.

This research found that internet based online learning may prove increasingly important to the improvement of entrepreneurial skills and capabilities. Learning how to use the internet as a resource while being able to check the validity of the available information from the internet would contribute to Entrepreneurial Learning. Further research on Internet-based sourcing of knowledge by entrepreneurs may help to better understand this widely used resource. CRP could also be utilised in this online learning. Overall, reflection has now been widely studied in entrepreneurship but specific critically reflective practices need to be researched further.

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## Appendix

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### Reflection: What is it and why should I bother?

Reflection offers a way for you to make the most of your Participation activity. Reflecting on the many new experiences, challenges and opportunities of this activity will improve your ability to respond effectively to situations and incidents, meet the intended learning outcomes that will serve you throughout your life. Reflection is useful for making sense of the something you have done or doing. Reflection may provide a quiet time to step back from the pressures of study, work and life to sort and process and learn from the experience or activity and your thoughts and feelings. Reflection helps Entrepreneurial Learning.

### What is reflection?

There is no agreed definition of reflection in the literature however most approaches would include purposeful thought about beliefs, thoughts or actions in order to improve or learn.

Some examples include:

- Deliberately thinking about action with a view to its improvement (Hatton and Smith, 1995, p.34);
- The ability to think about what one does and why – assessing past actions, current situations, and intended outcomes (Richert, 1990, p.525);
- An active, persistent and careful consideration of any belief or supposed form of knowledge (Dewey, 1933);

**Critical reflection** is taken to mean a deliberate process when the candidate takes time, within the course of their work, to focus on their performance and think carefully about the thinking that led to particular actions, what happened and what they are learning from the experience, in order to inform what they might do in the future (UK Qualifications and Curriculum Authority in King, 2002).

### When to reflect?

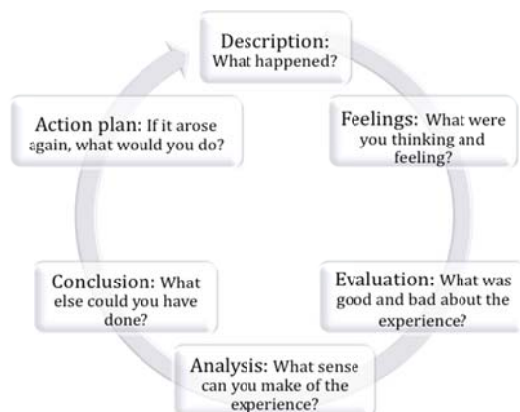
Reflection may be used to support learning at any time. Participation is an example of an experience. In this framework reflection follows experience and reflection leads to conceptualisation and experimentation.

In practice, *learning to reflect* may start before you commence your participation learning experience and continue through and beyond the experience. Indeed, once started, the development of reflective skills may be ongoing to become a lifelong learning practice, and is a requirement in some professions.

A reflective phase that may be termed *reflection for action* usually occurs prior to engaging in an activity. This phase is about preparing for the experience through reflecting on issues such as: what do I hope to get out of this experience, what might others expect of me, what do I have to contribute, what do I most need to learn, how will I get the most out of this experience? Exploring the many reflective tools and ways to reflect is useful at this stage to further develop reflective skills and help identify the reflective processes that will best support your learning.

*Reflection in action*, as the term suggests, occurs during the participation experience. This is the phase during which you may explore putting theory from your studies into action or practice. New experiences, even the most positive ones, may challenge your thinking and previous assumptions, stir up emotions or present issues you are not immediately sure how to address. There are many reflective tools and processes that can help make sense and meaning of your experience during this phase including “critical incident analysis” to help work through and make sense of a significant issue or event; online or face to face discussion sessions that may assist you to explore others’ perspectives; reflective writing, blogging or journaling to assist exploration of new ideas and feelings and to develop insights; and creative or expressive media such as poetry, art, music and video making that enable you to draw on your senses and engage in cognitive and affective (emotion) learning processes, known as whole person learning.

*Reflection on action* (Schön, 1987) is the phase during which reflection is most valuable, reviewing and synthesising learning and considering any future application. This phase may involve debriefing or discussing events, issues, emotions and lessons that have arisen during the experience. A reflective debriefing process such as that proposed by Gibbs (1988) has been found to support learning in participation activities:



It is during this phase that final assessments are usually completed which may involve a synthesis of your reflections and learning during the participation activity. There are many ways to express and communicate your learning, some of which have been explored in this module and which we briefly outline in the next section. How you present your final reflections will be guided by your teacher’s requirements and your own learning.

### How to reflect

There are many ways to approach reflection and a diversity of techniques to use depending on what works for you and your learning requirements. A useful place to start is to consider your experiences from different **lenses** or perspectives (Brookfield, 1995).

In higher education, the useful **lenses** through which to reflect on your Participation activities include:

- **You** – what’s your view of this (situation)?
- **Your peers** – how might your fellow students’ or work colleagues’ approaches differ from yours?
- **Your teacher** – what would your teacher’s perspective be?
- **Your host supervisor** – how might your host supervisor respond to this?
- **Recipients of your services** – if you provide a service to others, what would they think?

- **Your course** – what does the literature or theory associated with your course say?

Reflection techniques vary in their approach and skill requirements. Exploring techniques that use different skills such as writing and art, or critical incident analysis and drama will help you to find ways that work for you in different circumstances. Techniques for reflection include:

- Writing/blogging/journaling/twitter (structured or unstructured);
- Essays and reports;
- Organising tools such as mind maps, Venn diagrams and flow charts;
- Analytical approaches including critical incident analysis and force field analysis;
- Individual or group presentations and performances;
- Creative/expressive media including video, photography, storytelling, poetry, dance/movement, drama, music/song and art;
- Contemplative practices including meditation, mindfulness and dream play.

**Remember:** There is no one best way to reflect, so if what you are doing isn't working for you try another technique or take a different perspective.

**Question:** If you have used critical reflection in your entrepreneurial practice, then what are the Lenses you would use? Please write from most important to the least important ones.

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