CHAPTER 8

DISCUSSION OF FINDINGS AND CONCLUSIONS

"When I examine myself and my methods of thought,
I come to the conclusion that the gift of fantasy
has meant more to me than any talent for abstract, positive thinking."
— Albert Einstein

8.1 Overview of Chapter 8

The research objective of the study is to enquire into postgraduate accounting and finance students' perceptions of critical thinking in the context of group learning. This objective is met with the findings presented in Chapters 5 to 7. First, Chapters 5 and 6 present the significant variation in the ways in which students perceive their learning experience in the context of group learning. These include their perceptions of critical thinking and group learning, their stances on conflict and the correctness of answers, and their orientations to group learning and motivation. Second, Chapter 7 considers the links and relationships among these identified findings. The analytic framework of the study reveals and reinforces the complexity not only in learning itself, but also in this social context of learning, i.e. group learning and the student as individual learner.

Recapitulating, this thesis seeks to make three contributions: (1) A contribution to theory, (2) a contribution to the empirical literature; and (3) a contribution to the accounting professional and accounting academic.

With this in mind, this chapter first considers the discussion of the findings identified in Chapters 5 to 7 in section 8.2. Drawing from these discussions, the contributions of the thesis are presented in section 8.3. This chapter concludes with recommendations for future study, pedagogical considerations and the limitations of the present study from sections 8.4 to 8.7 respectively.

8.2 Discussion of Findings

Twenty postgraduate accounting and finance students participated in the study and agreed to be interviewed. These students shared their learning experience in the FFM module, particularly how they worked with others to solve the Global Ltd case in a particular social setting, i.e. in the context of group learning. The research objective was to enquire into their perceptions of critical thinking in the context of group learning. This discussion is organised into five subsections (8.2.1 -8.2.5), drawing on the findings presented from Chapter 5 to Chapter 7.

8.2.1 Students' perceptions of critical thinking

It is widely accepted that fostering critical thinking has been a professed goal of higher education (as discussed in Chapter 1). Yet, despite this emphasis, there is still much confusion about what *actually* defines critical thinking (Bailin et al., 1999a). This study found that the postgraduate accounting and finance students' perceptions of critical thinking consisted of emphases on skills, reflections and social context, with less emphasis on disposition.

In Chapter 2, the review of previous studies relating to critical thinking highlighted that critical thinking research, particularly in relation to students' perceptions, was rare, and only Philip and Bond's (2004) participants were similar to this study, where the focus was directed to students rather than educators in the literature. Therefore, there are not many prior works to which this study can be related and compared. The study found three significant variations in the way students described the perceptions of critical thinking and they are discussed in turn below.

First, students who perceived critical thinking as to develop a deeper understanding (CT1) showed the emphasis of reflective dimensions in models such as those proposed by Dewey (2004) and Lipman (2003). Students who aligned with this perception commenced a reflective process that involved quality deliberations and exercising an open mind to examine the issues at hand. They associated critical thinking with words such as 'analyse', 'evaluate', and with making sense and

engaging in critical reflection. In view of this, they showed intentional reflective thinking (Dewey, 2004). Some students especially mentioned that they would not take things as given before coming to a view. These variations related to an intention to develop a deeper understanding with any presented views and perspectives. Students also described similar variations to Duchscher's (2003) participants, particularly CT as the 'big picture' – seeing beyond what was presented – and also Philip and Bond's (2004) finding about critical reflection as 'looking at it from all the angles'. In summary, students associated with CT1 undertook the reflective capacity in critical thinking to examine information, views and perspectives given to them.

Second, the study also identified that students perceived critical thinking as to provide an outcome (CT2). The focus for students was to derive a better answer (S20), make improvements (S14), solve problems (S23) and apply subject knowledge (S12). This supports Lipman's (2003) model of critical thinking: in particular, he mentions that the outcomes of critical thinking are 'judgements'. According to Lipman, 'judgements' include decision-making, problem solving and learning new things. The outcomes students described in their perceptions were similar to Lipman's (2003). However, students also described a reflective and skills emphasis in CT2. For example, S14 described a process of analysing and questioning feedback in order to improve her understanding. However, the study found that the outcome-related activities might not necessarily be concerned with critical thinking. As a result, the emphasis was given more to the 'outcomes' for students associated with CT2.

Many students also described their perceptions in a similar way to Phillips and Bond's (2004) study with second year undergraduate students in New Zealand, Particularly, students who perceived critical thinking as a mechanistic process (CT3) described a similar notion to 'weighing up' in Philips and Bond's (2004) study. Their four perceptions of critical reflection - weighing up, looking at all angles, looking back on and looking beyond – were revealed in a similar way in this study. Students associated with CT3 were making simple comparisons to the New Zealand students, such as analysing advantages and disadvantages.

However, this study did not identify any perception of critical thinking that relates closely to the emphasis on dispositions. Dispositions are one of the key emphases in many of the models of critical thinking considered in Chapter 2. They refer to the behaviours, characters and personalities of critical thinkers. Critical thinking theorists who advocate this element include Ennis (1987, 2011), Paul and Elder (2008, 2012), the Delphi Report (1990) and Barnett (1997). They use different terms to capture this element of disposition in critical thinking. For example, Paul and Elder (2008, 2012) use *traits* in their model and the Delphi report (1990) uses *attitudes*.

Students in this study did not explicitly comment and said very little about the emphasis of disposition in relation to their perceptions of critical thinking. This showed that students' perceptions of critical thinking reflected a fairly one-sided understanding and focused on its more logical and rational aspects. The only perception of critical thinking identified that could relate to the element of dispositions was the perception of critical thinking as a means to develop a deeper understanding (CT1). Students with this perception of critical thinking commonly demonstrated one key personality trait: they were attentive to details relating to the issues, views and ideas presented. They commented that they would see the issues, ideas and views from many angles (S3), and would understand them deeply (S12) and beyond face value (S17). The significant variations in the ways they perceived critical thinking were related to what Duchscher (2003) found with female nursing students who perceived critical thinking as seeing the 'big picture', and also with 'looking at it from all the angles" in Philips and Bond's (2004) study mentioned above

The last emphasis of critical thinking identified is concerned with the social context of critical thinking, which is advocated by critical thinking theorists such as Barnett (1997). This emphasis was evident in students' perceptions of critical thinking, where students related critical thinking with the involvement of others. This was particularly true for CT1 students, who mentioned that they would develop a deeper understanding through interacting with others. The involvement of others was evident in the identified variations they described. For example, being able to see from many angles and able to evaluate feedback required students to interact with

others. Hence, this shows the necessity of the social context for one to engage in critical thinking.

It is evident that critical thinking appears to be represented by a series of skills descriptors, such as the ability to reason, analyse, interpret, explain and evaluate. Whilst there is evidence that critical thinking can be defined *solely* in terms of a set of skills (Paul and Elder 2002) or can appropriately be described in these terms (Bailin *et al.* 1999a), there is a danger of seeing students as skilled, competent or proficient thinkers. In this view, critical thinking becomes a learned skill which can be achieved in a mechanical way (as described in the perceptions of CT3) apart from any knowledge domain and context. However, it was found that although many skill-related descriptors were evident among students associated with the perception of CT1, they used them to develop a deeper understanding in their learning with others. Particularly, they showed an emphasis on reflection in critical thinking. It was found that students aimed to make sense of their learning experience. Yet, the emphasis on reflection should not be assumed to be a matter of being proficient at mental processes (Balin *et al.*, 1999a). Otherwise, it falls back to the skill-talk as considered earlier.

By contrast, Barnett's (1997) belief, within his notion of critical being, is that an effective education should foster both critical thinking skills and critical spirit. Other models of critical thinking considered in Chapter 2, such as the Delphi report (1999) and Paul and Elder (2012), support his idea. The study found less evident in the emphasis of disposition for a postgraduate accounting and finance student. This could be the lack of awareness of such emphasis within the learning experience. However, students revealed open-mindedness and avoidance stances when they faced conflict with alternative views and perspectives during the interaction and discussion with others. The Delphi report (1990) and Paul and Elder (2012) see open-mindedness as one of the dispositions of a critical thinker. Nonetheless, both open-mindedness and avoidance leaned more towards personal stance, as explained by Salmon (1989), and this will be considered fully in section 8.2.4.

Although students in the study had difficulty providing their perceptions when asked for their understanding of critical thinking in the interviews, when allowed to fully discuss their perceptions within the context of their learning experience set out for the study, they shared more elaborated perceptions of critical thinking with detailed descriptions and articulated examples from the experience, particularly the group learning experience. Accordingly, this emphasis of social context relating to critical thinking was evident in this study. This concurred with the claim that critical thinking was contextually dependent (Dewey, 2004; Lipman, 2003), particularly Barnett's (1997) notion of 'the social context condition for critical thinking'. In other words, students agreed that critical thinking can be facilitated more in a social context of learning. This corresponded with the findings of previous studies considered in Chapter 3, such as the empirical studies in cooperative learning.

It was found that the emphasis of social context was evident to a lesser extent for students associated with CT2 and CT3. However, the activities they described were understood in the context of working in a group. To understand further, the next section 8.2.2 discusses the findings on students' perceptions of group learning.

8.2.2 Perceptions of group learning and orientations to group learning

The study revealed two perceptions of group learning drawn from students' comments and sharing, i.e. that group learning could either provide an opportunity for critical thinking through members' interaction (GL1), or an opportunity to share the task (GL2). The review of the literature in Chapter 3 shows that many studies focused on the effectiveness or outcomes of group learning. It was found that students agreed that group learning was beneficial to them and enhanced their learning, regardless of the different learning orientations and learning objectives students had in mind. Therefore, it was not surprising to see that the majority of the students perceived that group learning could provide an opportunity for critical thinking through members' interaction (GL1).

Many students who perceived group learning as GL1 emphasised the interaction with others as providing the opportunity for critical thinking in their learning

experience. They also shared that members played a central role in their learning, particularly in relation to their participation and interaction, contribution and accountability in group learning. Steinert's (2004) study with undergraduate medical students in the US reported that their perceptions of effective group learning were related closely to active student participation and interaction. Students shared the same sentiments in this study. This was evident in the variations identified with those students associated with GL1: they valued members who could bring positive contributions and who would actively participate in group learning. They believed that critical thinking was encouraged in group learning through the interaction with other group members.

Similarly, the variations identified in GL1 also complement Feingold *et al.'s* (2008) study, particularly the role of discussion and interaction in developing the ability to consider different views and perspectives. This was evident for students associated with GL1 who shared that they valued the different ideas, viewpoints and experiences that members bring into the group learning. They believed that this would facilitate the engagement of critical thinking. Ward-Smith, Peterson and Schmer's (2010) study with masters-level nursing students also highlighted the benefits of discussion and interaction in group learning, but their study reported that student benefited in their subject knowledge only, not in their critical thinking.

Nonetheless, Ward-Smith, Peterson and Schmer's (2010) findings were evident in the variations described by students who perceived group learning as providing an opportunity to share the task (GL2). Agreeing with nursing students in their study, students with GL2 shared that the opportunity to share the task made it more efficient and less stressful than completing tasks individually. Feingold *et al.'s* (2008) study also reported the nursing students found easier to arrive at correct answers in groups compared to individual effort. In this sense, students with this perception provided similar responses that members helped them to divide the tasks, reduced their workload and that it was a time-saving and efficient way to learn. It appears that the accounting and finance students held similar perceptions of group learning as an opportunity to share the task compared with students in other disciplines.

It was evident in the studies above that not all students were happy with group learning. This related to the orientations to group learning identified in this study. Accounting and finance students reported two main orientations to group learning. These orientations show their attitudes towards working in a group and preferences for group learning. Students either preferred working individually (OR2) or group learning and working with others (OR1).

Students whose orientation leaned towards group learning and who preferred working with others indicated an interdependence relationship (Johnson and Johnson, 1989; Deutsch 1949a, 1949b) with other group members. This can be supported by the variations identified in the study where the majority of the students believed they could learn from one another, drew from one another's strengths and were happy to contribute and participate in group learning. However, one interesting observation from the significant variations in this OR1 is that students acknowledged the limitations in working alone. They shared that they might lack the required knowledge, experiences and skills, particularly for the FFM assignment.

By contrast, some students reported another orientation to group learning: they preferred to work alone (OR2). This orientation indicated an independence relationship (Johnson and Johnson, 1989, Deutsch 1949a, 1949b) where students did not see any relationship between themselves and the other members in the group. In this study, students wanted to have more control over their own learning in term of contribution, time and effort without having to consider others' role in learning. They also shared that they disliked the 'free rider' issue.

Particularly, students associated with OR2 felt that the group mark was an issue. Some of them felt that the marks did not match the effort they had put in, nor the time they spent on the group work. The findings complemented the work of Ward-Smith, Peterson and Schmer's (2010), Feingold *et al.*, (2008) and Phipps *et al.* (2001). All these papers reported the issue of grades in the social setting of learning. Phipps *et al*. (2001) found that their students resented depending on others for the grade.

Feingold *et al.* (2008) reported that the students found the same concern in their team learning sessions and stated that it was stressful because the work was graded. The study found that students preferred to work alone (OR2) and was most closely related to Ward-Smith, Peterson and Schmer's (2010) findings in terms of the issues of equality and free riders. Both their students and students associated with OR2 in the present study were unhappy with the inequality in effort, contributions and workload. They also expressed that they felt stressed when there were inactive members (free riders) in group learning.

Social Interdependence theory (SIT) emphases the case for positive interdependence and the effects of goal attainment among the members (Johnson and Johnson, 1989). For example, social independence occurs when the goal attainment of A is unaffected by B: A does not need to rely on B to achieve his goal cooperatively. Based on students' comments and responses in the learning context set out in the study, the significant variations identified in this regard showed that students who preferred to work alone (OR2) indicated that they did not need to rely on others for the group work. On the other hand, students who preferred to work together (OR1) wanted to work cooperatively to attain the group goal (for example, a good result for the FFM assignment) by drawing strengths from one another. Accordingly, students' motivations may infer their orientations to group learning, particularly goal attainment for oneself. This leads to the discussion of the findings on motivation in the next section.

8.2.3 Motivation

The study found that students were motivated to learn because of the grade they desired or the outcomes they wanted for their work (M1). These are extrinsic motivators, as Ryan and Deci (2000, p.60) explained: students were motivated to learn to attain "some separable outcomes". In this study, these outcomes were exam marks, grades and better results for the assignment.

On the other hand, only a few students expressed a desire purely for learning (M2). This is intrinsic motivation, which contrasts with the extrinsic motivation mentioned

above. Students with intrinsic motivation wanted to learn from others in this context of group learning. They also wanted to expand their knowledge by considering others' views and perspectives

Glyn *et al.'s* (2005) study on motivational constructs, discussed in Chapter 3, is particularly helpful to understand students' motivations. Besides intrinsic and extrinsic motivation, two particular constructs can be observed from students in this study:

1. Goal orientation – this construct fits well with students in the study. Glyn *et al. (*2005) relate this construct to learning and performance goals. Students who want to learn are motivated by learning goals and take any opportunity to learn.

2. Self-regulation – this construct is particularly observed in students who prefer to work alone. According to Glyn *et al.* (2005), students' perceptions of control are closely related to self-regulation. This can be observed in the study that some of the students who wanted to work alone because they wanted to have more control over their own learning.

Johnson and Johnson (2003) argue that motivations, goals and social relationships are interrelated. In brief, they argue that goal and motivation are inseparable, and they are interdependent with members' emotions in a group. This study found that students' motivation is inherently aimed at achieving goals (grade, result, learning), which was observable in their comments, especially the context of the group learning that was set up for the FFM assignment and closely related to its assessment. More interestingly, the social aspect of motivation was also evident in the study, particularly the orientations to group learning mentioned in section 8.2.2. This observation supported how students thought about the role of group members, who ought to be active participants and positive contributors in achieving the group goal, be it just completing the task or getting a better grade. In other word, students' motivation was related to the social context of group learning, supporting Johnson and Johnson's (2003) argument above.

Motivation is highlighted as one of the key factors that promote critical thinking in the context of group learning. In other words, it was a necessity for group learning to *work*. Students' motivations in this study appeared to correspond more with the orientations to the group; nonetheless, motivation plays an important role in group learning (Johnson and Johnson, 2003).

8.2.4 Students' stances on conflict and critical responses

One interesting and important finding was the students' personal stance on conflict, which affected their perceptions of critical thinking and group learning and their orientations to group learning.

Taking account of Johnson and Johnson's (2009b) constructive controversy theory in Chapter 3, and personal stance, as considered in Salmon (1989) and Brockbank and McGill (1998), a majority of the students responded in the way predicted by constructive controversy and concurrence-seeking processes (Johnson and Johnson, 2009b, see Table 3.1 in Chapter 3), particularly when other members challenged their views with alternative perspectives during the interaction and discussion. The ways they responded in these processes related to their stance on conflict.

When students are confronted with an opposing position, the constructive controversy theory suggests that they become uncertain about the correctness of their own views (cognitive conflict). Under the constructive controversy process, students are encouraged to consider other views and perspectives and synthesise the information to reach a revised conclusion. In this case, students show an open-minded stance. On the other hand, under the concurrence seeking process, the avoidance stance is identified in this process. Students were apprehensive about differences in views and quick to compromise to the dominant view.

This study identified that the majority of students adopted an open-minded stance during their interaction with others in group learning, where they were motivated by epistemic curiosity and open to alternative views and perspectives during their learning, especially in situations where intellectual conflicts occurred. In this study, the intellectual conflicts happened when they were working together on the FFM

case. It was found that the majority of students who sought to understand further (CR3) the presented conflicting view before any conclusions were made were generally related to open-mindedness. This finding supported the constructive controversy theory that students were motivated by epistemic curiosity and open to alternative views and perspectives. Hence, they would pause to listen, reflect, review and seek more information before coming to a view.

On the other hand, this study also found that some students were apprehensive about differences and quickly concurred with the majority view. This suggested that students were adopting an avoidance stance in their learning. This study found that the students were avoiding conflict because it was a 'group' task and would readily compromise with group decisions in order to move on.

The study found that students generally responded in three different ways as they described how they managed the conflict during the interaction and discussion. They would engage in a debate (CR1), enquire (CR2) and establish understanding (CR3) with others and this often involved a process of convincing themselves and the other party. Besides relating to the open-minded and avoidance stances, these responses could also infer that as critical thinkers, they believed critical thinking involved clearly stating one's ideas and views and producing credible evidence in support of those ideas and views. In other words, they wished to form their own judgements or views based on credible evidence. This was evident in students' critical responses when they asked for reasons, arguments and evidence that they could use to convince others (CR1) or of which they were convinced (CR2), especially if there were conflicting views among them.

It was surprising that the study found that the critical responses in relation to CR1 (to debate and convince others) and CR2 (to enquire and be convinced) were equally apparent and evident in open-minded students. Such observation revealed the complexity of understanding students as learners in this context and the difficulty in understanding their responses without looking at the student and the learning context as a whole. Moreover, arguably personal stances on conflict and critical responses were unique elements for the study, which has yet to have similar studies

to compare, contrast and infer to. This observation drew my attention to the need to analyse the relationships between the identified findings in the study and generated the following findings, as considered next in section 8.2.5.

8.2.5 The congruent and incongruent relationships within student learning and student profiles

Drawing from the literature on constructivist learning, particularly Biggs's (1999) 3P model, and questions raised about the interrelationships between the 3Ps in the model (for example, Prosser and Trigwell, 1999; also discussed briefly in Chapter 1 and more fully in Chapter 7), the study used the matrices and student profiles to explore possible potential relationships between the identified findings, i.e. congruent and incongruent relationships (as considered in Chapter 7). The study found that some relationships can be identified and linked, but it was not an easy task. In brief, it was not easy to explain particular relationships by examining the matrices alone. Further testing and constant revisiting of the students' profiles were required to understand the relationships.

Subsequently, the study continued to examine these relationships by delving into five particular students' 'worlds' in the context of group learning to demonstrate the relevance and application of student profiles in the study. As discussed in Chapter 7, congruent relationships can only be explained or deduced after taking account of the individual student profiles.

The complexities inherent in student learning are still a 'black box' hidden in the learning process (Brockbank & McGill (1998. P.65). The inference drawn from the complexity mentioned was that individual learning experiences were unique for any learner, rather than being characterized by shared elements. This is consistent with the constructivist view of learning, which is the position the study takes, which suggests that learning is characterised by an individual within specific social context.

This is an important discovery, placing students as the central players in learning. This is particularly relevant because the study recognises the personal stance students bring to learning. Although the stances identified were limited to situations

where students faced conflict in the context of group learning, if it is considered in a wider perspective, the stance can be explored in relation to learning: this is the original intention that Salmon (1989) introduced.

In addition, in Chapter 6, the study also identified the stance on the 'correctness of answers' during the interaction and discussion in group learning. The study found that some of the students had particular ideas about the correctness of the answer for the FFM assignment. Such a stance is also possibly related to students' epistemology. Students were looking for a right answer, which implied that there was a wrong answer 'out there'. Such a stance relates to Perry's (1970) dualistic view of knowledge or Baxter Magolda's (1992) absolute way of knowing. The epistemological dimension is closely linked with critical thinking. In Chapter 2, Baxter Magolda's (1992) ways of knowing were discussed and she points out that critical thinking is only possible with the development of epistemology.

8.2.6 Summary of findings and conclusion

This study was centrally informed by the constructivist model of learning and particularly refers to Biggs's (1999) 3P model. The analytical framework was principally adapted from the 3P model, which brings in the relevant and unique components within the Presage, Process and Product factors in the model to meet the research objective of the study, i.e. to enquire into postgraduate accounting and finance students' perceptions of critical thinking in the context of group learning.

Drawing from the discussion above, after examining the intricacies and interrelations of the identified findings, first, this study reported the significant variations identified in postgraduate accounting and finance students' personal stances on conflict; their perceptions of critical thinking and group learning; their orientations towards group learning, motivations and critical responses in the context of group learning. Next, it was evident that group learning brought potential contributions and opportunities for students to engage in critical thinking. Lastly, the study discovered the complexity in determine or exploring the potential relationships among the identified stances, perceptions, orientations and responses in this social context of learning.

The findings identified in the study underline the central role that students play in critical thinking and learning, both individually and socially. The idea of the student as learner is not foreign to the literature. The constructivist model of learning (see, for example, Ramsden, 2003), in fact promotes student-centred learning, which places the focus back on students. According to Jarvis (2006), learning is the process by which the self develops: "I learn to be me" (p 50). Jarvis argues that learning is about the person who learns (ibid, chapter 2). In Jarvis's (2006) view, there is no comprehensive theory of human learning, simply because, while it is possible to consider all possible elements in the learning process, it is still not possible to fully understand the influence of individual variables that fully explain every aspect of human learning (ibid, p.194)

This is exactly what the findings revealed and is the conclusion reached in this study. If *x* is "the most significant element" of *y*, it does not imply that *x* represents the entire phenomenon. It is not the relationships that are ultimately important to understand students' learning in the context of group learning: it is the students as individuals and the contingencies of their specific context.

8.3 The contributions of the thesis

This study has laid a valuable foundation of knowledge of postgraduate accounting and finance students' perceptions of critical thinking in the context of group learning. This thesis seeks to make several modest contributions to the development of knowledge and the existing body of research in the field, which are considered below.

8.3.1 Contribution to theory

The contribution to theory refers to the development of the analytical framework of the study, which is adapted from the 3P model. This framework has been utilised in this study for the first time. Particularly, the framework sought to re-contextualise the existing 3P model (Biggs, 1999) by considering different components within the three Ps (Presage, Process and Product). The framework not only met the research

objective, enquiring into the students' perceptions of critical thinking in the context of group learning, but also drew out many other exciting findings such as the perceptions and orientations of group learning, stances, orientations to group learning and critical responses. In addition, this study utilised the framework to test the congruent and incongruent relationships that were recognisable and interpretable, as suggested in many empirical studies with regard to the 3P model. In other words, the model was also applied in a new context, testing a theory in a new setting and showing the applicability of the adapted model to a new situation. Hence, the thesis makes a contribution to theory by developing and utilizing the analytical framework for the provision of original knowledge and evidence.

8.3.2 Contribution to empirical literature

This study also makes a contribution to the empirical literature, because it is evident that there is only scant research exploring students' perceptions of critical thinking, particularly in relation to the context of group learning. This was highlighted n Chapters 2 and 3, which focused on perceptions of critical thinking from the students' perspective. Moreover, the literature review also shows limited work with accounting and finance students at the postgraduate level. Similarly, it is evident that empirical studies that examine all the three key foci of the study, i.e. perception, critical thinking and group learning, are rare in the literature. Besides, the students' stances were important findings identified in the study, offering a contribution to the literature on student learning. This is very different from the critical thinking 'dispositions', as stance refers to the position students 'take up in life' (Salmon, 1989, p.231). The constructivist model of learning within HE often examines and discusses the area of perception in teaching and learning; 'stances' has not been the word used or the emphasis given so far in the literature.

As a result, the thesis makes a modest contribution to the empirical literature. Specifically, it adds to an expanding literature on the students' perceptions of critical thinking in the context of group learning. This study hopes to provide insights into how postgraduate accounting and finance students perceive critical thinking in their learning experience, particularly in the context of group learning.

8.3.3 Contribution to the accounting professional and accounting academics

Following from the contribution considered above, this study contributes to knowledge in an academic perspective, because the current issue of postgraduate accounting and finance students' perceptions of critical thinking and their relationship to group learning and other background variables has not previously been researched.

Particularly, it offers a contribution in understanding how postgraduate accounting and finance students relate their learning to the social context of group learning. In the immediate academic context, students' engagement in critical thinking may be encouraged by interaction and discussion in the context of group learning. Especially when there are alternative points of view expressed in group learning, students are encouraged to consider 'critically' these alternative views and convey their opinions with sound consideration and careful deliberation. In other words, it makes a contribution to the professional and academic spheres of accounting that is of pedagogical importance by directing their attention to the pedagogical role of group learning with critical thinking and the importance of realizing and understanding that it is the students as individuals who learn. More precisely, the study proposes that attention is paid to students as learners in any learning experiences, rather than the components of learning in the process. In other words, it is important to see that it is the students who think critically and learn.

To consider this contribution, the findings and the context of the study are drawn together to set out the implications and recommendations for pedagogy. In the next section, the contribution to the professional and academic spheres of accounting is deliberated and reflected upon more fully, by considering how the contribution is translated to the recommendations for pedagogy. With this in mind, this particular contribution then sets out the implications and recommendations for pedagogy, especially for policy-makers and academics both in higher education and in professional accounting education.

8.4 Implications and recommendations for pedagogy

This section attempts to answer the 'so what' question posed to any research study. Ultimately, the research objective of the study is to enquire into postgraduate accounting and finance students' perceptions of critical thinking in the context of group learning. Clearly this is of interest to policy-makers and educators in HE and professional accounting education who are involved with accounting and finance students. Therefore, it also intends to see how these findings can be relevant and beneficial to the accounting professional and accounting academic, especially the stakeholders of HE and professional accounting education.

As discussed in Chapter 1, it is common to see critical thinking as part of the learning outcomes in the programmes and module specifications in many HEIs. Similarly, the role of critical thinking is equally important and evident in the professional accounting literature: for example, the Pathway Project (Ben et al., 2012).

The findings of the study are likely to be of use to policy-makers in HE and professional accounting education. The findings provide understanding of critical thinking and group learning from the students' perspective which may inform policy makers in HE and professional accounting education, such as the QAA and IFAC, in terms of drafting statements in relation to critical thinking and group learning. For example, some students engage in critical thinking in individual learning; such understanding warrants some emphasis on critical thinking in self-study in drafting documents and statements. Similarly, the study reports that group learning provides the contextual conditions for critical thinking and brings potential opportunities for students to engage in critical thinking. Therefore, policy statements might draw more attention to group learning. By contributing the research findings to both HE and professional accounting education, the study will be of relevance.

Educators, especially accounting academics, might consider the significant variations in the ways in which students describe their perceptions, orientations, stance, critical responses and motivation before they aim to promote and encourage critical thinking in learning. The study also informs educators of the pedagogical role of

group learning with critical thinking, particularly the constructivist learning and constructive controversy proposed in the study. Educators should examine and justify their reasons for using group learning in relation to critical thinking and consider the student as an individual learner before employing group learning in the classroom.

One of the problems is that many studies in the literature suggest 'step-by-step' approaches to implement group learning and the development of critical thinking, such as cooperative learning texts from Johnson, Johnson and Holubec (1993) and Kagan (1994). These texts provide details of how to structure cooperative learning/group learning in the classroom. Group learning has been claimed to be a solution for many issues in students' learning, including critical thinking. At the same time, some studies (Gibbs, 1994; Cottrell, 2001) suggest that critical thinking is transferable and can be learned. I do not dismiss those claims and values from the findings and contribution to the literature of critical thinking and group learning. Nonetheless, the concern is that some educators may advocate the use of group learning in **any** learning settings with simplistic views of group learning and critical thinking.

Employing group learning and promoting critical thinking in the classroom should not be understood as a simple task. This study employed group learning as the contextual condition for critical thinking by adopting the theoretical framework of cooperative learning as a guide. At the same time, the case study was also used to provide the mediation for students to engage in critical thinking. Chapter 2 and 3 considered the practices and research in relation to critical thinking and group learning, and the literature review showed that it was well accepted that group learning and case study are useful strategies and instruments for cultivating critical thinking in students' learning. Nonetheless, it is evident that however well organised and thoroughly thought through the group learning and case study, students ultimately have the sole ownership of how they learn in the environments set out for them. This is reported in the findings, through the variations of perceptions, responses and experiences drawn out from this social context of group learning.

As a result, drawing again from the findings and contributions made for this study, the recommendations for pedagogy are directed to the constructive-development pedagogy, with particular reference to Baxter Magolda's (1999) text.

The constructive-development pedagogy

Constructive–developmental theories are an extension of the work of Jean Piaget (1971): therefore, constructive–developmental theorists suggest that as we interact with our environment, we make sense of our experience through the process of assimilation and accommodation. Through this interaction and negotiation, our meaning systems gradually develop and become complex (Helsing, Drago-Severson and Kegan, 2003). One key underlying assumption of this constructive–developmental theory is that it focuses not only on the changes within the individual, but also on the context in which the individual is situated (ibid, pp. 162-163). Therefore, the constructive–developmental pedagogy is relevant and appropriate for this study

The recommendations are drawn from Baxter Magolda's current work on self-authorship (1999). Baxter Magolda constructs a pedagogical approach based on three principles: (1) validating students as knowers, (2) situating learning in students' own experience, and (3) defining learning as mutually constructing meaning within the constructive–developmental pedagogy.

1. **Validating students as knowers**: Students are acknowledged and respected for their capability to hold a view; the tutors recognise their current understandings and support them in explaining their current views. This helps students to view themselves as capable of learning and knowing. Baxter Magolda suggests that tutors adopt a caring attitude toward students and take an interest in their lives. She states that "it is a 'welcoming acknowledgement' of who the students are that enables the students to risk travelling to more complex ways of making meaning" (Baxter Magolda 1999, p. 68).

   To achieve this, tutors may consider the following:

- Get to know their students: possibly the first thing is to know their names.
- Build connections with the students by talking ***with*** them, rather than talking ***at*** them, so that they are not intimidated and feel comfortable to voice their opinions and views.
- Consider rewarding students for taking risks in expressing their thinking, views and perspectives.
- When using group learning, it is essential to build trust among the students. Tutors must facilitate this by emphasising that everyone's ideas are respected and valued in group learning.

2. **Situating learning in students' own experiences**: This helps to validate the student as knower by welcoming their experience (students' life experiences and meaning-making) into learning (ibid, p.68). This means using students' experience, life and current knowledge as a starting point for learning.

   To achieve this, tutors may consider the following:

   - Linking the subject with real life examples. For example, use their working experience and work placement to connect their learning.
   - Using an appropriate case study that matches with students' current knowledge and experience.
   - Considering using a reflective report and learning journal as part of the learning strategy, to allow students to tell their story in their learning journey and experience.

3. **Defining learning as mutually constructing meaning**: This requires both tutor and student to share the learning process, making them both active players in learning. Baxter Magolda (1999) says that the underlying assumption in this principle is that an educational interaction that will shape both students and tutor results from a dialogue in which both voices are considered (ibid, p.70). She suggests that tutors move away from an authoritative role and share the leadership and knowledge creation with students in learning. This will help in validating the student as knower as well.

   To achieve this, tutors may consider the following:

- Emphasise the tutor's role as facilitator and co-learner in student learning.
- Consider using learning contracts with students, allowing students to take ownership and leadership in their learning.
- Consider group learning that promotes positive interdependence by emphasising group effort rather than individual achievement.

8.5 The limitations of the present study

Methodological limitations

These finding are generated from the students' perceptions and experiences from a particular context. Therefore, the reliance on data from this particular context is subject to the limitation of transferability (Guba, 1981). To overcome this limitation, the study has adopted a thick description approach throughout the methodology, analysis and interpretation chapters. By doing so, I enhance the possibility of transferability to any study in relation to critical thinking and group learning in similar contexts in other institutions. However, the context is not unfamiliar to many accounting and finance programmes. The use of case study and group learning and the aims of encouraging students to engage in critical thinking are not something totally uncommon in HE institutions. However, the general use of case study in relation to critical thinking and group learning must also be carefully considered. The nature and quality of the case study is one issue; students' attitude toward case study is another. It is not easy to equate case study with the students' willingness to engage in critical thinking.

Another limitation is that the type of self-reported data gathered in the interviews is potentially subject to bias, which should be noted as limitations:

1. Interviewees may not be able to give an accurate response due to poor memory;

2. When asked for their experience in a particular setting, event or context, interviewees are recalling events that occurred at one time as if they occurred at another time; and
3. Interviewees may provide responses that make them look better. For example, students may tend to portray themselves as active contributors in the group.

Being aware of such limitations and bias in self-reported data, the use of individual reflective reports (IRR) as an audit trail was helpful to a certain extent. Moreover, the analytic process involving the use of student profiles also mitigates these biases and limitations.

The other limitation is time. Students' perceptions, meaning-making, responses and experiences are elements that require longitudinal study. The limitation lies within the assumption that these elements require time to emerge and establish. However, this study is exploratory and qualitative in nature, forming a stepping-stone for future research. Though the study only covers a short period of investigation and exploration into the students' life world, it is argued that their responses and comments were reflections of their experiences in that particular situation. Stripping away the context provides potential areas for future research.

The fact that only one researcher conducted the study is another limitation, because it may be subject to personal bias, thus affecting the credibility of the study. This is unavoidable, as the study was a self-funded Ph.D. project which was subject to limited resources, especially financial support and human resources such as research assistants. However, the study was discussed frequently with two supervisors and with peers; moreover, the persistent engagement in data analysis and interpretation by bracketing and the empathy approach, and the active search for deviant cases in the data to return voices back to the students, helped to enhance the credibility of the study, as well the confirmability issues.

Lastly, there may be some problems associated with group learning. For example, one common problem associated with group learning is that members may not be

prepared for or be able to attend group meetings due to work or family commitments, especially among mature students. The free-rider issue and different work ethics among individuals were evident in the study, drawing from the students' comments in the interviews. As a result, the administration in terms of group formation and group dynamics cannot be ignored. This reinforces the point mentioned above, relating to professional and academic pedagogy, that the pedagogy and implications of using group learning with students must be carefully considered.

In conclusion, future investigations or the extension of this study to other contexts or settings should take all the possible limitations highlighted above into consideration.

8.6 Implications and recommendations for future research

Following what has been considered above, the intent of this study, besides the research objective, is to explore and examine how the relationships between critical thinking and group learning and other findings in the study are of relevance and benefit for pedagogy. Understanding what students bring to their learning - particularly their stances, perceptions and responses – will help researchers to identify and narrow down specific areas for further investigation and examination. As for educators, such as accounting and finance educators, it means that they will know how to prepare and deal with different students in their classes in a better way. As a result, the recommendations for future research are revolving around students' learning and teaching practices.

The findings reinforce the investigation of personal stance in students' learning, since there is not much work in the literature pertaining to this area. As mentioned above, research into student learning often examines and discusses the area of perception in teaching and learning. 'Stances' have not yet been given emphasis in

the literature. The study, therefore, identifies this as an important and potential area for future research with regard to student learning.

The study found a lack of expression about the dispositions dimension from students' comments. This offers another potential area for future research so as to examine the understanding of critical thinking dispositions with accounting and finance students. An in-depth examination about their understanding and perceptions in this area would help the educators and students to understand the ideal of being a critical being (Barnett, 1997).

The development of the adapted version of the 3P model, i.e. the analytical framework of the study, provides many potential areas for future research. The framework considers that different components within the 3P model offer scope for future adoption in researching student learning in the context of group learning. As mentioned above, components such as personal stance offer the potential for future study. Together with the context set out for the study, particularly the social context of group learning, there are many potential areas for further work in respect to this framework, for example:

1. By narrowing down the investigation to a specific component from the framework. For example, research could be conducted by focusing on the personal stance only.

2. The particular relationships between the components within the framework. For example, future study could be undertaken to investigate the relationship between the stance and critical responses.

The participating students comprise both UK and international postgraduate students. Future research could be extended to different levels of study (undergraduate); different genders; different countries; different types of students studying accounting and finance modules or programmes, such as business students and pure accounting stream students. Similarly, the framework of the study could be extended to different levels of study, different types of students, different countries and different disciplines for future research.

Although not an explicit goal of this study, students' comments hinted at their stances on the 'correctness' of the answer. This raises an interesting question about the relationships between these stances and critical thinking. In other words, might there be any connection with students' epistemology (Baxter Madgolda, 1992)? Future research might benefit from an exploration of the relationship between the two.

Lastly, future research might consider adopting an alternative methodology to the one currently employed here in order to gain greater insights. For example, a mixed-method strategy involving a quantitative approach might provide useful insights.

8.7 Concluding Thoughts

This study of critical thinking and group learning with postgraduate accounting and finance students is illuminating in many ways. It points out the necessity for a concerted effort from many parties, especially the educators and students, focused on critical thinking and group learning, which can yield a greater engagement in critical thinking and offer potential benefits for both educators and students. It also shows how difficult it is to have a sustainable result in relation to these two core research subjects. This is evident in the university in which the study was undertaken, where the learning outcomes specifically drew out the requirement for critical thinking, and the efforts in making students aware of the importance of critical thinking and group learning in the FFM module. What this tells us is that there are more areas to be considered if we truly want our students to become critical thinkers.

We must first understand how students construe critical thinking and group learning. Drawing from the significant variations identified in the study, we hope to know how they would respond and behave in their learning. In this manner, educators are more informed about the stances the students bring to the learning, particularly concerning critical thinking and group learning. Consequently we hope to know how

critical thinking can be fostered in their learning. In this sense, educators, therefore, are the agents or mediators to encourage students to engage in critical thinking in learning.

Unfortunately, it appears that we don't yet know *all* about critical thinking and group learning. Educators using group learning (and case study) in relation to critical thinking must examine the tool(s) carefully and strategically in their instruction.

To sum up, it is hoped that the findings, discussion and recommendations presented in this thesis may draw other researchers' attention to further investigate the potential areas proposed above and expound them. The potential areas for future research may be challenging, but the result will be worthwhile and rewarding for educators, students and stakeholders in HE and professional accounting education.

"Learn from yesterday, live for today, hope for tomorrow.
The important thing is to not stop questioning."
— Albert Einstein (Relativity: The Special and the General Theory)