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# **Investigating learning related factors as antecedents of first year university students' non-completion: a phenomenographic study**

Thesis submitted by

**Susan Mary RUSSELL**

B Ed., M Bus.

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For the degree of Doctor of Philosophy

In the School of Education,

James Cook University

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## **The Contribution of Others**

I readily acknowledge the contribution of Professor Val Klenowski who guided the preparation of the proposal for this thesis. Further intellectual guidance and direction during the writing of this thesis was provided by Associate Professor Lynette Henderson. Finally, Dr Josephine Balatti made a tremendous contribution to the design and production of this thesis, and along the way provided valuable academic input.

I received advice on the bivariate statistical design used in the research from Professor Danny Coomans, while Professor Michael Ramsden also furnished advice about phenomenographic analysis of survey data. Dr Paul McPhee conducted the statistical analysis using a contingency table program designed for that purpose.

Three internal School of Business reports relating to first year retention were referred to in this study. These were based on surveys designed and implemented by the SOB Teaching and Learning Committee and, as a member of this committee I contributed to these reports. The first report referred to an exit telephone survey of withdrawals conducted by the SOB. The second report by the Chair of the Teaching and Learning Committee, Dr Pierre Benckendorff, investigated the skills discovery program implemented to address first year attrition. The third report commissioned by the Teaching and Learning Committee was the first year experience report, which was conducted by Ms June Bode, a staff member of the university Teaching and Learning Development Unit. I thankfully acknowledge the contribution of fellow members of the Teaching and Learning Committee in providing the impetus for such investigation as well as providing funding for the initial surveys to be conducted.

Retention data used in the study were obtained from Faculty Office records, with the kind assistance of the Faculty Registrar.

## **Declaration of Ethics**

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council (NHMRC) National Statement on Ethical Conduct in Human Research. The proposed research study received human research ethics approval from the JCU Human Research Ethics Committee Approval Number H1993 in 2005.

## Acknowledgements

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In the final stages, Dr Josephine Balatti provided the impetus and timely advice needed to get the thesis to completion. Jo's patience and endurance in supervising from a distance of many thousands of kilometres was always encouraging, especially at times when I thought the goal was just out of reach.

These busy and uncomplaining women always found time to cheerfully provide help and support. So to Val, Lyn and Jo I offer my sincere gratitude for your considerable expertise, dedication and generosity.

I also acknowledge the support and forbearance of my family who walked this long journey with me with patience and good humour.

## Foreword

The genesis of this research lay in my interest in how students learn, and in particular how they learn in their first year at university. It arose from a need to explore the reasons for the high attrition rate in first year Business. My colleagues' attitudes towards this issue often reflected a certain ingrained culture of tolerance towards attrition because entrance scores were historically low and, as a corollary, high attrition rates might be expected. Research has shown that if students with low entry credentials are supported in the initial period at university, the likelihood is that they will stay. However, Business students were not staying long enough to receive support. Some exited even before the first census date. Although the literature was awash with factors that impact first year student retention, there was almost no mention made of learning in that process. So I became curious about the possible role that certain aspects of learning might play in students' persistence in their first year, but firstly I had to investigate how first year students learn and what they understood about learning.

Academic staff said students withdrew because they were 'academically unprepared'. This led me to consider how 'academically prepared' might be defined to include learning. While much is written about learning styles, I wondered whether it was possible to describe a particular approach to learning which students acquired prior to entry that was unique to first year commencing students, and whether this impacted both success and retention.

A literature review established that there was a wide range of factors which might influence academic preparedness for commencing students. I was particularly interested in how Nelson et al. (2006), described commencing students as arriving at university with "baggage and expectations, regarding which we have a duty to be cognisant, as well as varied levels of preparation and doubts about university life" (p. 2). A variety of possible factors were raised which might determine learning preparedness and ultimately impact retention. Because such factors are invariably complex, there was a likelihood of relationships between the factors. Thus the research led me down many intriguing pathways and, as the research unfolded, small pieces of the puzzle began to fall into place.

In essence, I found that first year entry students do have a unique and different profile as learners which can affect the success of their first year. Students need to recognize this, and their teachers also need to recognise this as a crucial link in students' ability to stay and succeed in their first year at university.

## Abstract

This study investigates learning variables or factors considered to contribute to the preparedness of a cohort of 272 commencing business students to undertake their university studies and to stay at university. These variables were *prior learning experience*, *approaches to learning* and *perceptions of the learning context*, in this case of the core subject *Business Communication*. The study investigated how these factors related to academic preparedness and success and their impact on retention. It also investigated whether students changed their approach to learning and perception of the learning context over their first year, as evidence of transformational learning.

A phenomenographic methodology was used to reveal variation in the way students perceived and understood learning and their approaches to learning, and also to examine the qualitatively different ways students perceived the concepts, content and aims of *Business Communication* before their university classes began. Data were collected by survey as students entered university, and also by end-of-year interviews of 61 of those originally surveyed, so that evidence of the extent of transformations in these learning-related variables over the span of their first year experience could be determined.

The results of tests of a set of skills considered by academic staff to be necessary for successful study of business subjects were used as indicators of *prior learning*. These were the results of numeracy, literacy and information technology skills tests. Analysed data from the written survey provided students' *approaches to learning* as well as their *perceptions of the subject*, while students' end of semester results for *Business Communication* was used as an indicator of *learning outcomes*.

The cohort of first year business students entered university with varying perceptions of the subject, prior learning experiences, knowledge skills and approaches to learning which impacted their outcomes as well as their decision to stay at university. The analysis of survey and interview results produced a wide range of 22 categories describing students' approaches to learning and 10 categories describing their perceptions of their learning context. The cohort included deep and surface learners, and an intermediate group termed '*emergent*' was also identified and its learning characteristics described. Surface learners with pass and fail grades were of concern with respect to non-completion because they commonly held poor understandings of learning and learning approaches and inadequate perceptions of the subject. Furthermore, they had difficulty in reflecting on their learning and lacked the necessary

language to describe their learning. Students with these characteristics were given the term '*precariate*' in this study.

Learning-related variables were analysed using a bivariate statistical analysis. Positive relationships were found between the following pairs of learning-related variables: skills test results and final grade achieved for the business subject; approach to learning and grade achieved; perception of context and grade achieved; skill test results and approach to learning and approach to learning and perception of context. This study demonstrates that the reasons identified for first year non-completion are varied, complex, and often related, and highlights the need for a new narrative about retention: one that refocusses on learning factors and student preparedness.

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## CHAPTER ONE: INTRODUCTION

### Background

Universities commonly grapple with first year student success rates and retention. This exploratory study arose from a need to provide a better understanding of how first year student performance, progress rates and retention can be improved in a School of Business in an Australian regional university. In this respect, it is hoped that its findings will inform the retention discourse and improve first year teaching and learning practice by promoting scholarly dialogue amongst academic staff about ways to enhance the ability of commencing students to learn at the appropriate tertiary standard. As a consequence, its outcomes should improve the likelihood of students' success and persistence, and enable strategies to be developed for successful completion rates and to stem the high attrition. The principal underlying theme of this study is the nature of first year students as learners, and the role that various learning-related factors play in outcomes and retention. The research is firmly grounded in improving learning as a major factor in retention, and has implications for teaching practice. Most importantly the research highlights the need for a new narrative about first year retention, one that focuses on learning factors.

The key aspect of this study is first year learning specifically related to students commencing their business degree at university. Learning is used as the vehicle for investigating the reasons for high attrition in first year business students. It is research referred to by Prosser and Trigwell (1999) and Ramsden (2003) as student learning research as it adopts the student perspective to explore factors contributing to variation in the quality of students' learning outcomes. Although much has been written in the research literature about the causes of first year retention, this study argues a pivotal contributing role that learning plays in first year retention. In departing from the extensive range of student-based causes for withdrawal offered in the literature that are discussed in the following chapter, the key aspect of particular note here is the impact of learning factors such as prior learning, approaches and perceptions of the learning context on students' decision to stay or leave. As the literature review indicates, learning is a complex construct of sometimes problematic and often inter-related variables. However, for the purposes of this study, the research was limited to investigating the impact of a small number of learning-related factors considered to be relevant in the particular business context, and the relationship of these factors to outcomes and retention.

The research lens was directed particularly at certain critical learning-related factors thought to affect academic preparedness and, ultimately, retention. These critical dimensions of learning included prior learning, approach to learning, perception of the subject and learning outcomes rather than the more usual factors connected to first year retention such as student engagement, motivation and sociological and personal factors.

The theoretical perspective of this study was guided by the underlying principles of phenomenography, which has a defined theoretical framework and lexicon, and a methodology which is interpretist, subjective and hermeneutic (Prosser & Trigwell, 1999). Because phenomenography proposes that change is an indicator of learning, this study also inquired into whether students changed in aspects of their learning over their first year, and the extent of that change.

### **Aims of the Research**

The three aims of the study reflect the context which gave rise to this research. Firstly, the study responds to the urgent need to address high first year attrition rates. Secondly, it investigates how the mix of learning-related variables of entry students, that is, prior learning experience, knowledge and skills, approach to learning and perception of the subject *Business Communication*, related to final grades for that subject and, most importantly, whether these variables affected student retention. The outcome of this enquiry would also produce a profile of the cohort as learners, which is important in order to understand aspects of their learning characteristics which may have an impact on persistence.

Finally, this study aims to address gaps in the literature. According to Cumming et al. (2006), there is a clear lack of evidence on the impact of factors such as aspirations and perceptions of learning on transition student participation. Although there is a surfeit of first year retention literature, there is relatively little on the impact of entry learning-related variables such as perceptions and approaches of learning on first year success and retention, and how commencing students understand learning and their approaches to learning in a tertiary context. Without research-based knowledge of how students understand learning and their learning approach, the strategies which teaching staff design to address first year retention might not engage the central tenets of learning in a way which enables improvement in learning and student outcomes and persistence. Additionally, although there is an increasing body of research using phenomenography, there are very few phenomenographic

studies of first year business students, and so the exploratory nature of this study will contribute to that literature.

### **Precursors to this Study**

As a starting point, this study drew its inspiration from the research and scholarly literature of Prosser (1994, 1997) and Trigwell (1996) on the importance of understanding students' perceptions of context in relation to their approaches to learning. This was buttressed by Prosser's (1993) notion that the way students approach their studies is related to the way those students perceive and experience their learning context, which is, in turn, related to their prior experiences of learning. It also builds on the scope of Prosser and Trigwell's (1999) learning conceptions set which were used in this study to categorise the approaches to learning of first year Business students, and to trace the relationship among their approaches to learning, perceptions of learning context and learning outcomes. Prosser and Trigwell's approach was useful in clarifying the range of phenomena which impact learning and the complexities of their relationship. In addition to Prosser and Trigwell, this study also ascribed to the research of other researchers whose pedagogy was essentially phenomenographic such as Miller (1989), Biggs (1993) and Ramsden (2003). Their research on the relationship between prior learning, approach to learning, and perception of the learning context was extended in this study to probe the impact these factors might have on student outcomes. Their research conveyed the possibility that retention might also be linked to learning-related factors.

The second pivotal influence was the phenomenographic learning theories expounded over the past thirty years by a number of educational researchers. The most prominent of these include Akerlind (2005); Booth (1992, 1997); Bowden (1990, 1994, 1996, 1998, 2005); Dahlgren (1995); Dall'Alba (1994); Marton (1981, 1986, 1992); Säljö (1995, 1997) and Walsh (1994). Bowden (2000) contended that phenomenographic research is always about studies of learning and its origins lie in an educational context. A phenomenographic paradigm has been used by educationalists to investigate similar aspects of learning to those of this study. Phenomenography was a compelling influence because its research often involves establishing relationships between ways in which students experience and engage in learning, and it was thought possible that this relationship might also extend to outcomes and retention. Phenomenography also posits that learning results from change, which raised the possibility of enquiring into whether entry students changed in aspects of their learning

over their first year at university, and to observe whether this change impacted outcomes and perhaps retention. In addition to these factors, this study employed phenomenography as its prime methodology because, as Marton and Säljö (1976) noted, the original purpose of phenomenography was to improve learning.

The third seminal influence was the scholarship of Meyer and Land (2003) and their notion of a “threshold concept” (p. 373). This had appeal in its contribution to the description of first year learning, particularly when this study employed learning as a threshold concept. As the research progressed and it became obvious that certain students experienced difficulty with learning, it appeared that Meyer and Land’s troublesome threshold concept could be extended to describe the difficulty students were experiencing with learning.

In addition to the influence of these three sources, the study was also informed by the substantial body of literature about student learning, although much of this was generic rather than applying specifically to first year undergraduates. In the first instance, the literature refers to the widely recognized surface and deep learning categories (Marton & Säljö, 1976), and the impact of deep and surface learning approaches on learning outcomes (Säljö, 1984). Of equal importance was the body of research around transformational learning. This included research by Bowden (1990), Gibbs, Morgan and Taylor (1984), Land (2006), Marton, Beatty and Dall’Alba (1993), Mezirow (1984, 1991), Merram and Caffarella (2003), Van Rossum and Schenck (1984), and also Trigwell and Prosser (1996b) who captured the essence of transformative learning in this description:

The purposes of teaching are to increase knowledge through the transmission of information to help students acquire the concepts of the discipline, develop their conceptions and change their conceptions (p. 278).

The concept of transformative learning, which is a tenet of phenomenography, was considered central to understanding the practical implications for enhancing retention. Therefore, this study built on the concept of transformative learning by studying the ways students changed their approach to learning and their understanding and perception of the learning environment over the course of their first year at university. Essential to this approach was the proposition that for students to be successful in their first year at university and persist, they must enter a transformative process and develop tertiary learning skills.

## The Research Questions

This study began by using Prosser's (1994) research model premised on the tenets of phenomenography, to investigate how prepared for university a group of first year commencing business students were in the way they approached their learning and understood the subject *Business Communication* (BU101). This core Business subject focuses on the key role of various forms of communication as an essential business tool.

The study further explored the extent of change in students' learning as an indicator of the extent to which they had attained the necessary tertiary learning skills to enable the attainment of successful outcomes, and to complete the course. Finally, the study investigated additional dimensions of the learning experience of the first year cohort in an attempt to illuminate the factors affecting outcomes and retention (Question 3). The three research questions were:

- (1) *How academically prepared are students to begin their first year of university studies in regard to three factors: prior learning experiences, approach to learning and perception of the learning context?*
- (2) *Do students change the way they view their approach to learning and their learning context over the first year?*
- (3) *How are the factors of prior learning experiences, approach to learning and perception of the learning context related to (a) the learning outcomes of a group of first year business students and, (b) retention?*

These questions contain certain underlying assumptions which require clarification.

There is a basic epistemological assumption in the first question: *How academically prepared are students to begin their first year of university studies in regard to three factors: prior learning experiences, approach to learning and perception of the learning context?* that prior learning experience, approach to learning and perception of the subject comprise the set of requirements for academic preparedness. Such factors are common to a phenomenographical research epistemology, and were chosen as a focal point for this study because they provide an object of enquiry in which the awareness of learning can be investigated (Marton & Säljö, 1976). More specifically, Question (1) is similar to questions commonly posed by Prosser and Trigwell (1994, 1997, 1999) in the design of their phenomenographic investigations into learning in various university disciplines. In choosing this question, no presumption was made that other factors related to learning such as, for instance, demographic, socioeconomic or cultural factors, are any less important than those

chosen in this study. The focus of enquiry was simply narrowed to within-the-student learning related factors such as understanding and perceptions of learning and the learning context - which is the subject *Business Communication*.

The second question: *Do students change the way they view their approach to learning and their learning context over the first year?* underscores the basic pedagogical assumption that learning results in change, an assumption which finds support in the literature and is discussed in greater detail in the following section. The implication is that when students reflect on their learning they will (or will not) find that they have changed. The notion that learning represents change reflects the phenomenographic definition of learning, (Bowden, 1990) where it is referred to as transformational learning. It is relevant to the design and context of this study that transformational learning describes learning in which students challenge their assumptions, and in so doing facilitate change in their set of understandings and knowledge about learning.

There is an assumption implicit in the third question: *How are the factors of prior learning experiences, approach to learning and perception of the learning context related to (a) the learning outcomes of a group of first year business students and, (b) retention?* that a relationship exists between students' prior learning; their approach to learning; their perception of the learning context; their learning outcomes and retention. However, no presumption was made that these factors are the only or, indeed, the prime reasons for student retention.

In addressing these three questions the researcher sought to determine whether there was any relationship between these factors which might have an effect on retention. The overwhelming image to emerge from the findings presented is that the various dimensions of learning were both multifarious and complex, and in most cases related. Consequently understanding these relationships provided insights into how first year students learn and how this affected both outcomes and retention.

### **Key Aspects of the Study**

There are several key aspects of this study, the preeminent being learning and the role it plays in first year retention. In addition to precursory factors such as preparedness and prior learning, other components which are proximal to the study include transformational learning and troublesome threshold concepts, and finally the relevance of developing a profile of first

year students as learners. All of these aspects contributed to an understanding of the nature of first year retention.

The study demonstrates that students enter an undergraduate Business course with varying characteristics and experiences of learning which affect their preparedness to study and their first year experience, including their decision to stay. With this in mind, its findings furnish academic teaching staff with a description of certain complex variables which impact the way students learn *Business Communication*. It thus provides a basis for a deeper understanding of the nature of their students as learners and, consequently, enables strategies to be designed for improved outcomes and student retention. It is through the lens of learning that aspects of the first year student experience such as their outcomes and the factors relating to retention are viewed. A key aspect of the study therefore is learning, and more especially learning as it is experienced by first year students.

The first question enquires into how prepared student are for their university studies. In this study 'preparedness' is considered to be synonymous with students' prior learning experience, which is defined as embodying the corpus of knowledge, understandings and skills with which students enter their university studies. They also bring to university expectations, beliefs and values, perceptions and orientation towards particular learning approaches. In this study prior learning is measured as the results of basic numeracy, literacy and information technology (IT) skills testing on entry, buttressed by additional information obtained from post course interviews.

It is reasonable to assume that prior learning, which includes basic skills competencies and other forms of learning experienced and developed before entering university, is central to learning and to the approach to learning that is adopted and, as one student remarked, *previous knowledge will allow you to progress quicker and learn more efficiently*. Biggs (2003) asserted that "it is what students do (or have done prior to entering university), which results in learning, and in the process their conceptions of their learning change" (p. 13). Furthermore, according to Barrie (2006), it is what "students bring to university which provide a minimum base to which can be added the discipline knowledge" (p. 223). Prior learning is therefore also a key aspect of the study.

Another key aspect is the nature of relationships between variables and their multi-dimensional data. The study examines Prosser's (1994) notion that the way students approach their studies is related to the way those students perceive and experience their learning context, and extends this approach to the relationship between these learning variables,

outcomes and retention. Probing such relationships was important in discerning the facets which constituted first year learning and in establishing a likely chain of associations of variables leading to outcomes and retention.

Meyer and Land's (2005) term "threshold concept" (p. 373) which denotes knowledge-specific concepts considered essential for understanding a particular subject, was adapted for use in this study, where learning was taken to be a threshold concept. In the context of the subject *Business Communication*, the threshold concepts were described as students' approach to learning and their perceptions held about the subject as they commenced university.

The study also proposes that because entry students can encounter problems in understanding and describing learning, their learning can become a troublesome threshold concept, which is, again, an adaption of Meyer and Land's troublesome threshold concept. Similarly, when students have difficulty in expressing their knowledge, understandings and ways of perceiving what the subject is about, this also represents a troublesome threshold concept. Using learning as a threshold concept and describing learning-associated problems as troublesome threshold concepts are both key aspects of this study, and mark a departure from the usual use of these terms in the literature.

The conceptual view of investigating first year retention in this study is somewhat different from the common approach in the literature. This approach is premised on the idea that factors connected to students' learning such as their approach and skills and conceptual understandings which they bring with them to university, are more fundamental and urgent than any discussion about their subsequent success at university, the extent to which they integrate and ultimately whether they stay or leave. In fact, the notion that is proposed in this study that entry students be treated as entry learners and their learning abilities, readiness and perceptions become the focus of attention for educators, is a rather different view from that espoused in the current literature but, nonetheless, equally cogent.

The final key aspect relates to the development of learning profiles for the cohort under enquiry. In the process of investigating the underlying factors contributing to retention considerable data were collected which were used to develop a profile of the cohort of students. This resulted in the production of a useful key outcome. In brief, the profile was produced by the synthesis of available data to describe students as learners entering the undergraduate Business degree program, and was complemented by reflections of their learning experience over the first year. Consequently, the profile that was of greatest

importance to the aims of this study and described in its entirety, was the profile of the group of students with an N (Fail) grade result who were found to be more likely to be at risk of exiting the course. With the wealth of available information to develop the individual profiles; their immediate use as a platform to promote enhanced teaching and learning approaches by first year practitioners and to inform the course review process, demonstrates a very practical outcome.

In general terms, and to paraphrase Punch (2005), “the study was proposed to proceed from a pragmatic approach of finding answers to urgent questions that needed to be addressed, and incorporating description as well as explanation” (p. 36). In reality, the key aspects of the study and its methodology produced a rich source of data comprising both descriptions of the learners and answers to the questions which framed the research. Ideally, the picture of first year learners which emerged from these profiles could be used by educators for the purpose of improving student learning and developing intervention strategies that would attract and support students to stay in the course and complete.

### **The Structure of the Thesis and Overview of Chapters**

This thesis is organized into seven chapters, beginning after the introduction with literature review and methodology chapters. These are followed by three chapters of findings which describe the three phases of data collection, namely: survey, interview and relationships between relevant factors from the data. Finally, there is a conclusion. In addition, a reference list and five appendices, including a definition of terms in Appendix A, (p. 287) are provided. In its scope, the thesis drew on three broad fields which were learning and the first year student experience of learning, retention and phenomenography. Because of the magnitude of this literature, these areas were refined to focus more specifically on research which was relevant in addressing the research questions that framed the aims of this study. An outline of each chapter follows:

Chapter 1: *Introduction*, provides a description of the purpose and precursors of the thesis and its scholarly context. The aims of the research are presented together with the research questions that are designed to provide structure and direction to the research. Key aspects of the research are indicated as well as the structure of the thesis which gives direction to its arrangement and development.

Chapter 2: *Literature Review*, includes an analysis of the literature of the broad issues that are embedded within the theoretical foundation of this study, namely the importance of

learning, phenomenography, the importance of relationships to learning and factors related to retention. The most important theme is that of learning, and several aspects of learning are reviewed including specific learning theories, approaches to learning and perceptions of the learning context, threshold concepts and troublesome threshold concepts and also learning profiles. The related areas of preparedness, persistence and retention are also investigated. Because this study employs phenomenography as its theoretical, methodological and research framework for examining the qualitatively different ways in which students experience, conceptualise, understand and perceive learning, a brief outline of phenomenography is included. The literature review demonstrates that there is insufficient research on the nature of entry students as learners to warrant serious consideration of learning-related issues in the retention discourse.

Chapter 3: *Methodology*, explains phenomenography as a research method and its context in education research, and how its methodological framework is used to address the research questions. A rationale is provided for using phenomenography, and its constraints and strengths as a methodology are noted. Most importantly, the chapter explains the way in which the phenomenographical categories of description of the learning factors are developed and analysed in the study, and the nature and variation of relationships between these.

Details are provided of the research design, the outline of the qualitative and quantitative approaches to analysis used, and the three phases of the data collection and analysis. The chapter situates the research model developed in this study against the background of its predecessors, most notably those of Biggs (1978), Ramsden (1988) and Prosser (1994). Thus it clarifies how this study contributes to previous scholarship and research on the nature of learning and the relationship between various learning variables. Finally, there is a discussion of the parameters of the study, its limitations and also its assumptions.

Chapter 4: *Phase one: Student Preparedness*, reports the results of the written survey of the cohort at commencement of their first year. The analysis of students' responses to two questions about their approach to learning and their perception of the subject *Business Communication* is reported and their findings discussed. A selection of concrete examples of what students wrote in answer to these two survey questions is used as a medium for exploring the variation in ways students thought about or experienced learning. These are shown in tables with details of the categories of description. Further examples are provided in Appendices B and C (pp. 299 and 310 respectively).

The focus of this chapter is to demonstrate the variation in ways that commencing students intended to approach their tertiary learning and the extent to which students understood what they were about to learn, because these were considered to be two critical factors in the ability to learn and be successful learners. The data reported in this chapter contributed to a profile of first year students as learners which is described in Chapter six.

Chapter 5: *Phase two: Change Learning*, reports on the results of the telephone interviews of a small cohort of the original survey group, who were interviewed at the end of their first year at university. The first four questions aimed to establish whether there was any change in students' approach to learning and their perception of the subject, which was important because this would indicate that change learning had occurred of the type which is important for retention to occur. Appendix D (p. 316) provides the Categories of description for change in learning. The remaining four questions were dealt with in Phase 3. For the purposes of comparability, the learning characteristics of students who completed the survey and those who completed the interview were compared per final grade achieved for the subject *Business Communication*. The two groups were found to have a similar profile, thus allowing some valid generalisability of results to be established.

Chapter 6: *Phase three: Relationships between Learning Variables, Outcomes and Retention*, is the third findings chapter and builds on results from the previous two chapters. It provides additional qualitative information from the last four interview questions. These include students' opinions of the importance of numeracy, literacy and information technology skills on their learning outcomes, details of their prior learning and reflections of their first year learning experience including problems encountered. Those students who withdrew were asked the reasons for their non-completion.

This chapter seeks to identify the complex nature and relationship between factors relating to students' learning and the way these may have affected their decision to stay or leave their university studies. The results of qualitative and quantitative analysis between paired sets of learning-related phenomena and outcomes demonstrated a relationship between the learning variables and outcomes. The analysis is provided in Appendix E (p. 330). Finally, student learning profiles are presented which comprised a summation and synthesis of relevant findings.

Chapter 7: *Conclusion*, synthesises ways in which the research questions were addressed by referring to the findings, and highlights the contribution these make to scholarship and practice. These findings are considerable, and are linked to the rich theme

running through this thesis that first year learning is complex and characterized by wide variation; that aspects of learning are related and impact on both success and retention; and that students enter their university business studies being better or less prepared because of their prior experience.

The chapter concludes that this research provides a conceptual framework for understanding how first year students learn and its impact on outcomes and retention. It also addresses the gap in the literature regarding the role of learning in first year retention by indicating that in order to improve first year retention, knowledge of the nature of student learning is pivotal.

In addition, chapter seven reinforces the contribution made earlier by this study to learning, retention, phenomenography and practice and policy. It also raises implications for theory, practice and policy directions. Finally, it proposes that the engaging nature of this research raises the desirability for further investigation into several related avenues.

### **Conclusion**

This chapter introduces the pivotal role that this study proposes learning plays on first year undergraduate retention. It provides a rationale for investigating the high attrition rate in first year business students by examining how prior learning experience, knowledge and skills, approach to learning and perception of the subject are related to final grades for a core subject, and also whether these variables affect student retention.

It indicates the range of research and scholarly literature which provided an impetus to the study, including the contribution of phenomenography. The research questions are discussed in relation to the major themes, including student preparedness for their tertiary studies, whether students changed their approach to learning and perception of the learning context, and the relationship of these themes to grade outcomes and retention. Thus a framework is provided for determining the scholarly context, focus and structure of this study, as well as an indication of its outcomes. Chapter two, which follows, comprises a synthesis of the broad range of literature relating to the themes underpinning the research.

## CHAPTER TWO: LITERATURE REVIEW

This chapter explores the literature that contributed to the development of this study, and in particular four salient themes, namely learning, phenomenography, the relationship between various learning factors, and factors relating to the retention of first year students. The chapter is organized around these four themes.

The overwhelming impression to emerge from the literature review is the primacy of the relationship between various learning factors and outcomes, although the relationship of these factors to retention is not as clearly established. The chapter reviews the literature in terms of its relevance to the purpose of the study and to the three research questions. The impetus for the study and the prevailing issues with first year business learners, raised in the first chapter, gave rise to the following research questions:

- (1) *How academically prepared are students to begin their first year of university studies in regard to three factors: prior learning experiences, approach to learning and perception of the learning context?*
- (2) *Do students change the way they view their approach to learning and their learning context over the first year?*
- (3) *How are the factors of prior learning experiences, approach to learning and perception of the learning context related to (a) the learning outcomes of a group of first year Business students and, (b) retention?*

These learning-related questions suggested the major thematic areas, providing breadth and depth to the direction and substantive focus for the literature review. Seeking themes addressed the imperative to heed McInnis's (2001) advice that "the main purposes of the literature review [are] to locate these central themes and research questions within the existing body of work and to build an argument about the choice and relevance of the topic" (p. 6). This was fundamental in articulating current understandings of learning and retention.

Firstly, this chapter reviews a number of learning related areas such as the nature of first year learning and preparedness, necessary to address the first two research questions. The review discusses certain factors which entry students bring to their first year studies such as approaches to learning, perceptions of the learning context, prior learning and threshold concepts. These factors which were identified in prior research were adopted in the current study because of their relevance to investigating relationships contributing to outcomes and retention. A review of theoretical models of learning follows. While models might not have

directly contributed to addressing research questions, they provided the necessary foundation for understanding how this study drew on previous research to provide insights into why factors such as prior learning, approach to learning and perception of the learning context were important. The chapter reviews predominantly phenomenographic theories of learning because they provide the theoretical and pedagogical underpinnings to the study.

The theory of transformational learning is also reviewed because of its relevance to investigating how students' learning changed over their first year; although within the praxis of commonly-held perspectives about how students learn, the notion of learning as change in perceptions was largely absent in the literature.

Secondly, the chapter explores specific literature about phenomenography which provided both epistemological and ontological underpinnings for the study. Thirdly, the chapter reviews literature on the relationship between variables such as prior learning experiences, approaches to learning and perceptions of context, and how these affect learning outcomes and impact retention. Such relationships were important in addressing the research questions one and three.

Finally, the chapter reviews the major perspectives of retention and most particularly those factors which the literature proposes contribute to first year attrition. This review specifically provides essential knowledge for addressing part (b) of research question three. Definitions of some of the terms used in this chapter may require clarification. These have been defined and appear in Appendix A (p. 287).

## **THE IMPORTANCE OF LEARNING**

Any attempt to improve the first year learning experience needs enquiry into the nature of learning, particularly the role that learning plays in retention. As learning is at the centre of this study, it was the appropriate starting point for this review. Despite the voluminous literature about learning, how first year students learn is under-researched. More particularly, there is an absence of what Harvey et al. (2006) described as “that which examines the impact of learning styles and approaches to learning as likely predictors of retention” (p. 129). This paucity in the literature was a crucial consideration in this study. Because very little of the learning literature referred specifically to first year learning, it was necessary to draw from the wider scholarship of learning applying generally to university and to the literature referring to the first year student experience and other related areas thought applicable to first year learning.

Because the literature about learning is so expansive, only a select number of topics were chosen for review. These key sources of literature related to aspects of learning which were relevant in addressing all three research questions. The literature review therefore sought to provide an informed backdrop for the research questions relating to learning and also a deeper understanding of the characteristics of first year learning.

### **First Year Learning**

An initial survey found a wide range of views in the literature pertaining to learning and different criteria used to examine and define learning. It revealed that most of the current literature lacks a central explanation and rationale for how students learn, particularly one which embraces a holistic view that extends past process. A selection of the more pertinent literature is discussed later. Given the number of learning theories that abound and the volume of research devoted to aspects of learning it is surprising that there is no consensus about the fundamental nature of learning, and in particular first year learning. Moreover, the first year experience literature is often characterised by attention to a range of problems commonly arising during the first year at university rather than on those aspects of learning that characterize first year. Such literature is often accompanied by recommendations for addressing problems with the aim of improving the student learning experience and retention. Although this approach may be constructive, it fails to consider the essential aspects of learning which also contribute to improving that experience.

While investigators have generally viewed the first year student experience from a number of different perspectives, relatively few have addressed learning as the focal point in that experience. Furthermore, in style and tenor, the literature tends to describe aspects of learning as a generic entity with general application, common to students across all years at university, including those in first year. Viewed in this way, first year learning would appear to be little different from learning in other years at university. In the general absence of any research to the contrary, the present study proposes that there are elements of learning that characterize first year, and for this reason it is possible to describe these and their relationship to retention.

Over the past thirty years or so the learning research spectrum has ranged widely. These include the biological basis of learning (Liamson, 1999), metacognitive basis for learning (Ryan, 1992; Schommer et al., 2006) and phenomenographic studies of learning (Ackerlind, 2005; Bowden, 1990; Marton & Booth 1997; Prosser & Trigwell, 1999). A plethora of

studies contributed to defining learning styles (Kolb, 1981; Marton, 1981; Säljö, 1975), leading to the development of inventories that employ a variety of cognitive and other dimensions of learning to describe and measure specific learning characteristics (Biggs, 1987; Entwistle, 1992; Ramsden, 2003). All of these various approaches contributed to building a picture of the complex nature of learning, but remain to be fully synthesised by researchers.

More recently the locus of first year learning literature has shifted to first year transition and the student learning experience with engagement as its focus (Krause et al., 2005; Oliver, 2007; Pascarella & Terenzini, 2005; Tinto, 2009; Yorke, 2006); as well as more global concerns for learning to be more equitable and inclusive (Krause, 2006). In the context of enhancing the first year experience, the role of academic literacy in first year learning has also received attention in the literature (Bedford, 2006; Calder & Hanley, 2004; Henderson & Hirst, 2007; Krause, 2006). There are also numerous national reports on the Australian first year university experience, for example those commissioned by the Department of Education, Employment and Workplace Relations (DEEWR), the Australian College of Educational Research (ACER) and the Centre for the Study of Higher Education at Melbourne University (CSHE) with authors such as Krause et al. (2005), James et al. (2010) and McInnis and Hartley (2000). In addition to other factors, these studies report on certain aspects of the learning experience in the context of student retention.

National data from the Australian Surveys of Student Engagement (AUSSE) by Richardson and Coates, (2010, 2012) provided useful data about how first year students in participating Australian universities engaged with their learning. The AUSSE surveys presented a picture of first year students as being less self-efficient in terms of their learning than their American counterparts to relation to their willingness to ask questions in class, participate in group presentations or be actively engaged in constructing knowledge. The underlying assumption was that first year students need to engage more in the learning process if they wish to be more successful learners. One of the shortcomings of such survey reports is that their design limits the range of data that can be collected because while the items selected for the survey cover a broad range of topics relating to the first year student experience and engagement, very few questions specifically address learning. For instance, 'The First Year Experience in Australian Universities: Findings from a decade of national studies' (Krause et al., 2005) used findings from a national survey that contained only one item relating to learning, and this item sought students' perceptions of the quality of teaching.

This section indicated that the available literature relating to first year learning is limited, with the existing literature predominantly concerned with the first year experience and how students integrate into university. There is little or no emphasis upon the role that learning contributes to that experience. In reviewing the literature on first year learning, it seems that the corpus of literature makes little contribution to understanding how first year students learn. The present study will add to this literature an understanding of how first year students learn.

### **Preparedness**

The literature relating to student preparedness was reviewed to establish how preparedness is defined and its role in the scholarship of learning. The current study examines the relationship between certain aspects of student preparedness and outcomes. In this context preparedness is defined as the students' prior experience of learning, including their approaches to learning and their perceptions of the learning context. However, this is not the definition that is common in the literature, which generally favours academic/cognitive descriptions of preparedness.

The review found little clear indication of the exact nature of academic preparedness for university other than various accounts of the importance of a range of academic skills and knowledge required for university entry criteria (Hatt & Baxter, 2000; Byrd & Macdonald, 2005; Koh & Koh, 1999; Matthews & Mulkeen, 2002, Pintrich & Schenk, 1996). The literature conveyed an impression of student preparedness being a rather amorphous and ill-defined entity. Nelson et al. (2006) for instance, depicted commencing students as arriving at university with "baggage and expectations, regarding which we have a duty to be cognisant, as well as varied levels of preparation [for] university life" (p. 2). It is a position very similar to that of Biggs (1996), who opined that various factors such as assumptions, motives, intentions and previous knowledge all contributed to how prepared a person was to begin their university studies.

A common view in the literature was for various indicators to be used to gauge whether students were adequately prepared academically to enter university (Kift & Nelson, 2005). For example, in a report about improving selection for tertiary education places in the state of Victoria in Australia, James, Bexley and Shearer (2009) summarised the common means used to establish how prepared students were to enter university, including admissions testing and standardized proficiency tests (Scholtz et al., 2008). Interviews and portfolios were also

employed to gather objective criteria which might gauge preparedness. Fisher et al.'s (2009) study into factors affecting attrition which listed preparedness as a contributing factor endorsed the views of James et al. (2009). These factors included measures such as previous high school academic performance, standardized scores on entrance tests, first term GPA results and the completion of an academic upgrading course. Ahola and Kokko (2001) took a wider view of preparedness to include "not only skills and knowledge, [as assessed by standardized entry tests] but also motivation and good social, communication and interpersonal skills" (p. 192). In general, there was agreement in the literature on the role played by academic skills and knowledge, usually combined with other factors, in student preparedness for university entry.

Students however, viewed preparedness in a slightly different way from that described above. Research into how students perceived preparedness by Holdaway and Holdaway (1987) reported that students understood preparedness more in terms of the set of academic literacy skills they would need in order to study successfully at university such as listening and reading, taking notes, budgeting time and library skills. This perspective resonates with that of Tinto (2000) who, in expanding on conditions that underpin student persistence, proposed that "commencing students may not be adequately prepared for the rigours of academic study" (p. 91). He also suggests the need for academic support to provide for greater engagement by students with the learning process. This position is shared by Wilcox et al. (2005). The Ellen et al.'s (2007) study investigating students' academic skills prior to the commencement of university lectures, concluded that students would benefit from implementing pedagogical practices to assist them to develop their academic skills, rather than demanding that secondary schools better prepare students.

Lowe and Cook (2003), who viewed preparedness in the context of students' ability to transition the gap between secondary school and university, confirmed that many students entered a higher education environment with insufficient preparation, having little idea of what to expect and inadequate understanding of how the university environment could affect their lives. Byrne and Flood (2005) shared the same view as Lowe and Cook in regard to the role of preparedness of accounting students to enter higher education. They proposed that prior experiences and previous academic success affected students' self belief, which in turn influenced their motivation and willingness to engage in learning. Having little idea of what to expect in the course was also an element of preparedness. Brennan (2001) and Watson et al. (2004) proposed that while having the right information about the course is an element of

preparedness, prospective students often mistakenly believed they already knew enough about the subject when they might not, suggesting they were not as prepared as they believed.

This section presented a variety of views from the literature about the issue of student preparedness, with the most commonly held perspective being that preparedness is defined by academic standards. This is different from the way preparedness is used in this study which, in common with certain other authors, considers the role of prior learning to be predominant.

### **Prior Learning and Preparedness**

Relatively little attention has been paid in the literature to the role that various aspects of prior learning plays in preparedness for students for their university study. When Prosser et al. (1996) observed that “a substantial amount of research suggests that students enter higher education courses not just knowing more or less about the subject” (p. 32) and added, “ more importantly with qualitatively different conceptual understandings of key concepts and ideas to be taught and learnt in that subject” (p. 32), attention was not only given to the importance of prior learning experience and perceptions to the way students learn but also to the role that prior learning plays in preparedness. In the present study preparedness engenders the student’s prior experience of learning, including approaches to learning and perceptions of the learning context.

The literature on students’ prior experiences of learning is relevant to this study’s investigation of the factors that impact learning and retention, and is of particular interest in addressing the first research question about how prepared students are to begin their tertiary studies. From the phenomenographic learning perspective which has been adopted in this study, when students are presented with a new learning situation they make use of prior experience by recalling what they have learned in a similar situation and applying it to the new situation (Bowden, 2000). The literature provides evidence that students bring to university the sum of their prior learning experience, comprising knowledge, expectations, and perceptions of context, as well as orientation towards particular learning styles. These examples of prior learning are fundamentally important with respect to how students perceive their new learning situation at university and approach their studies.

The notion of prior learning experiences impacting not only outcomes in subjects and disciplines but also future learning is well established in the literature. Ausubel (1976) proposed that “. . . the most important single factor influencing learning is what the learner already knows” (p. 163) which is to suppose that prior learning is primal to preparedness for

university. Similarly, when discussing the diversity of prior experience, Yorke (2006) observed “a number of competing desires and obligations of entrants to full-time study with consequences for their educational attainments” (p. 2). Yorke asserted that, for the most part, it is prior experience that impacts students’ learning outcomes. Prior experience was viewed as the discipline-specific knowledge or competencies which students have acquired in either previous learning or in work experience, and which relates to their perceptions and understanding of current discipline study. The present study uses a particular set of discipline specific numeracy, literacy and IT skills considered to be precursors for successful study of the business discipline. It therefore falls within the research genre which posits prior learning experiences to be a precursor to learning.

Viewing learning as an aspect of previous experience is important to this study in several respects similar to those highlighted by Prosser and Trigwell (1999). These researchers suggested that prior learning should include the experiences of studying the subject matter because of its effect on how students learn at university. One student surveyed in their research recommended this form of discipline learning as: “previous knowledge [of studying the subject] will allow you to progress quicker and learn more efficiently” (p. 30). The importance of prior experience of learning finds support in Biggs’ (2003) assertion that it is what students do, or have done prior to entering university, which results in learning and, in the process, their conceptions of their learning change (pp. 6-7 and *passim*). However, the importance of learning as a major factor in prior experience is not a view that has received the amount of attention in the literature that it deserves.

There is valid and persuasive evidence of prior learning experiences contributing to discipline learning in recent Australian national surveys of first year students: in 1994 (McInnis & James, 1995), 1999 (McInnis et al., 2000), 2004 (Krause et al., 2005) and 2009 (James et al., 2010). These were summarised in a report: “The First Year Experience in Australian Universities: Findings from 1994 to 2009”, (James, Krause & Jennings, 2010), which consistently found that students entered tertiary education with increasingly diverse backgrounds with respect to their perceptions and prior knowledge of their area of study, their experiences of study and life experience in general (p. 9).

A common finding to emerge from the learning-related literature, for example, that of Biggs (1987), Meyer et al. (1990), Prosser and Trigwell (1997, 1999), Marton et al. (1997), Gibbs (1993) and Ramsden (2002), is that, in addition to previous experiences of learning such as poorly developed academic backgrounds and study habits, prior experience also

includes discipline perception and knowledge. For example, when Krause et al. (2009) reported increasing numbers of students entering higher education with lower levels of achievement in their previous educational experiences (p. 7), the researchers were not only referring to previous academic standards. Some first year students in Australian universities appeared to have “a poor alignment between their objectives and the courses in which they enrolled, probably due to students having vague goals or misunderstandings [of the course or discipline]” (p. 73). This latter view mirrors that of Meyer et al. (1990), Entwistle et al. (1992), Crawford et al. (1994), and Dahlgren (1997), all of whom highlighted the importance of students’ perceptions and prior understanding from a focus of the key concepts and understandings of what the subject or discipline is about. Such observations are a valid and persuasive argument for investigating the impact of poor understandings and perceptions of the learning context on performance, and thereby provide support for the purpose of this study.

In reviewing the literature about prior learning, it was clear that there were common factors arising from prior experience and learning which influence academic preparedness and academic success for commencing students. The praxis of relevant literature on prior learning experience, which is discussed in the sections following, supports the proposition that prior experiences of learning are fundamentally important to how students perceive their learning context, approach their studies in a particular learning situation and achieve successful outcomes. Furthermore, including students’ approach to learning and their perceptions of the learning context as indicators of prior learning, this position departs from the established view of prior learning reflected in the wider literature on the first year experience.

### **Approaches to Learning**

Knowledge about the nature of students’ approach to learning is integral to enquiring into the factors that contribute to outcomes and retention, and also fundamental to answering all three research questions, but more importantly question one. The way that students go about their learning, their strategies and orientations are described variously in the literature, but more commonly the term ‘approach to learning’ is used, which is the term adopted in this study.

Approaches to learning are often premised by the context of the learning situation and its demands. For instance, question one asks how students intend to learn *Business*

*Communication*, which places the question in a particular context. Prosser et al. (1999) indicated that individuals in the same context can find themselves in quite different situations, with “varying perceptions of their situation relating to their different approaches to learning” (p. 106). In exploring the importance of context and experience in how students’ approaches and understanding of learning are constituted, Land (2004) contended that students’ new understanding of learning, which is based on their prior experience, may always be “provisional and negotiable” (p. 7). This implied that in Land’s view learning is context sensitive, as well as tentative in regard to how students perceive their learning. Likewise, Kolb (1981), in describing different learning dimensions and orientations, argued that learning style is context specific in that it can be adjusted to the task at hand.

There was general agreement in the literature that the same student can have qualitatively different approaches to learning in different contexts, and their learning orientation can be completely changed by their perceptions of the demands of a particular learning task (Bowden, 2000; Eley, 1992; Gibbs, 1993; Kolb, 2005; Land, 2004; Laurillard, 1979; 1997; Ramsden, 1984, 2002). These alternative views of approaches to learning were useful in this study in accommodating the notion that students’ approach to learning can change according to context.

The literature on approaches to learning is voluminous, as are its definitions, therefore a brief outline and summary only will be provided of surface and deep learning. Emergent Learning, which is an approach proposed by this study, is discussed in detail in relation to its findings. While there are other approaches mentioned such as ‘achieving’ (Biggs, 1987), which was also labelled by Tait et al. (1998) as ‘strategic approach’, these will not be expanded upon here but are defined in Appendix A (p. 287).

Research on student learning approaches originated in Sweden with studies by Marton and Säljö (1984) into surface and deep approaches to learning: terms they devised to describe ways of learning a particular task. According to Marton and Säljö a deep approach to learning is characterised by students aiming to understand ideas and seek meanings. They have an intrinsic interest in the learning task and expect to enjoy carrying it out. In addition, they relate the task to their own experience and look for underlying principles and patterns. Prosser and Trigwell (1999) described this as “overall they have a focus on the meaning in the argument, the message, or the relationships, but . . . the meanings are carried by the words, the text or the formulae” (p.3). According to Prosser and Trigwell, a surface approach is characterised by students seeing learning tasks as external impositions and aim to cope

with these requirements with the minimum effort. They often adopt strategies which focus on related parts of the task because they fail to see the bigger picture. This means students often employ rote memorisation to reproduce the original essential facts or principles for a strategic purpose of satisfying and passing assessment requirements. Accordingly, surface learners are generally involved in study without purpose or strategy. Academics have generally shown in the literature an attachment to these two terms in describing learning, and their use has become commonplace in practice.

Phenomenographic pedagogy views approaches to learning as the relation between the learner and the object of learning within a particular context, a view which is widely shared in the literature, including Ramsden (2002) who postulated approach to learning as “general tendencies to adopt particular approaches related to the different demands of courses and previous educational experiences” (p. 51). This sentiment echoed that of Laurillard (1979) and Gibbs (1999) who posited that students’ approach to learning is not static but relational and variable, and changing with different contexts as they perceive them. Another perspective proposed that “the same student may take a deep approach to learning, given a more supportive learning environment” (Ramsden (1984, p. 59).

In defining the range of characteristics of learning approaches that are prominent in the literature, it was commonly agreed that approaches to learning were considered to be somewhat provisional in nature and context sensitive. The point is made that if students’ approaches to learning are categorised relative to a particular learning context, and at a particular point in time, the possibility is afforded that their approach to learning could well change according to different circumstances, contexts or experiences. Regardless of the particular approach to learning, it is well to be cognizant of Bowden’s (2000) caution that a person may be described as having taken a surface approach to a task (that is, the object of learning in phenomenographical terms), but should not be described as a surface learner (p. 61).

Understanding approaches to learning is fundamental to a conceptual understanding of learning itself, and essential to investigating the role learning plays in successful outcomes, as well as central to answering the research questions. It is interesting to note Sims and Sims’ (1995) pertinent suggestion that students not knowing their approach to learning is an impediment to learning, which implies that understanding and identifying approaches to learning is not only important for practitioners but also for students themselves. The next

section explores the nature and development of learning as described in a phenomenographical paradigm.

### **The Pedagogy of Phenomenography**

According to Biggs (2003) theories of learning which focus on student activity are based on two main theories, that of phenomenography and constructivism (p. 12); although Prosser (2004) observed that phenomenography is not in itself a theory of learning and it is true to say that phenomenography also has its derivation in constructivism. Because the literature on the pedagogy of phenomenography is rather extensive, only the more prominent phenomenographic researchers whose work is significant to this study are discussed. To understand the pedagogy of phenomenography, three essential aspects are significant, namely, constitutionalism, transformational learning and the variation theory of learning, and more especially the way these are related. This section raises the importance of these concepts.

Phenomenography is a term coined by Marton (1981) that emanated from his research with Säljö (1975). Phenomenography is based on the notion that the learner's perspective defines what is learnt rather than the teacher's perspective. Constructivism draws its origins from psychology and posits that "it is what the learner does that creates knowledge", which can be built upon to affect further learning (Biggs, 2003, p. 12). Both theories provide a theoretical perspective to viewing students as learners, which is fundamental to investigating why students are successful, in this case, in their first year at university. Phenomenography offers an avenue for students to provide valuable insights into critical aspects of their learning.

Phenomenography employs *constitutionalism* as its theory of learning, and thus its epistemological underpinnings relate to the way meaning about learning is constituted by the continual interaction between person and object (Bowden & Green, 2005). Constitutionalism is derived from constructivism. The term *constitutionalism* denotes a learning paradigm "whose assumption is constituted through interaction between a subject and object, and whose meaning is constituted through an internal relationship between the individual and the world" (Guba & Lincoln, 1994, p. 107). The central tenet of constitutionalism, therefore, is that different ways of experiencing the phenomenon are inherently related to the unique nature of each individual's experience and comprises the sum of all past experiences. From this perspective, learning results from the interaction between various elements of the

environment that are experienced by the students which, in the current research, are their prior experiences, approaches and perceptions of learning.

Constitutionalism differs from other learning epistemologies in that knowledge develops internally by the learner continuously interacting with the outside world. In this paradigm, knowledge is constituted by incremental assimilation and accommodation, a process which draws from cognitive psychology sources (Prosser & Trigwell, 1999). Students then “apply this new knowledge in new learning contexts” (p. 65). Using this principle as a point of reference in the present study, when students were asked to reflect on how they would approach learning *Business Communication* and what they thought the subject was about, they would refer to their prior experiences of learning and business communication which had accrued incrementally. Consequentially, students’ prior experiences and understandings would be applied to constitute the approach to learning and understanding of the study of *Business Communication* which they brought to their university study. This sequence of associated events conveys the image of individual and dependent links in a chain where each aspect of their prior experiences is related and leads eventually to learning.

There is one remaining aspect of constitutionalism which has applicability to the present study, and that is simultaneity of awareness. Constitutionalism posits that learning is the result of the interaction between its various elements which are simultaneously present (Prosser & Trigwell, 1999). Albeit simultaneously present, some of a student’s awareness may be foregrounded or backgrounded (Marton & Pong, 1995). For example, a student might be focussing on acquiring knowledge to pass an assessment, while backgrounding conceptual learning connected to the subject. At the same time, the process of acquiring, knowing and applying is continuing which, according to Prosser and Trigwell (1999), are the “three successive phases which students simultaneously engage in during any act of learning” (p. 17). Thus the relationship between objects of study in this research, namely prior experience, perceptions of learning context and approaches to learning are conceived of as “being simultaneously consecutive in a particular moment of time” (p. 24). Simultaneity allows for an argument to be made that variations in prior experiences, variations in approaches to learning and variations in students’ perception of their learning context, all being simultaneously consecutive in a moment of time, will lead to variations in the quality of learning outcomes, and by extension, variation in persistence.

A second aspect which phenomenographic pedagogy promotes is the notion of transformational learning which is commonly referred to as change learning. (Campbell et al., 2001; Chi et al., 1994; Druit & Treagust, 2003; Johansson et al., 1985; Novak, 2002; Pintrich & Schent, 1996; Posner et al., 1982; Prosser, 1993). Phenomenographic researchers such as Bowden (2000), Dall'Alba (1994), Green (2000), Marton and Booth (1996) and Prosser and Millar (1989), all characterized learning in terms of change.

Transformational learning is concerned with what Bowden (1990), calls "learning that is meaningful and results in new ways of seeing the world" (p. 2). This implies that the learners develop capabilities for perceiving or experiencing situations or phenomena in certain ways (Bowden & Marton, 1998). Transformational learning allows for enduring personal change of the type which Beatty and Ulrich (1991) called "deep change, in which deeply held values, beliefs and assumptions are challenged and modified" (p. 39). Consequently, when students are challenged to review their assumptions and knowledge, change is facilitated in their set of understandings and knowledge about learning and the learning context (Marton & Booth, 1997). Bowden (1990) proposed that such change was contingent upon approaches to learning and prior learning, which is a viewpoint that is widely supported in the literature, including by Gibbs et al. (1984), Marton, Dall'Alba and Beatty (1991) and van Rossum and Schenk (1984).

The importance of change learning was underscored by Haggis (2009), when he suggested that "changing as a person is the most important consideration of the lived experience of learning and arguably it is what underpins academic performance in higher education" (p. 89). However, he also commented on the under-emphasis afforded to the complex nature of the change process for students, which reflected Wood's (2006) view that not all people would experience change learning because of the variation in their experiences during the learning process, which might not result specifically from activity at university (p. 64). Similarly, Andrews (2006) observed another factor which he thought militated against transformational learning, and that was misalignment of student and lecturer expectations. Andrews considered this to be the greatest obstacle to early adoption of self-directed and transformational learning. He further argued that inappropriate values, beliefs, conceptions and assumptions can also be serious obstacles to students' transformational learning. As proposed in this study, such obstacles can be the cause of troublesome threshold concepts which can deter transformational learning. More is discussed about troublesome threshold concepts later in this section.

It should be noted that while the use of transformational learning in the present context has similarities to Mezirow's (1978) concept of transformational learning, its focus does not refer to his model of transformational stages which describes different dimensions of learning. Transformational learning is widely used as a term synonymous with change in learning, particularly in the phenomenographic literature, and it is in this context that it is used here.

The third aspect of phenomenographic pedagogy is variation theory (Akerlind, 2005). The object for phenomenographic research is to identify and describe the various ways in which people experience variation in certain phenomena in the world about them (Marton, 1981). As Marton (1986) explains: "Phenomenography is a research method adapted for mapping the qualitatively different ways in which people experience, conceptualise, perceive and understand various aspects of, and the phenomena in, the world around them" (p. 31). Such a research method opens up "different dimensions of variation that constitute a space of variation in which students discern critical aspects of their learning" (Marton, 1998, p. 24 and *passim*). Marton's (1986) definition resonates with one of the desired outcomes of this study. In phenomenographic terms, it was to construct a structured space of variation, representing key aspects of the qualitatively different ways that students approach their learning and understand their learning context which would indicate a relationship to retention.

Phenomena can be experienced widely, a view which is well established in the literature. A series of studies found consistent and significant differences in the ways which students experienced and engaged with different learning-related phenomena (Biggs, 1993; Crawford et al., 1994; Dahlgren, 1975, 1997; Entwistle, 1988; Gibbs, 1993; Laurillard, 1997; Marton & Booth, 1997; Marton & Säljö, 1976; Prosser & Miller, 1989; Prosser & Trigwell, 1997; Svensson, 1977; Biggs & Tang, 2007; Watkins & Biggs, 1996; Webb, 1997). The literature indicated different perspectives about how the full dimensions of a phenomena are experienced. While Akerlind (2005) described a pool of meanings which are present when phenomena are experienced, Marton and Booth (1997), for instance, explored Gurwicz's (1964) notion of field of consciousness to learning. They argued that every object which is experienced, or encountered, is inexhaustible, and therefore impossible to grasp completely. In contrast, Marton and Pang (2003) later proposed that every phenomena can be experienced in a finite number of qualitatively different ways. In employing a phenomenographic methodology to analyse and categorise what the cohort of students described about their learning into categories of description, this study drew on both perspectives. The categories

of descriptions identified a finite range and variation of students' approaches to learning and their perceptions of their learning context. This variation reflected Marton and Pang's perspective, but only as the variation applied to the particular cohort of students at a particular time in their university experience, thereby accommodating the earlier perspective of Marton and Booth (1996).

Variation in experiencing a phenomenon also allows for students to grasp certain key aspects of that phenomenon. Green (2005) proposed that the theory of variation "rests on the assumption that by focussing on difference or contrast it is easier to discern the key aspects under study" (p. 305). Bowden (2000) described this process as: "the student makes sense of new situations in terms of their critical features. The critical features are dimensions of variation constituted by the new situation and the previous ones which it resembles in critical aspects" (p. 34), which clarifies that the process of discerning critical aspects, whether new or previously experienced, constitutes an element of learning.

Variation theory is linked to learning. Because variation is anchored in the experience of students themselves and provides for a range of approaches to learning and perceptions, individuals learn by experiencing variation in different situations or phenomena. Bowden and Marton (1998) explained this connection to learning as "new contexts or situations present new sources of variation, and every learning situation includes the potential for application of something learned previously, and every situation or application implies the potential for learning something new" (p. 25). This connection is critical in phenomenography where learning results through the creation of meaning and awareness of the critical features in that meaning, which Bowden (2000) proposes will "correspond to dimensions of variation that are constituent parts of the knowledge of specific disciplines" (p.180). Learning also accrues through aspects of phenomenography such as discernment, simultaneity and variation, which are elemental to acquiring the critical aspects of the discipline and the formation of knowledge. These aspects are hallmarks of constitutionalist learning in which "the learners develop capabilities for seeing or experiencing situations or phenomena in different ways" (p. 24). Thus, variation in experience, in all of its critical aspects and constituent parts which distinguish between one meaning and another, contributes to learning.

In this study the variation theory of learning refers to the different meanings and perceptions which students hold about a business subject and learning it. This includes their awareness of their approaches to learning that subject and ways of experiencing and interacting with their learning, which are apparent in their responses to questions asked about

their learning. Categories of description describe the range of variation of student's approaches to learning and their perceptions of the learning context. It was anticipated that students in this study would experience the phenomenon of learning in different ways because of differences in their prior experience of learning. As a segue, students would have different understandings of what their subject was about, and there would be variation in conceptual levels of understanding about learning and the critical aspects of their learning context. It can be seen that the tenets of the variation theory, as both theory of learning and approach to analysis, proved a useful medium in this study to probe the lived experience of student learning.

This introduction to the theory of learning identified the essential elements which are inherent to phenomenography, and positioned fundamental tenets of constitutionalism, transformational learning and variation theory within that pedagogical framework. It highlighted the role that critical aspects of students' experience plays in the learning process, particularly with respect to students' approach to learning and their perception of the learning context. The next section presents the literature relating to another aspect of first year learning, namely threshold concepts.

### **Learning as a Threshold Concept**

Two important ideas affecting learning discussed in this section revolve around the research of Meyer and Land (2005). They are the notion of a threshold concept and, related to this, that of a troublesome threshold concept arising from students' inability to deal with a particular threshold concept. Threshold concepts were considered important to this thesis because of their application in describing and understanding first year learning and retention, and the opportunity these provide in addressing the second research question which concerned whether student's changed the way they viewed their approach to learning and their learning context over the first year.

The literature about threshold concepts most often refers to the landmark study by Meyer and Land (2003) who defined a threshold concept as "a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress" (p. 373). Threshold concepts were described in terms of their relationship to a particular discipline; how students think or practise within a particular discipline, or how they perceive, apprehend, or experience particular phenomena within that discipline. These aspects constituted the 'critical threshold function' (p. 373) used to distinguish between core

concepts of an academic domain and other concepts. The focus on ‘threshold’ is relevant to the study in that it connotes those critical concepts which students hold as they enter university which, in part, constitutes their preparedness.

According to Meyer and Land (2000) who used the metaphor of a portal to signify the transformation needed for learning to occur, once students have passed through the learning portal, there is little likelihood that the transformed understanding will be forgotten. This represents an apt metaphor for the present study because of the way ‘portal’ can be applied to students entering their business studies, and the way they may be transformed as a result. In this respect, the irreversibility element of a threshold concept has application in that once a student has learnt a better way of understanding the subject or learning it, it is unlikely that they will want to revert to their previous set of understandings (p. 3). As previously discussed in respect of phenomenography, the principle of such transformation is not new and is consistent with the constructivist theory of learning. This study draws understanding of transformative learning from both sources: that of Meyer and Land and that of phenomenography.

The use of ‘portal’ as a metaphor also represents students’ understanding of the approaches to learning and learning attributes required as they enter university. This includes the adequacy of particular academic skills, including literacy, numeracy and information technology skills considered necessary for business studies. It also includes their understandings and perceptions of *Business Communication* and the set of concepts inherent in the subject. In brief, the use of threshold concepts related primarily to those knowledge and skills required for learning as well as those germane to the subject itself.

Threshold concepts are commonly considered to apply to disciplines. Studies by Barnes et al. (1977), Cope (2006), Eckerdal et al. (2005), and Terenzini et al. (1994), for example, used threshold concepts that connoted knowledge-specific threshold concepts inherent in particular disciplines. This discipline-based context for applying threshold concepts was extended by Baillie (2008) who suggested that “the threshold that students have to pass through is associated with rethinking the dominant discourse that they have been brought up with, and engaging in learning [of discipline content] which is new for the students” (p. 16). She further argued that the ‘concept’ part of the term ‘threshold concept’ was not sufficiently broad, and that ‘threshold’ was a more appropriate term to capture the notion that students are learning a new discourse related to a specific discipline, as well as learning a new discourse relating to their own learning (p. 12). Like Barnes et al. (1977), Baillie (2008) found the

notion of threshold concepts to be a powerful one in student learning, but stopped short of promoting the idea that learning itself can represent a threshold concept. While drawing attention to the importance of students learning about their own learning, she suggested that there are ways of practising and thinking required to become “initiated” into the discipline (p. 11) and hence cross the threshold of learning represented by a portal.

An exception to the discipline-based use of a threshold concept in research was Clouder (2005) who built on the idea of students being initiated into the discipline threshold by using ‘caring’ as a threshold concept for her study into the transformation of higher education students into healthcare professionals (p. 9). This researcher explored ways in which healthcare professionals undergo a transformation in how they viewed their caring role, as well as how they engaged with caring discourses that underpin healthcare. She asserted that learning to care in a health context was required in order to become initiated into the discipline, and hence cross the threshold into the health profession. Such a position echoes that of Entwistle et al. (1999, 2002), Hounsell and McClune (2002), and McClune and Reiman (2002), who described threshold concepts more broadly as being in a body of knowledge comprising parallel ways of thinking as well as practising in a subject.

The use of caring as a threshold concept for healthcare workers is analogous to the use of learning as a threshold concept for business students in this study. As a segue to the definition of Meyer and Land (2003) and using Clouder’s (2005) example of caring, this study proposed that learning be considered as a threshold concept because it involves aspects of learning and practising in a subject. When learning is used as a threshold concept, crossing the threshold of learning entails understanding what learning is and how it is developed in practice. This includes sequences of thought, understanding and perception, connection between various concepts and intellectual behavior and application, which reflect the notion of thinking and practicing proposed by Entwistle et al. (2002), Hounsell and McClune (2002), and McClune and Reiman (2002). Furthermore, Meyer and Land’s (2005) five characteristics can be applied, that is, learning can be integrative, transformative, irreversible, bounded and counter-intuitive. This use of threshold concepts which is different from that intended by Meyer and Land et al. (2005) represents an application of their work and a contribution to scholarship.

A critical point of interest from the literature is that the acquisition of a threshold concept requires that it be integrated into the student’s experience. This supports the argument of Barnes et al. (1977) that, for a threshold concept to be acquired, it must be

“integrated with students’ experiences of the world, and their personal understandings of those experiences” (p. 27). In the context of viewing learning as a threshold concept, this means that students will use their prior experience of learning as a frame of reference in intuiting new ways of learning.

A study by Davies and Brant (2006) demonstrated this concept-acquisition process of students acquiring specific economics concepts. The authors found that to acquire a threshold concept in economics a student must integrate it with their personal thinking and indirect experience of the world. Once internalized, students were more able to integrate that concept into other learning situations which might be presented in different contexts. Furthermore, the concept needed to be introduced in a way that scaffolded it to previous knowledge (p. 14). Although Davis and Brant’s conclusions fell short of highlighting the role of acquiring and integrating discipline-based concepts in the learning process, their view, like that of Baille’s (2008), was essentially constructivist and in line with phenomenographic pedagogy. Its application and similarity to the view of learning proffered in the current study, is striking. If, to acquire a threshold concept students need to integrate it with their prior experience of the world and, following this logic, that the threshold concept contributes to their perception and understanding of the new learning context, then a sound case is presented for asserting that learning is a threshold concept.

It follows syllogistically then, that the use of learning as a threshold concept promotes transformative understanding of what the concept, learning, is about. Land (2004, 2005, 2006) described transformational learning as reconceptualising what [knowledge] has already been learnt (2005, p. 7). Furthermore, he proposed that if learning can be reconceptualised, it can impact on personal subjectivity and the way students view themselves as learners. The extent and significance of this proposition resonates with the way this study draws attention to how students view learning which is constructed, in part, from their previous experience of learning. In this respect, learning as a threshold concept can serve an ontological role, with profound implications for learners in respect of how they view themselves as learners and the extent to which their prior experience of learning has affected that perception.

The second issue to be discussed in this section is the notion of a threshold concept being troublesome. ‘Troublesome’ is a term which Meyer and Land (2003, p. 11) used in reference to Perkins’ (1999) description of troublesome knowledge, which was knowledge that was difficult for students to integrate, and therefore counter-intuitive. Within this range of troublesome knowledge will be concepts that prove problematic for students, which

according to Bowden (2000) can be caused by incorrect understanding of the subject, understanding the subject as a generic entity or viewing it from one perspective.

In the present context, the proposal that threshold concepts can become troublesome when the experience of learning leads students “to a previously inaccessible or perhaps troublesome way of thinking about something” (p. 373), is relevant. Some students might pass through the portal of learning and come out the other side with new ways of perceiving learning, and consequently new areas of understanding being opened up. Other students might get ‘stuck’ because of their troublesome way of thinking about learning or the learning context, and be unable to pass through. Prosser and Trigwell (1999) expressed a similar view when investigating the impact of prior learning on outcomes. They suggested that when students enter their new university learning context – which approximates to the ‘portal’ of learning - that their prior learning experience can be prove to be problematic in that it:

evokes an awareness of particular aspects of their prior experience, such as previous experience with assessment which may or may not have been troublesome, or a particular teaching approach which they liked or disliked (p. 4).

The assumption is that aspects of prior experience may prove troublesome for students commencing their university studies. In this respect, Meyer and Land (2003) observed that there were certain crucial ways of functioning as learners “which could prove to be troublesome if students had not acquired the correct set of skills, language and understandings required for learning at university” (p. 374). In the context of the present study, these troublesome threshold concepts, including skills, languages and understandings, could impact both outcomes and retention.

Alternatively, certain concepts might be threshold to some students and not to others. Students might not hold the required threshold concepts to negotiate the transitioning of the portal to university learning. Baille (2008), described this as “some students would be stuck in their understanding of the process of learning, and would need transformative learning opportunities to enable them to successfully negotiate their learning passage” (p. 11). Accordingly, such students then become disillusioned and often take up surface approaches to mimic what they see other students are doing. Their understanding of the concept becomes troublesome, and as a result learning becomes adversely affected. Moreover, if ‘stuck’, the likelihood is that students might choose to discontinue with the course. This study employs Baille’s metaphor to contend that if students’ ability to successfully pass through the portal is

compromised because elements of their threshold concepts prove to be troublesome, this is likely to effect the attainment of successful learning outcomes and retention.

Certain critical aspects play a role in threshold concepts being troublesome. Within the context of relevance to practice, Cope (2006) reported a phenomenographical study enquiring into 30 university students' approaches to learning about information systems. She identified multiple educationally critical aspects of information systems which were described as being troublesome for students (p. 6). Cousin (2009) also highlighted the role that developing critical threshold concepts plays in students' approach and understanding of learning when he suggested that students who are still developing emerging understandings in the "troublesome journey through change will substitute mimicry for mastering a surface approach to learning rather than a deep approach" (p. 5). This insight was worthy of consideration when students in this study were interviewed and asked the third research question concerning the extent of their change as learners over their first year.

Threshold concepts and troublesome threshold concepts provided a framework for considering how students learn. Meyer and Land (2003) argued that, regardless of barriers, learner identities, that is, how learners perceive their learning role and approach, and threshold concepts are linked in complex ways. This thesis promotes the epistemological foundation of threshold concepts of learning as one cogent element in understanding the complexity of first year learning. While learning about learning might be somewhat of an intangible entity for students to comprehend easily, it is a strongly transformative process and one that students need to pass through in order to be able to succeed in their tertiary studies.

Threshold concepts are relevant to the present study because it is proposed that learning, *inter alia*, can be seen as an inherent threshold critical function which students must negotiate successfully. Consequently, the notion of certain concepts being troublesome to learning has relevance to practice because of its potential to influence students' approaches to learning, their perceptions of the learning context, their learning outcomes, and possibly on decisions to stay or leave university.

### **The Ability to Reflect as a Threshold Concept**

The nature of reflection is complex, and is defined in the literature from different perspectives depending upon whether the emphasis is on theory, practice or context. The concept can be treated philosophically, as in Dewey (1933, 1997) and Habermas (cited in Langer, 2002), and as pivotal to action research constructs as with Schön (1983). Reflection

can be considered in terms of reflection in the learning cycle (Kolb, 1984), or as reflection in practice (Brookfield, 1995). For some, reflection is seen as fundamental to learning. Hullfish and Smith (1978), for instance, suggested that the use of reflection supports an implied purpose in teaching and learning, while for others reflection is engendered when the appropriate learning environment is presented (Moon, 2000). Langer (2002) proposed that “the production of reflective thinking is affected by student attitudes and pre-conceptions” (p. 348), therefore the ability to reflect and use the products of reflection will vary according to individual students. This variation in ability to reflect was evident in the data collected in this study.

Students must have well-developed reflective skills which, according to Bond, Keogh and Walker (1985), “individuals engage to explore their experiences in order to lead to new understandings and appreciation” (p. 3). Developing the ability to reflect is a desirable trait within the praxis of current pedagogic practice (Boud et al., 1984; Brookfield, 1995). If students must have the skills and experience in reflection, the ability to reflect becomes a troublesome threshold concept which acts as a barrier for students in developing necessary attributes of tertiary learning.

Specifically, this study required students to reflect in order to answer the questions posed about their learning. To answer the survey and interview questions, students need to look back on their prior learning and ponder their understanding of the subject and their approaches to learning (Brookfield, 1995; Carnell & Lodge, 2002; Marton, 1998; Mezirow, 1991; Raelin, 2001; Schön, 1983). The quality of their reflection affected the quality of the data generated and had implications for the validity of the findings.

Reflexivity has been explored widely in the literature and is often associated positively with learning. Schön (1983) for instance, observed that reflection was essentially a constructive experience which builds a framework and gives coherence to understanding one’s experience (pp. 217-18), thereby facilitating the learning experience. Carnell and Lodge (2002), acknowledged the contribution of reflection to learning when they described learning as “students being able to reflect on their goals and strategies for learning, how they feel about their learning and what the outcomes of their learning are” (p. 2). Such reflection, according to Raelin (2001) is associated with learning dialogues in which a person periodically steps back to ponder the meaning of what has been experienced. He defines ‘experiences’ as being composed of actions, beliefs and feelings (p. 11). Reflecting on past actions, beliefs and feelings relating to learning can provide very cogent clues in deciphering

present and future learning situations, even when the new situation presents itself in a different context.

Brookfield (1995), like Carnell and Lodge (2010) and Raelin (2001), viewed reflection as an adult learning process involving emotional and cognitive processes (p. 227), and which offers a lens to assumptions and experiences. He suggested that reflection is 'critical' when it questions those assumptions and experiences (p. 6). The prevailing assumption in the literature is that such reflection is critical reflection, whereas Kember et al. (1999), suggested that reflective activity may well represent introspection, which is a non-reflective activity, and may therefore be an effective response to the activity required (p. 22). For students in this study who did not question assumptions, their responses to the survey and interview questions might well represent mere introspection, as suggested by Kember et al. (1999), and consequently lack the insights through which learning can occur.

Reflection is also an important thread in phenomenography. For example, Marton (1998) challenged students to "experiment with various learning situations, to draw conclusions, to trial solutions and to reflect on their experience" (p. 125). Also in a phenomenographical vein, Grimmett et al. (1990), described reflection in terms of its epistemological purpose of fostering dialectical knowledge, in which "transformation of the individual occurs in the way the assumptions of experiences are reconstructed" (p. 79). This is the kind of reflection which Mezirow (1991) described as 'premise' reflection in which people question the very questions they have been asking in order to challenge their fundamental beliefs (see Raelin 2001, p. 12). According to Broughton (1977) such reflection "allows for recognition of paradigmatic assumptions in the person's thinking" (p. 88).

Finally, there is an important connection between reflection and language. Meaning derived from reflection needs to be converted into language (Vygotsky, 1988), for that meaning to be communicated to others. Indeed, students in this study needed to use written language (in the survey) and spoken language (in the interview) to communicate their reflection about learning. Raelin (2001) suggested that the thoughts arising from reflection are constantly reshaped when students are asked to communicate them, and in reshaping students begin to reframe their position. Thus language can act as a portal to greater understanding, segueing into learning, and, as a consequence, constitutes a "crucial threshold function" (Meyer & Land, 2003, p. 12) for the learner, and is of significance to this study.

## Learning Profiles

Profiles were constructed in this study to highlight the range of learning styles characteristic of the student cohort. The use and design of learning profiles in this study is different from other more normative profiles that abound in the literature. More importantly, they have a different emphasis which is to describe first year students as learners, and are designed to help teachers to identify the best learning situations for individual students. While Fritz (2002) proposed that teaching that responds to the learning profiles results in learners becoming more active in the learning process and therefore positively impacting retention and graduation rates, there was no consensus in the literature about the best way to design such profile, rather a variety of designs exist according to their aim and use.

Perhaps the most familiar form of profile in the literature is that which lists a number of ideal learning attributes, while other forms are simple descriptions based on prior knowledge or on scholastic performance (Shen & Shen, 2007). Some are presented as case studies (Gross, 1977). More often profiles are a group of assessments of certain factors such as learning styles, competencies, motivation and commitment, appearing in a common table format (Culver et al., 1994). More recent profiles utilized a wide range of web based technology and validated instruments to survey affective learning styles (Confessorre & Park, 2004; De Grave et al., 1999; Dolog & Schafer, 2005; Lagud & Rodrigo, 2010). In respect of the latter design, Dolog and Schafer indicated that several new tools have been designed to improve learner models with the use of active learner web-based modelling. However, according to Csizer and Dornyei (2005) while the use of various questionnaires and survey instruments to obtain relevant data which are then “processed by means of often complex statistical procedures such as correlation and factor analyses, analysis of variance and structural equation modelling” (p. 614) may have helped to understand the nature of various cognitive and affective factors, they provided few insights about how these factors are combined to achieve specific learner types.

In reviewing the literature, profiles are found to be more dominant in science-related empirical research that commonly employs various batteries of standardised and other specially constructed instruments and inventories to establish quantifiable clusters of psychological, personal, behavioural or other characteristics across a population (Alexander et al., 2005; Chan, 2000; Stellwagen, 1997; White, 1998). In format these comprised tables of data sets statistically analysed for the purposes of synthesis, comparison and monitoring the results of research. It is apparent from the volume of literature employing these approaches

that, in general, the research favours models which tend to describe rather than predict. In the absence of sufficient critical dialogue on these models and the methodologies they employ, there is a need for a richer research agenda which emphasises the essential attributes of students as learners and capturing these in a suitable profile.

Profiles of the type found in the literature were unsuitable for the particular aims and research design of this study, and a wide cast of the literature failed to locate any suitable profile that might be used as a model to present the breadth of findings. A profile describing students' learning was required which could present a distillation of the findings including those of the survey and interview, the results of skills testing and final grades. Pryce's (2000) advice that profiles can be developed over several categories and specify a range of widely different characteristics was pertinent. It was possible to design a suitable profile which allowed for student learning to be described and also choose a discursive format for this purpose. Such a design would allow representative quotations from students relating to their approach to learning, perceptions of the subject and their learning experience and was considered apposite to the purpose of developing a profile with application for practice.

In summary, not only do the profiles designed for this study describe the learning characteristics of commencing students so that their teachers can cater for their learning, they also serve as an aid in understanding how prepared those students were for learning at university. These attributes mark a significant difference between the profiles developed in this study and the more common profiles found in the literature. It must be noted that the content of the learning profiles produced in this study is not meant to be prescriptive, as is usually the case with profiles presenting empirical research. The content relates only to the particular cohort of students in the current study and therefore is not generalisable to the wider population, as might be the case with normative profiles.

### **The Use of Theoretical Models of Learning**

The literature yielded ample examples of researchers who have made theoretical contributions to the scholarly debate about the relationship between specific elements of learning. Their research provided an important avenue for understanding the factors commonly associated with learning and provided valuable insights into their relationship to learning. Their research was also seminal in providing a useful and applicable platform for the design of the present study, especially in addressing the research questions. Three predominant learning models were considered pertinent to this enquiry. The research-

informed models were those developed by Biggs (1978), Ramsden (1988) and Prosser (1994). A dominant element in each is the relational dimension of learning used. Each model implied the relationships of various learning-related factors such as students' prior learning experience, the context of learning and the approach to learning outcomes, all of which are the subject of the present enquiry. These are discussed and their use in establishing relationships between prior learning, approach to learning and perception of the learning context and outcomes, demonstrated.

Models are figurative representations of paradigms which Guba and Lincoln (1994) described as being "a set of basic beliefs or worldview guiding enquiry" (p. 163) that define the nature of the world. According to Prosser and Trigwell (1999), models about learning "provide meaning and coherence to the practice of teaching and learning in higher education" (p. 10). The idealized patterns in the three models used to guide this study show the influence of previous research on establishing the relationship between prior learning, approach to learning and learning outcomes. These models link aspects of students' learning as well as the theoretical ideas derived from a predominantly phenomenographical perspective. Moreover, they follow an approach which is common to phenomenographic research design which seeks to identify and establish differences and relationships between phenomena.

Biggs' (1978) 'Presage-Process-Product (3P)' model of student learning (p. 268) described three points in time at which learning-related factors are placed. These are 'presage' – before learning takes place including student factors and learning context, 'process' – the activities during learning, and 'product' – the outcomes of learning. (Biggs, 2003, p. 19). The model was built on the earlier work of Dunkin and Biddle (1974) to include approaches to learning. Biggs' model represented the genesis of ideas proximal to the present study because it provided an ideal paradigm for investigating further the interaction between students, their learning context and their approach to learning, as well as other factors such as prior learning and learning outcomes. According to Prosser and Trigwell (1999), Biggs' (1978) model was the first to present a unified system showing the inter-relationship between the various components of learning and teaching, and subsequent models drew from the concepts it presented.

Ramsden's 'Student Learning in Context' model (1988, p. 161) presented the relationship between the four basic elements of learning which were used by Biggs (1978), but with the addition of perception. Unlike Biggs, Ramsden's (1988) model places prominence on 'Prior Experience', and employs 'Context of Learning' rather than Biggs'

‘Teaching Context’. Context is relevant to the model used in this study where the subject *Business Communication* is used as the context of learning. Ramsden (2003), like Marton and Säljö (1984), considered that approaches to learning are fundamentally responses to a context rather than “a stable entity within a person’s mind” (p. 40). These approaches he termed ‘orientation to study’ (Case & Gunstone, 2003, p. 57).

Another point of difference from Biggs’ model is Ramsden’s (1992) emphasis upon the central role of perception as the point of contact between educational context and students’ orientation to studying. Biggs (1978) did not include perception as one of the student factors in the ‘Presage’ stage of his model. Ramsden (1992) viewed perceptions in a phenomenographical way as the product of an interaction between the various learning environments which comprise the context learners find themselves in, as well as their previous experiences, including their ways of thinking about learning (p. 84). Like Biggs (2003), Ramsden (1992) indicated clearly that this sequence did not suggest a causal sequence of events but should be viewed as “a chain of interactions at different levels of generality” (p. 84). Such a view is consistent with the phenomenographical position, and the position taken in this study which investigates relationships between factors rather than causal results.

The third model, ‘Student Learning Perspective’ (Prosser et al., 1995, p.15), marks a departure from early studies which largely failed to account for prior learning factors as one of the main determinants of successful learning in first year. The Student learning Perspective model proposes a linear relationship between phenomena which Prosser considered were integral to learning. These were Student Characteristics and Course and Departmental Learning Context, Students’ Perception of Context, Students’ Approaches to Learning and finally, Student Learning Outcomes. The resultant ‘Student Learning Perspective Model’ focussed on the central themes of academic preparedness, perceptions and understandings of the course and students’ approaches to learning and their relationship to course outcomes. The researchers adapted and contextualised existing models by Biggs (1978) and also Ramsden (1988). Prosser et al. also used certain indicators from Ramsden’s (1992, 2005) Course Evaluation Questionnaire (CEQ) relating to students’ perceptions of context, and various indicators for subject perceptions and approaches to study of Biggs’ (1987b) Study Process Questionnaire (SPQ). Prosser developed his model further by measuring these factors against student learning outcomes (Prosser & Trigwell, 1999, p. 108).

Furthermore, like Ramsden (1988, 1992), Prosser (1999, 2004) was interested in the role that perception contributed to learning, and purported that students often have an unclear perception of what they study (Prosser et al., 1999, p. 1). He built on earlier work (1994, 1995, 1996, and 1997) to investigate the way variations in approaches to study related to perceptions about the subject and prior experiences of learning. Perceptions were viewed as “being the product of an interaction between the various learning environments and the students’ previous experiences, including their ways of thinking about learning” (Prosser & Trigwell, 1999, p.151). Consequently, it was argued that students exhibit a variation in approaches to learning and study orientation that are intimately connected to their perceptions of the learning context. This argument is supported by a substantial body of research in the literature which is discussed in the following section.

The relational perspective underpinning the research of Prosser et al. (1994, 1996, 1997), developed from earlier seminal studies on student learning, principally those of Säljö (1979), Biggs (1978), Marton and Säljö (1997), and also Ramsden (1983, 1984). Prosser et al.’s approach was to address the relations between certain aspects of the students’ experience of learning. However, his model takes as a point of departure the phenomenographic concept of variation between individual students buttressing their perspectives of learning. For example, Prosser et al. proposed over several studies (1994, 1995, 1996, 1997, 1999), in which the same phenomenographical methodology was repeated in different disciplines, that variations in students’ perceptions of their learning and understanding of the subject would produce learning at various levels. While the Student Learning Perspective’ model reflects the concern of Prosser et al. (1999), to determine the relationship between variables and their likely impact on the quality of learning, the component variables were “simultaneously present in any act of learning, and therefore causal results cannot be ascertained” (p. 31). Nonetheless, Prosser et al.’s (1994, 1996, 1999) findings demonstrated that there is a chain-like relationship between students’ prior learning experiences, approaches to learning, perception of the learning context and the learning outcomes. By using the Student Learning Perspective model, this study attempted to find a similar association between these factors. An important distinction however, is that the present study extends the enquiry to include the possible relationship of the variables to retention.

In extending this enquiry to include the relationship of the learning variables with retention, the model for this study represents a further development of the earlier models of student learning by Biggs (1992), Ramsden (1988) and Prosser (1994). The model for this study is positioned clearly within the ambit of first year learning and retention related

scholarship. Reviewing the literature on the development of three prominent relational models and their characteristic features, served to inform the design of the model used in this study and provided insights into the component factors and their significant relationships.

In addition to the theoretical models, this study borrowed most heavily from an approach to research design commonly employed in a number of studies by Prosser and Trigwell (1997, 1999). These researchers used a phenomenographic approach in discipline-specific studies to show how students' approaches to learning and perceptions of context were related to learning outcomes.

## **PHENOMENOGRAPHY AS THE UNDERLYING FRAMEWORK**

The main body of literature about phenomenography has been produced by phenomenographers themselves and those using its methodology in their research. Prominent amongst these include: Akerlind (2005); Biggs (1996); Booth (1992, 1997); Bowden et al. (1988, 1990, 1994, 2000); Dahlgren (1985, 1995, 1997); Dall'Alba (1994); Entwistle (1997); Marton & Säljö (1976, 1979, 1984); Marton and Booth (1995, 1996, 1997); Miller et al. (1989, 2001); Prosser (1989, 1994, 1997) and Svensson (1977). As there is a wealth of such literature, this section primarily includes only a selection of some of those writers and researchers who have contributed to the underlying ontological and epistemological and framework for this study.

The central premise which shaped the research design and the choice of phenomenographic theory and methodology is that students who enter university do so with varying phenomena comprising perceptions, learning skills, knowledge, interest and intrinsic motivation, and will have experienced these in different ways (Bowden & Marton, 1998). The varying phenomena refers to students' previous experiences and understandings developed in secondary, post-secondary studies or in the workplace, and, according to phenomenographic theory of variation, are related. Taken together, the multiple realities of these phenomena give a comprehensive picture of first year students as learners entering university, and therefore are relevant to the purposes of this study.

Fundamental to an understanding of phenomenography and its pedagogy is the knowledge that its ontological and epistemological stance is premised on the principle that phenomena are experienced. Consequently, the key epistemological aspects of this study relate to the lived experience of students as they relate it, and include the lived prior

experiences of learning which students bring to university; students' perceptions of the object of learning and the interpretation and perception of their own learning. These are aspects of learning which are both ontological and epistemological, and are important considerations in this study because they provide a framework for understanding how students perceive their learning and how this is constructed. As phenomenography uses 'epistemology' and 'ontology' in an idiosyncratic way, a brief explanation is warranted in the context of the present study.

The phenomenographic paradigm used in the present research addresses both ontological and epistemological concerns about meaning and learning by posing such questions as: What is it like to be a first year student on entry? and, What do the survey scripts tell the researcher about the students' learning? and also, What do students understand about their learning context? Such concerns reflect Guba and Lincoln's (1994) proposition that, "as in most social research, a large portion of the ontological question about the critical ways that students experience the world of learning consists of making meaning around the phenomena" (p. 167), which, in the context of phenomenographic pedagogy, accrues learning.

While ontology is about making meaning, epistemology is about understanding knowledge: the way it is acquired and how it is contextualised. In this research it refers to students' knowledge of their prior learning skills, approaches and experience, as well as their knowledge of what *business communication* entails. Such knowledge is not exclusively cognitive because, according to Dall'Alba and Barnacle (2005) it is "created, embodied and enacted from their lived experiences" (p. 362). However, if the sole pedagogical intention is epistemological with a focus on using knowledge and skills to transform students into deep and reflective learners, a focus on epistemology alone will not result in transformation because, according to Bowden and Green (2005), transforming the self is ontological. So, while students need to understand their learning practice and their domain-specific knowledge and skills, acquisition of these alone is not sufficient to make the transition. Dall'Alba and Barnacle (2005) proposed that directing attention to ontology by focussing on ways of being [a learner] will result in students making the transition into effective deep and self-directed learners (p. 361).

The ontological framework to this study is informed by the proposition that a set of prior phenomena, as described by Ramsden et al. (1996), Biggs (1988), Prosser (1994), Trigwell (2000), Marton (1981), Säljö (2000), Booth (1997), Bowden and Marton (1998) and

other researchers using a phenomenographical method of enquiry, relates to the way students approach their learning and their perceptions of the learning context. In terms of the nature of reality, this position aligns with a constitutionalist paradigm, which was discussed earlier.

The underlying message is that students' prior experiences, including their approaches to learning and perceptions of the learning context, have specific implications for facilitating their transformation from surface learners to deep, self-directed and reflective learners, and the acquisition of skilful learning practices. Nonetheless, Biggs (2003) contends that it is what students 'do' which results in learning, and in the process their conceptions of what they learn and how they learn change (p. 13), which reaffirms the role of ontology and epistemology in transformational learning.

Phenomenography has been criticized on a number of its precepts and practices. In response to criticism by Richardson (1999) of its reliance on student reflections in the interview, Jones and Asensio (2002) argued that phenomenographic research is adapting to its critics as the methodology is developing. One such change would be to accept the recommendation of Ashworth and Lucas (2000) that the interview should be better structured to elicit the emotional meanings of the participants' responses.

In its focus on the individual experience of the world and their conceptions of reality arising from this, Säljö (1994) and Uljens (1993) criticized phenomenography on the grounds that social and cultural contexts of learning and cognition are ignored. Three relevant articles report phenomenographic studies of student learning in a naturalistic environment that supports social and cultural contexts. Govender (2009), for example, used interviews to establish that African students' experiences of learning were embedded into their natural surroundings through various social interactions. Similarly, Lameris et al. (2008), used interviews to show that Greek students had different experiences of learning which were specific to their specific cultural context. Austerlitz (2007) researched the emotional experience of learning for art, design and communication students, and established that the phenomenographic researcher was able to capture the participants' internal viewpoint about their learning and the meaning they attached to it. With regards the role of cognition in students' accounts of their experiences, Hazel et al. (1997) defended the way in which the outcome space of the categorisation process is defined in cognitive terms, rather than affective dimensions.

The role of student reflection and awareness of the individual experience of the world and conceptions of reality was also criticized. Marton and Booth's (1997) position regarding

an individual's awareness of reality being brought to the fore by a process of reflection during interviews, was challenged by Richardson (1999) who displayed a limited understanding of the particular role that reflection plays in the phenomenography. Phenomenography proposes that reality is not something that is inside or outside a learner, but is the totality of meaning ascribed to any perceived phenomenon in context (Hong, 1997). Reflection is used as a vehicle for arriving at meaning. Svensson (1997) explained that "the emphasis on reality is a part of the relation that knowledge is, and is combined with the assumption that what is entering the relation has to be part of reality" (p. 166). In his study of Hong Kong final year Law students' experiences of learning, Hong (1997) found they had accumulated considerable knowledge over the years by a process of relating new knowledge to previously learnt content and making meaning of it. Students had developed an awareness of the meaning of Law and its practice as a reality. Even so, Hong found that some students tended to perceive reality strictly within the context of their own culture, which raises another area of criticism.

During a phenomenographic analysis the interviewer characterizes the reported participant experiences by using their own subjective frame of reference and experiences. Richardson (1999) highlighted the epistemological problem of how it is possible to know about other people's conceptions of the world merely on the basis of reflection of their own discursive verbal accounts of their experiences. However, Edwards and Potter (1992) argued to the contrary; that in order for investigators to understand conceptions of learning within the social context in which these occur, the interactions that occur in the context of interviews would need to be included (p. 10).

Richardson (1999) also criticized what he saw as problems with the articulation of conceptions as they appear in the categories of description of the phenomena being investigated. Categories of description describe the structural relationships between ways of experiencing a phenomenon in terms of the increasing complexity or breadth of awareness across categories. Richardson thought that because the classification into categories was based on the researcher's own experience of the domain in question, the categorisation of concepts could therefore be open to value judgments (p. 70). However, Akerlind (2004) contended that "the categorisation is not based on value judgments of better or worse ways of understanding, but on evidence of some categories being inclusive of others" (p. 95).

Essentially, such criticisms arose from how Richardson viewed the nature of qualitative research which was similar in sentiment with that of Hammersley (1989), who proposed that

“the dilemma of qualitative method [lies] in failing to reconcile the search for authentic understanding with the need for scientific rigor” (p. 53). This position is ironic, given that one of the tenets of phenomenography is that it purports to use authentic accounts by students whilst providing scientific rigor with its analytic methodology. It is evidence based research which is used to describe the world authentically as people describe it and, furthermore, it is a heuristic research method whose theories and processes are continuing to develop and improve. In recent years there has been considerable progress made by phenomenographic practitioners in refining the process, most prominently those of Bowden et al., (2000, 2005) and his colleagues. Both Hasselgren (1997) and Ramsden (2002) provided a counterbalance to this criticism by highlighting the way that phenomenographic has been useful in producing beneficial improvements to student learning, and proposed that phenomenographic research illuminates the processes of learning in higher education.

### **THE IMPORTANCE OF RELATIONSHIPS IN LEARNING**

Phenomenographic research is largely about learning and relationships. It is premised on a constitutionalist epistemology which argues that learning variables such as perceptions, approaches and outcomes are simultaneously present in a student’s awareness, and therefore are not independently constituted (Prosser & Trigwell, 1999), which implies a relationship. Prosser and Trigwell (1999) described the relationship as follows:

variations in students’ prior experiences, together with variations in perceptions of the situation, will evoke, or bring to the foreground, aspects of awareness that lead to variations in approaches to learning, and to variations in the quality of their learning outcomes (p. 14).

Previous learning experiences are evoked that have a chain-like reaction on each aspect of students’ learning, This is an important element in research such as the present study which seeks meanings and insights from a relational perspective.

This study employed a phenomenographic methodology to explore a full range of variation of learning approaches and perceptions expressed in responses by the student cohort, and to analyse the relationships between various learning-specific phenomena. Research question three specifically enquires into the relationship between the relevant learning-factors and outcomes and retention.

### **Nature of the Relationships between Learning Factors**

The literature on relationships between learning variables reviewed later in this section focusses primarily on those studies which employed phenomenographic methodology; specifically those enquiring into the relations between approach to learning, prior learning experience, learning outcomes and retention. According to the context in which they are used, these relationships are described in the literature in a variety of ways, such as internal, logical or functional, structural or hierarchical and dialectical relationships (Trigwell, 2000, p. 63 and *passim*). The implications of such relationships are central to the learning research, with Bowden and Marton (1998) describing the functional relationship between approaches to learning and the outcomes of learning as “perhaps the best known discovery in the research tradition” (p. 47). Some examples of these relationships are briefly outlined below for the purpose of clarification and to substantiate the approach taken to investigating relationships in this study.

Relationships can be described as being intrinsic in phenomenography because it is premised on a constitutionalist and non-dualistic epistemology, which argues that learning variables such as perceptions, approaches and outcomes are simultaneously present in a student’s awareness, and therefore are not independently constituted (Prosser & Trigwell, 1999). In the present case an internal relationship is shown between the learner and the phenomenon being experienced. Likewise, there is an internal relationship intrinsic to phenomenographic methodology between the interviewee and the phenomenon being investigated which, according to Walsh (2000), “is loose or very broadly based” (p. 20). The notion of an internal relationship denotes that if each student has a different relationship to learning, and each individual part of their learning experience impacts that relationship, then it is possible to describe a relational link in their learning chain.

Establishing logical relations between ways of experiencing phenomenon constitutes the main results of a phenomenographic study (Marton, 1992, in Prosser & Trigwell, 1999, p. 57). In defining the relationship between ways of understanding phenomena as “logical” (p. 56), Marton and Booth (1997) proposed that the relationship has a logic or chain of reasoning which they explained in terms of “acting in a particular way in a situation which springs from the manner it has been experienced previously” (p. 50). Furthermore, to arrive at a particular outcome, “a learner must have approached the learning task in a particular way” (*ibid*). This logical relationship was described by Entwistle (1997) as “functional” (p. 95) because it shows a sequence, for example, between the approaches to learning and perceptions of the

learning context that produces an outcome (p. 3). Studies by Crawford et al. (1994); Dahlgren, (1995); Marton, (1998); Prosser and Miller (1989); Marton, (1992); Matthew et al., (2010) and Walsh, (1994) all demonstrated logical/functional relationships between factors inherent to learning.

More common in the literature were studies demonstrating structural or hierarchical relationships. These studies provided evidence of different ways of experiencing a phenomenon in terms of the increasing complexity, or breadth of awareness across categories of description for phenomenon (Ashworth & Lucas, 2000; Bowden, 1996). These relationships consist of groupings of logically related dimensions of variation, based on differences and similarities, but are not, according to Trigwell (2000) intended to be a linear relationship (p. 95). Although categories of description are usually arranged in a logically hierarchical sequence, as they are in this study, it does not necessarily mean that the hierarchy is a direct line of descent or ascent. The relationship is hierarchical in that the categories provide a broad range of variations which as a group is linked to the next category. Categories of description reported in Chapters four and five, for instance, clearly demonstrate a logical relationship in the way students approached their learning or perceived *Business Communication*, and the way that the same students had changed or not changed in regard to these two aspects over their first year. More importantly, they also clearly demonstrated a *structural* relationship in the range and breadth of variation and complexities. Consequently, it must be reasonably argued that in order to establish the structural relationship of the different complexities in ways of seeing such phenomenon, each category must be considered in relation to each other, as is prescribed in the phenomenographic literature.

According to the literature there can also be a dialectical relationship between factors. Bowden (1998) declared that “students experience the learning environment according to the way they handle it, or conversely, they handle their learning environment according to their experience of it” (p. 8). This is an example of the dialectical relationship in learning between ways of experiencing the learning situation and ways of handling the learning situation, which infers the need for some logical disputation or discussion in order to test the truth of a proposition about a particular relationship.

For instance, in the case of the categories of description, it is not enough to simply constitute the categories; relationships between the different categories need to be considered, and a dialectical discussion and logical analysis undertaken of the categories. It is a process which is both heuristic and reflective in nature, with an outcome regarded as representing the

dialectical relationship between the categories of description in terms of content, meaning and structure (Bowden, 2000; Tan, 2008). In synthesising the range of categories describing students approach to learning and their perception of the learning context in the study, the guidance offered by the literature was relevant in regard to employing a dialectical approach to synthesis, allowing a logical and thoughtful deliberation about particular relationships between each category.

Learning can be thus considered as a relationship between all the complex and conceivable ways in which it can be experienced, made sense of and thought about (Bowden, 2000). Such a relationship is described as being heuristic rather than deterministic as it helps to reason and discover possible relations between different aspects of learning (Ramsden, 2001, p. 56). In this respect, Ramsden stressed that such a relationship “does not imply an inevitable or single causal sequence of events, but rather a chain of connections at different levels of generality” (p. 81). These connections are said to establish points of intervention to enhance the quality of student learning, and by inference, to encourage persistence (ibid). The present study does not aim to confirm or disprove such findings, but uses the conclusions as points of comparison in its analysis and discussion of their contribution to retention. This approach is consistent with the study’s focus on describing and analysing relationships inherent in students’ experiences of their learning situations, and the way these are constituted. Some of the more salient findings are presented here for the purpose of making greater sense of the theoretical models, in particular aspects of relationality and variation.

Aspects of experiencing such phenomena, that is, approaches to learning and perceptions of the learning context, are considered to be “intertwined” (Bowden & Marton, 1998, p. 50), suggesting a complex relationship between these factors. The idea of learning phenomena being intertwined is pivotal to the conduct of the present research which investigates the often complex relationships between factors thought to contribute to retention. Consequently, seeking relationships is fundamental to phenomenographic research, and therefore to this study.

### **Relationships between Learning Variables**

This study investigated whether prior learning factors have a bearing on students’ approach to learning, their perception of the subject and their outcomes, including their decision to stay at university or leave. To address the first research question, studies that substantiate the relational aspects of learning being investigated in the current study were

reviewed. The literature review also identified particular predictors of student achievement and individual factors relating to retention.

This literature comprised mainly studies which were predominantly phenomenographic in design, reporting findings in the way learning phenomena were related (Byrne & Flood, 2005). The view of York and Longden (2004), for instance, that there is no simple relationship between independent variables and withdrawal, was of particular interest as it was clear from the literature that there is no single determinant of success or of retention that was clearly articulated. Rather, there is a cluster of factors involved, with the strong likelihood of these being related. Similarly, in their study of dental students Alzaharani et al. (2005) showed that a single variable of student prior learning experience was not a good predictor, but clusters of variables could be significant at predicating academic success (p. 37). Reporting on a study of UK undergraduate students, Harvey et al. (2006) concluded similarly. The national study found that prior knowledge of a subject and grades achieved in the early part of the first year were indicators of success in first year, but only in combination with other variables (p. 47). This relationship between variables associated with learning warrants further discussion.

The literature pointed to a convergent pattern where variables were interrelated. According to Bowden and Marton (1998), such research findings are interrelated because the variation in factors inherent in learning represent “different aspects of the very same learning experience, as seen by the same individuals, and between the same aspects of the same situation or phenomenon as seen by different individuals” (p. 72). Also summing up the phenomenographic approach to investigating the experience of learning, Wood (2006) emphasised the relationships of three pivotal factors as “variation in the critical aspects [that] relate to epistemological stance, [including] perceptions of others’ perceptions, the relational nature of learning, interpretation and perception” (p. 53).

These phenomenographic perspectives establish the importance of a convergent pattern of related variables in allowing the learning process to be conceptualised holistically. In the context of the present study investigating the relationship of relevant factors to outcomes and retention also allows for a more holistic view of learning to be taken.

The relation of approaches to learning to outcomes has been much researched and is well established (Biggs, 1987; Biggs et al., 2001; Cano, 2005; Drew & Davis, 1998; Drysdale et al., 2001; Elliott et al., 2002; Hall et al., 1997; Marton & Säljö, 1984; Marton, 1988; Norton & Crowley (1995); Prosser & Miller, 1989; Trigwell & Prosser, 1996; van Rossum &

Schenk, 1984; Watkins 2001). While there was a considerable body of convergent literature about the relationship of variant factors to outcomes, as well as the relationship between approaches to learning and aspects of prior learning, there was a notable absence of research about the contribution of approaches to learning, prior learning and the learning context to retention.

### **Relationship between Approach to Learning and Prior Learning Experience**

This study proposes that the way students engage with these various phenomena prior to entering university will affect the way they understand and perceive the concept of learning when they enter university. Hence, to the phenomenographer there will be different approaches to learning according to what the learners are focussing on, what they set out to achieve and how they intend to go about it, and these will be based on their prior experience of those approaches (Prosser & Trigwell, 1999). This tenet implies a relationship between factors, and is therefore pivotal to the conduct of this research. Before turning to specific examples of this relationship, a brief discussion of approach to learning is required.

There is general agreement in the literature that approaches to learning have been found to be varied and variable, according to context, and aligned with previous educational experiences (Biggs, 1993; Hall 1997; Marton (1981); Prosser & Trigwell, 1997; Ramsden, 1984; Säljö, 1975). For instance, research by Cook and Lecky (1999) demonstrated a dependence on the experiences of prior learning patterns to be an important factor with subsequent learning approaches, with many of the study habits developed in high school persisting into the first year of university.

Over a number of successive studies Prosser and Trigwell (1994, 1997, 1999) also provided persuasive argument that students who undertake subjects and courses with a poorly developed background understanding are likely to adopt surface approaches to their studies. Likewise, if students have had previous experience of learning where their subject included rote material of a surface nature, it was more likely that the students would adopt a surface approach to learning in their other and subsequent studies (Prosser & Trigwell, 1999, p. 27). Additionally, Duchy et al. (1999), in a study which investigated how prior learning of concepts related to the impact of problem based learning, demonstrated that students with better developed perceptions and understandings of their learning from their prior experiences of learning, responded better to the impact of problem based learning. These studies usually refer to prior learning as being students' prior experience of learning a

specific discipline at high school or some form of post-secondary education, although it sometimes also includes informal learning of the type acquired in employment or work experience.

The connection between approach to learning and a student's prior learning experience is best summed up by Ramsden (2005), who, when focussing on the nature of approaches to learning, described them as "being inseparable from both the content and the context of learning, both as previously experienced and as currently experienced" (p. 64). This is primarily a phenomenographical viewpoint which aligns with that of Biggs (1998), who proposed that no learning occurs independently of students' previous experiences of learning. This forms the basis of the current study that there is a connection between students' prior learning and their approach to learning employed in the university *Business Communication* subject. For example, when students are asked about their approach to learning *Business Communication* they draw on their previous experience of learning business communication, or their experience with employment-related business communication.

The generalisation that emerged from this section is that students' association with their prior learning experience engenders a predilection towards a particular approach to learning. In the context of the present study, it might also provide an understanding that learning will involve both theoretical and practical knowledge of business communication, and therefore shape their approach to learning. There is thus an implied relationship between both factors.

### **Relationship between Perceptions of the Learning Context, Approach to Learning and Outcomes**

In this study perceptions of the learning context and approaches to learning are considered as instantiations of prior experience, and in phenomenographic terms, simultaneously constituted (Akerlind, 2002). Therefore, when discussing the relationship between these factors in this section, there is an assumption that perceptions of the learning context and approach to learning refer to prior experience, albeit it not exclusively. As this relationship is fundamental to addressing research questions one and three, its pertinence in respect of the literature needs to be established. Before this discussion occurs, perceptions of the learning context are defined since perception is considered an essential lens for interpreting phenomena in this study.

Perception is used here as it is in the literature, that is, interchangeably with conception, although there are slight differences in meaning between the two. Perceptions comprise the

set of understandings which students have about the subject they are about to study. In a wider sense, this definition was influenced by that of Poulson and Wallace (2004) who described perceptions as “sets of concepts often combined to form certain perspectives, such as selected facts, values and assumptions forming a screen for viewing social events and processes” (p. 11). The nature of student perceptions would be affected by the various beliefs and cultural artefacts which comprise their prior experience (*ibid*). According to Volet and Mansfield (2006) perceptions are mediated by personal goals (p. 353), which was also the conclusion of Sharma (1997) in respect of student’s perceptions of learning and their learning approaches in accounting. In this study ‘learning context’ refers to the subject, *Business Communication*, and defines its inherent set of understandings and perceptions of its goals, content and major inherent concepts. Perception of the learning context and approaches to learning, although simultaneously constituted in phenomenographic terms, represent significant links in the series of functional relationships in aspects of student learning, and the outcomes of learning arrived at by them. This nexus is important because the chain of relationships is considered to be associated with decisions for students to persist or leave.

Successive studies of first year students researched the relationship between perceptions of learning context and approaches to learning (Hounsell, 1985; Pintrich, 2004; Ramsden, 1992; Trigwell & Prosser, 1996; Sharma, 1997; Watkins, 2001). Where such research into student learning investigated the impact on outcomes, the research was clear about the effects of particular approaches to learning on the quality of learning outcomes, and also the effect of perceptions (and misperceptions) of the learning context on outcomes.

The literature shows there is a close relationship between students’ perception of their learning context and their approaches to learning, which was described by Ramsden (2002) as being “inseparable” (p. 64). According to Bowden and Marton (2004), such a relationship is “formulated in terms of the learner’s experience of the object of learning” (p. 71), in other words, not only the student’s prior experience of learning but also the way aspects of the subject have been experienced in practice.

Ramsden (1992) earlier advised educationalists to look beyond students’ approaches to learning and towards their perceptions of the educational context gained from their prior experience, which he considered to be the focal point in investigating the sequence of inter-related factors which impact outcomes. This point is crucial because it highlights the essential relationship between approach to learning and perception of the learning context that arises from the students’ prior experience, and as a sequitur, a relationship is established between

prior experience, approach to learning, perceptions of the learning context and outcomes. The research referred to here and elsewhere in the literature which confirmed this relationship repeatedly, (Biggs and Tang, 2007; Gibbs et al., 1984; Marton et al., 1993; van Rossum and Schenk, 1984), reveals that there is more concern with the connection of these factors to academic outcomes rather than to retention.

In terms of the present study, an important theme running through this research is that the way students approach their learning relates to their perception of the learning task, and in turn, relates to the quality of their learning outcomes. While this sequence of factors cannot be described as a causal link, it can be seen from the research to be relational, and implies an association with retention. These findings support a core assumption of this study: that threshold perception and approach to learning, which are developed as part of students' prior experience, affects performance and are likely to be associated with retention.

### **Relationship between Prior Learning Experience, Outcomes and Retention**

A common thread through the literature relating to retention is the role of student preparedness and its impact on student outcomes. As discussed earlier, different dimensions of preparedness are usually reported such as demographic, motivational and personal factors (James et al., 2010; Krause, 2006; McInnis & James, 1995). While not denying the importance of such factors, this study limits its consideration of preparedness to prior learning experience, which comprises perceptions of context and approaches to learning, as well as a measurement of students' skills attributes required for business studies.

One of the main factors which maximise student achievement and optimise retention, according to studies by Brennan (2001) and Watson et al. (2004), is the level of preparedness by prospective students to make an informed choice of course and subjects. This means having the required pre-entry information and students not mistakenly believing they already know enough to make an informed decision. In the absence of pre-entry course and subject information, students make decisions based on their prior learning experience, including perceptions which, as intimated by Trotter and Roberts (2006), might, or might not be accurate (p. 27).

This was borne out in the First Year Experience Report (2006) at James Cook University, which found that 27.1% of all first year students across the university identified their perceptions of university not matching the reality of their experience (unnumbered page) as the most important factor in deciding whether to discontinue or defer their course.

Furthermore, in three successive national Australian surveys of first year students, Krause et al. (2005) found that 30% of students felt ill-prepared to choose a university course on leaving school (p. 8). In other words, for many students, their prior experience and knowledge were insufficient to provide an adequate perception of the prospective courses they were interested in, and they were, consequentially, unprepared. Unfortunately, Krause et al.'s report fell short of making a link between unpreparedness and academic outcomes on retention. However, Trotter and Roberts et al. (2006), reporting on the results of a study in a UK university into approaches to enhancing retention rates in first year students, found that high retention rates were associated with students being provided with appropriate information to shape their perceptions and expectations of the learning context. Providing early student assistance with clarifying perceptions and understanding courses and subjects was demonstrated to be associated with improved retention.

Another pertinent survey was conducted by the School of Business of the university in which this study took place, titled: *First Year Experience Report in the School of Business, Findings for the 2005 First Year Group* (Benckendorff, 2005), which used a contextualised questionnaire from the national study by Krause et al. (2005), of the first year experience in Australian universities. Two hundred and forty three first year business students completed the survey. Amongst other things, 40% thought they had not been ready to choose a university course on leaving secondary school: only 34.6% reported they were given helpful advice when choosing their subjects: 30% were dissatisfied with their choice of subjects, 48.4% thought university was not what they expected: 19.6% hoped to change to a different course and 15.7% to a different university (p. 3). This survey demonstrated the general unpreparedness for students in this cohort to enter university. They held misperceptions of their learning context and were often uninformed about their subjects, or felt they had not received sufficient pre-enrolment advice. All of these factors were relevant and crucial in determining why 28% of students in the cohort failed to persist in their first year of their business degree studies.

A subsequent report about first year retention in the School of Business (SoB) by Benckendorff (2005), of the same cohort, found that personal circumstances, such as financial difficulties, employment and family, was a major cause of attrition in the first year business cohort. When these results were discussed by the School's Teaching and Learning Committee, it was concluded that "the only approach that may reduce this attrition [within the control of the School] is to be more flexible in its response to students' needs" (p. 3). The

SoB proceeded to propose increasing opportunities for flexible learning, and subsequently converted a wide range of its subjects to online delivery mode. The results of the SoB survey highlighted various social, economic and personal factors which were considered by the Teaching and Learning Committee to be commonplace for a school located in a regional university. The main criticism of an approach which has, at its locus, the student's experience of engagement and demographic, social, economic and personal factors, is that it is a somewhat narrow approach. To a large degree, it is typical of the literature discussed earlier which fails to address learning-related aspects of students' prior experience as likely contributors to the student experience and also to retention.

The design and approach of Benckendorff's survey and its response were consistent with a first year experience questionnaire conducted by the university in 2006, which premised student engagement and experience as essential to first year success. A telephone exit survey conducted by (Bode, 2006) also investigated the first year experience of 232 students enrolled in a variety of business degrees in the School of Business. Bode's survey reported similar findings to those of Trotter and Roberts (2006) about the importance of preparedness for students entering the business course, and the impact preparedness had on outcomes.

Bode's (2006) report, titled: 'Students' experience of first year study in the School of Business: factors which could influence retention', reflected the prevailing approach to retention research based on that of Tinto (1993). Tinto's approach is a commonly espoused view in the literature which asserts that students are more likely to persist with their study in settings that provide academic, social and personal support. Bode sought comments from students about four specific areas, namely transition into university, teaching and learning support, supplementary teaching in literacy and numeracy workshops, and the students' overall experience of first year in terms of its interest, challenges and rewards. Like Benckendorff (2005, 2006), Bode found that personal circumstances such as financial difficulties, employment and family issues were major causes of first year attrition from the SoB, and concluded that, in addition to the provision of learning support for students (p. 2), additional flexible learning opportunities were required. In probing the causes of high attrition, both reports ignored the impact of preparedness factors such as the set of learning skills and perceptions which entry students brought with them to their university studies. They also failed to consider whether these factors were adequate for the purposes of academic success in their first year, and for promoting retention.

A salient theme running through the literature was the connection between prior experience and outcomes which was established in a variety of discipline-specific studies including business, chemistry, economics, health, mathematics, medicine, psychology and physics. The literature confirmed that prior experience of learning a particular discipline, including relevant perceptions and content knowledge gained in that experience, influence students' preparedness to study at university, as well as acting as a predictor of their subsequent success with learning the subject.

The literature established associations between prior learning and performance, including research by Bartlett et al. (1993); Gracia and Jenkins (2001); Keef (1992) and Mitchell (1988) in accounting; BouJaodie and Giuliano (1994) in chemistry; De Clerq et al. (2001), Madigan (2006) in health-related contexts; Hagedorn et al. (1999), and Beckworth (1991) in psychology; and Meyer and Shanahan (2001) in economics. Several studies by Prosser et al. (1993, 1994, 1997, 1999, 2000) in various science fields, also confirmed that students' prior experiences of learning, in connection with their perceptions of the learning situation and their approach to their learning, had a substantial impact on their academic success. The research supported a core premise of this study, namely that threshold understanding and knowledge, as part of students' prior experience, affect their learning and performance, and to a lesser extent, supports the assumption that these variables ultimately relate also to retention.

Some studies reported findings to the contrary. Baldwin and Howe (1982), Bergin (1983), Lane and Porch (2002), for example, found that the effect of prior learning experience of accounting could not be used as a predictor value of results. Dreher and Ryan (2000) found minimal support for the proposition that previous work experience leads to higher levels of academic achievement, at least in an MBA program. With few exceptions, there was a clear trend evident in the literature to suggest that students with higher levels of prior knowledge or experience have (a) less difficulty with studying the subject, (b) report being more prepared for their subject by having clear perceptions of their subject and (c) generally are more successful in their learning outcomes.

While there is considerable research literature on the impact on outcomes of prior learning of discipline-related knowledge and skills, there is considerably less on the impact of non-discipline-specific prior learning. Including the experience of learning as an integral part of prior learning is a less-traditional approach to researching the impact of prior learning, and one which is desiderate in the literature.

The literature indicates that the concept of prior learning experience has been used in universities rather narrowly, relating primarily to specific discipline knowledge such as the studies referred to earlier. There is scarce inclusion of students' approaches to learning, for example, as an element of prior learning, or research which investigates the impact of learning approaches that were previously used in the acquisition of discipline knowledge and skills. This narrow focus may account for the relative paucity of published research into the impact of prior learning experience in the wider sense, including students' prior understanding of the act of learning, and the skills and epistemological underpinnings of learning.

Although universities, and including the School of Business in the university in this study, have long examined first year performance as a likely indicator of both success and retention, there has been a tendency to predict academic success by examining tertiary entrance measures such as the overall position (OP) score, or its equivalent, for academic entry (Krause et al., 1995). This traditional approach to viewing students' likely success in their first year is a narrow interpretation of the notion of prior learning, as it does not account for the wealth of other forms of learning which accrue according to a person's life experience prior to entering university.

Prior learning in this study differed from the traditional approach of relying upon academic entry scores. Prior learning embodied threshold knowledge and skills in literacy, numeracy and information technology, which were discipline-specific skills thought to serve as useful indicators of success in a business course, and considered to be largely unrelated to students' OP score. In *Business Communication*, for example, examination of student results and progress over a number of years led staff at this university to isolate generic literacy, numeracy and information technology skills at entry to be important in predicting student ability to cope with the concepts and skills inherent in a business course. Prior experience of learning in this study also included students' experience of learning that particular set of threshold knowledge and skills prior to entering university.

There is a clear trend evident in the research literature outlined above to suggest that students with higher levels of prior knowledge or experience in specific discipline areas have less difficulty with studying a particular subject. They reported being more prepared for their subject by having clear understandings of their subject, and were generally more successful in their learning outcomes. Consequently, as *a priori*, they might be expected to stay and persist in their studies.

## FACTORS RELATING TO RETENTION

This section presents a range of literature which enquires into factors affecting first year persistence. Student attrition is a large problem in universities. Referring to the results of the Australasian Survey of Student Engagement (AUSSE) survey conducted in 2008, Coates et al. (2009) noted that one third of all Australian and New Zealand tertiary students consider leaving their institutions before graduation. Non-completion was also a large and persistent problem in the School of Business where the present study was located, and one that prompted this study. Reviewing the retention literature was essential to answering the third research question and in particular those factors that impacted students' decisions to withdraw.

The corpus of relevant literature was found to be based on single institution studies and often with small samples, but a few large scale studies were also reported. Some of this research was generic and some specific, and while most was germane to first year, some also related to non-first year students. Retention literature was found to be vast, somewhat piecemeal, at times contradictory and sometimes confusing. Therefore, for obvious practical reasons, only a small part of that heterogeneous mix of literature is discussed here. There is an emphasis on demonstrating literature relating to the relationship between aspects of learning, outcomes and retention because investigating such relationships is the focus of the third research question.

There is general agreement in the literature about the difficulty of identifying the causes of non-completion, particularly those of first year students. Bennett et al. (1999, 2007); Braxton (2011); Hall (2001, 2002, 2004); Mackie (2001) and Yorke (1999) all concluded that the student retention issue is complex, and the decision to withdraw usually results from an accumulated combination of within-the-student and institutional problems. In fact, York and Longden (2004) argued that theorising retention is too restricted to cope with the many influences on student persistence, and concluded that the evidence showed that "student departures result from a combination of complex and multiple factors that are unique to each student" (p. 34). Although the present study also supports this position, its nucleus lies in examining only a small number of factors related to learning.

Locating studies on the causes for failure and non-completion is difficult according to Wimshurt et al. (2006), and remains "patchy and underdeveloped" (p. 134). Furthermore, there is very little in the way of guidance on or justification for the best strategies to take to enhance retention (Christie et al., 2004; Johnston, 2001), although in recent times various

national reports have provided recommendations for such strategies. Some of these reports are discussed later. A review of student non-completion models undertaken by Laing and Robinson (2003) indicated two crucial shortcomings of such models, namely, that they failed to justify the strategies used to reduce non-completion, and also that they did not explain the causes of non-completion in an integrated way. Both are indicative of Wimshurst et al.'s assertion that such literature is largely underdeveloped.

The literature revealed a dichotomous view in the reasons for non-completion, that “the problem either resides in characteristics of non-completing students, or in institutional factors” (Wimshurst et al., 2006, p. 133). The prevailing argument which runs through the current literature and continues to influence the way retention is viewed, is that factors such as the quality of a student's integration into their university environment, although tempered by personal characteristics and experience, are the main determinants of retention (Cuseo, 2003; Johnstone, 2001; Krause et al., 2005; Longden, 2004; Mackie, 2001; Pascarella et al. 1991, 2005; Tinto, 1987; Yorke, 2009). Non-cognitive factors generally fall into two broad groups namely, factors relating to the student and factors relating to the institution and integration; the latter currently prevailing in the literature. A survey of the prominent writers in the field is provided below to indicate the breadth of scholarship evident in the literature and the relative importance placed on aspects of retention. Generally, the studies found that the outcomes involved more than one contributing factor or group of factors.

In the research focussing on student-centered factors, a variety of personal characteristics was found to contribute to non-persistence. These related primarily to students' prior experience. The most prominent factor reported was academic preparedness which Bennett (2003); Davies and Elias (2003); Harrison (2006); Henderson (2003); Martinez (2001); Pascarella and Chapman (1983); Swail (2004) and Yorke (1999) found to be a prime cause for student attrition. Other researchers, including Foster (2002); Martinez (2001); Spours (1997) and Zimitat (2003), established a range of perceptual factors impacting retention including, for example, students' perception of their role as tertiary learners. Bellor et al. (2010); Brown and Revshlie (2009); Longden (2004); Mackie (1998) and Martinez (2001), proposed that students being first generation university attendees had a major impact on student retention, while another group of researchers focused on the impact of social groups on student persistence, including Krause et al. (2005); McCubbin (2003) and Thomas et al. (2002).

Other researchers described groups of student-centered factors which combined to contribute to non-persistence. The factors in each group are not listed in any order of importance. Davies (1999); Gordon et al. (2002); Harrison (2006); James et al. (2007); McInnis et al. (2000); and Pitkethy and Prosser (2001), for example, found that changing personal circumstances, financial issues and dissatisfaction with the course all contributed to non-persistence. This group of contributing factors was the most common referred to in the literature, followed by the group of course expectations, motivation and career decisions/choice of course (Davies & Elias, 2003; Gordon et al. 2002; Longden, 2001; Marland, 2003; Martinez, 2001 and Yorke, 1999). Another group of contributing factors included motivation, personal self-belief, stress and time-management abilities (Amaury, 1987; Henderson, 2003; Truman-Davis et al. 2000; Wethington and Kessler, 1986, and Yorke, 2001).

The most common discourse in the retention literature is the impact of student integration into the institution. Integration as an element in persistence was framed by Tinto (1975, 1987), who proposed that student integration into the institution is at the core of withdrawal. Integration incorporates a complex interaction of factors which writers such as Davies, (1999); Draper, (2003); James, (2002); Krause et al. (2005); Long et al. (2006); Longden, (2004); Mackie, (2001); Martinez, (2001); McInnis and James, (1995); Pascarella and Terenzini, (2005); Tinto, (1987); and Willmot and Lloyd, (2002) suggest are significant in the way they affect students' predisposition to non-persistence. The key aspect of such integration is the commitment of the institution to its educational goals which allows students academic and social integration into the fabric of university life. The quality of institutional and faculty level organization, for example course and academic integration, classroom engagement activities, the availability of resources and access to ongoing student support services, were found to contribute largely to whether students feel accepted in the institutional environment. The quality of the faculty-student interaction was also found to rely on students' social and interpersonal skills which were considered to be key components to institutional integration.

A recent critique of the student experience discourse by Sabri (2011) asserted that although commonplace in higher education, the student experience has "homogenised students and deprived them of a voice" (p. 657), while Lynch (2011) claimed that it "underpins the marketisation of higher education and the elevation of the consumer to a sacred form" (in Sabri, 2011, p. 638). The main criticism was that the student experience has

gained currency at the expense of the form and function of students' different experiences of learning and the scholarship of learning.

At this point a brief survey of national reports on transition students is pertinent in identifying traits and characteristics which may affect their decision to persist or leave their first year at university. In proposing a blueprint for enhanced transition to university, Nelson et al. (2006) reported on national and international research into the needs of transition students, describing commencing students as arriving at university with certain expectations and various levels of preparation for university and doubts about the process. They have ill-informed preconceptions about what might be encountered and how these factors might impact their ability to achieve, which may influence their decision to stay or leave.

This description aligns broadly with James' (2002) contention that "many new students are either not overly familiar with, or have completely ill-formed preconceptions about, what might be encountered in the course of their choice" (p. 2). According to Kift and Nelson (2005), and Krause et al. (2005), having ill-formed preconceptions about their course may impact their ability to succeed, and may ultimately influence their decision to withdraw. With this profile of transition students in mind it is apposite that this study enquires into aspects of students' preparedness for tertiary study.

Another report, 'The First Year Experience in Australian Universities: Findings from 1994 to 2009, (James et al., 2010), described the fourth national study of a series undertaken at five year intervals. Its findings revealed trends in students' study habits and patterns of engagement, as well as a deal of other empirical data about first year students. Of interest to this study was the finding that "responding to students at risk [of non-continuance or poor academic progress] . . . and students who are highly disengaged [with their university study], represents the biggest challenge of the sector" (p. 6). Yet, after fifteen years of surveying and describing first year students, James et al. argued that the precise reasons for the persistent proportion of first year students who are very disengaged are "difficult to identify and probably quite varied" (p. 6). The authors also predicted that there would be an "increasing number of students who will be entering higher education unfamiliar with its character and with lower levels of achievement in their previous educational experiences" (p. 7). It is clear that finding more effective ways of addressing non-completion is critical, given the nature of the increasing number of students who will be entering higher education and what the research has revealed about retention.

While not ignoring the importance of personal factors raised by Benckendorff (2005, 2006), and Bode (2006), or those range of the academic and social experiences of transition raised by James et al. (2010), the current study proposes that exploring approaches to learning and learning skills, as well as perceptions of the learning context, is essential to an understanding of the preparedness of first year students to learn in the way required at university. This study's contention that there are complex and interrelated issues involving learning which contribute to retention, is a theme which is largely not prominent in the literature. In so departing from the more common approach of focusing on integration and institutional factors in investigating first year retention, this study extends the existing theoretical framework for first year learning experience and retention, as well as contributing to its literature.

In summary, while various themes have been identified and explored in regard to the nature and causes of non-completion, there is no clear and unifying model articulated for viewing the range of issues affecting retention. Although the literature has a wide purview, there is no evidence of a common perspective - nor one which is systematically presented, and certainly no evidence of controversial or polemic debates, or critiques, which could be inimical to any individual theory. The literature review demonstrates that there is insufficient research on the role that learning plays in non-completion, and indicates an exigent need to develop the scholarship using a less narrow and seemingly disparate lens. It is impossible to draw any conclusions from the desiderate nature of current literature on retention, other than the need for research which extends current ways of viewing retention to incorporate the role that learning has on retention.

### **Conclusion**

This chapter examined a broad range of literature within the related themes of learning, phenomenography, relationships in learning and also first year retention. In its scope, the literature served to clarify theoretical, methodological and analytical issues related to the research questions and to situate the study within this framework. The chapter provided a justification for choosing prior experience, approach to learning and perception of the learning context to examine aspects of first year learning and their impact upon retention.

Reviewing the literature on threshold concepts and troublesome threshold concepts provided an avenue to argue that learning can also be considered a threshold concept for first

year students, and to suggest that students experiencing trouble with learning can contribute to their decisions to withdraw.

The chapter discussed the relationship between aspects of first year learning and their impact on outcomes, which this study proposes impacts retention. A gap in the literature was indicated which links aspects of first year learning to retention.

The main conclusions emerging from the prevailing and diverse literature on retention, are that there are multiple factors involved which are primarily associated with integration and institutional factors. Despite this trend, it is clear that in order to comprehend the potential for improving first year retention, it is necessary to extend the existing theoretical framework for examining student persistence models. This study proposes that such a model embraces the role played by aspects of student learning and their interrelationship.

A major insight gained in this review process was how relationships between the various factors and their impact on outcomes and retention were demonstrated, albeit to a lesser extent with the latter factor. It is the thesis of this study that these factors contribute to an understanding of why and how entry students develop their learning approaches and perceptions, and, consequently, how these may affect their success at their first year studies and their willingness to stay on at university. The next chapter considers the way in which this literature review informed the theoretical framework, design and conduct for the study, and the role that phenomenography plays in that design.

## CHAPTER THREE: METHODOLOGY

This chapter describes the methodology employed in the study with a focus on the phenomenographic analysis used. The chapter is divided into three sections. The first is a theoretical overview of the phenomenographic methodology. The second section presents the rationale for choosing this approach to explore the learning related factors in students' experience of first year university, and the third section presents the research design, which details how phenomenography was operationalised in the study.

As a starting point, this study employed the phenomenographic methodology which Prosser and Trigwell (1999) frequently used to investigate students' perceptions of context in relation to their approaches to learning. As well as drawing and building on their work, a statistical analysis and content analysis were used to explore the learning experience of the student cohort.

### The Research Questions

Three pivotal and closely-related questions were asked about the qualitatively different ways students approach their learning in their first year undergraduate university studies and how these ways affect learning outcomes. The questions are framed in terms of the underlying tenets of phenomenography, and provide not only a nexus to the aims of the research but also cohesiveness to the research design. The questions are:

- (1) *How academically prepared are students to begin their first year of university in regard to three factors: prior learning, approaches to learning and perception of the learning context?*
- (2) *Do students change the way they view their approach to learning and their learning context over the first year?*
- (3) *How are the factors of prior learning experiences, approach to learning and perception of the learning context related to (a) the learning outcomes of a group of first year business students and, (b) retention?*

These questions were addressed using both qualitative and quantitative methods, as detailed in the following table:

Table 1: Overview of the ways in which the Research Questions were addressed

Research Question	Method used to address question
(1) <i>How academically prepared are students to begin their first year of university studies in regard to three factors: prior learning experiences, approach to learning and perception of the learning context?</i>	<p>The results of skills pre-tests for numeracy, literacy and information technology were used as indicators of prior learning.</p> <p>A two item survey was used, and results analysed using phenomenographical methodology into categories which described the range and variation of students' approach to learning and their perception of the subject <i>Business Communication</i>.</p>
(2) <i>Do students change the way they view their approach to learning and their learning context over the first year?</i>	<p>An eight item telephone interview was used to gauge whether students had changed their approach to learning and their understanding of <i>Business Communication</i>. A combination was used of phenomenographic analysis for the responses to the first two items and content analysis for the responses of the remaining six items.</p>
(3) <i>How are the factors of prior learning experience, approach to learning and perception of the learning context related to (a) the learning outcomes of a group of first year business students, and (b) retention?</i>	<p>(a) A comparison was made of multi-dimensional data including distribution of final results per grade for <i>Business Communication</i> and categories for approach to learning and perception of the subject. These are presented as tables and graphs.</p> <p>A statistical analysis using bivariate analysis was employed to determine relationships between pairs of learning-related variables.</p> <p>(b) A review and comparison of the following:</p> <ol style="list-style-type: none"> <li>1. Faculty attrition figures for <i>Business Communication</i>;</li> <li>2. Data obtained in this study from end of year telephone interviews of students, including a small number who had left the course;</li> <li>3. Findings from the School of Bus. report of telephone exit interviews conducted at end of semester which included students who had left <i>Business Communication</i>; and,</li> <li>4. Comparison with results from a national DEST report on the first year experience in Australian universities.</li> </ol>

## SECTION 1: Overview of Phenomenographic Methodology

Phenomenography is a qualitative methodology that investigates the variation in the ways people experience a phenomenon such as learning (Bowden & Marton, 1998). According to Miles and Huberman (1994) qualitative research designs such as phenomenography “provide clarity and focus for the exploration of understudied phenomena or very complex social phenomena” (p. 16). For both of these reasons, it is therefore applicable to use phenomenographic methodology to understand prior learning experiences, approach to learning and perception of the learning context of first year learners as they begin their university studies.

Phenomenography is a participant-centered approach that incorporates a deep respect for the participants and their experience, as well as recognition of the importance of the meaning and significance they give to the experience (Bowden & Marton, 1998). The phenomenographic researcher commonly comes to know the participant through written responses to survey questions or through interviews. It is this focus on the integrity of the self-reported student experience that gave phenomenography its appeal for use in this study.

The aim of the methodology was to survey, by way of interview or in written form, and analyse participant responses to questions about the phenomenon to obtain the broadest range of meanings that participants ascribe to that phenomenon. These responses were classified in a way that described the experience of the group as a whole (Prosser & Trigwell, 1999) and each classification was given a title that captured the essence of that particular group of responses. The classifications are called ‘categories of description’ and are usually organized in a hierarchy, if this is appropriate, and presented in tables. Examples of students’ responses are included to illustrate the classification. The study employed this methodology to describe the individual experiences of first year university students, and to develop a comprehensive description of the variation of the learning experience for the group. Exploring the different ways that students understand their learning is a concern central to phenomenography (Marton & Booth, 1996; Prosser, 1994).

Phenomenography uses its own specific terminology to describe key concepts of the approach. One such concept is the theory of variation (Akerlind, 2003) which refers to the differences in the way that the participants in the study conceived particular phenomena, in this case, learning. These variations are generally classified by coalescing around researcher consensus on the meanings that researchers discern from the students’ text (Akerlind, 2005). A second concept related to the theory of variation is participant awareness. Prosser and

Trigwell (1999) emphasised the importance of interpreting the results of phenomenographic research in terms of the awareness of participants of their own particular learning situation, describing participants' awareness as "stable constructs within a cognitive structure" (p. 172). A third important term is outcome space (Marton & Booth, 1997) which refers to the logically structured and different ways of experiencing an object, and represents the range of qualitatively different understandings identified in the pooled data set (Prosser & Trigwell, 1999). In this study, the outcome space includes the categories of description which were used to articulate variations in learning and certain relationships in learning.

### **Rationale for the Use of Phenomenographic Methodology**

The choice of phenomenography as a research design was grounded in the purpose of the research, which was to enhance understanding of the way a group of first year business students learn, and the impact of various factors on this process. The purpose required a philosophical paradigm and a method that would allow a range of perspectives of learning to be identified, described, interpreted and classified. This meant that a methodology was required which would provide a systematic approach to illuminating how students conceptualised their role as learners, the perspectives they held about what their learning entailed and their prior learning experiences; and also how these were related.

A review of the literature revealed several methodologies appropriate for social enquiry and pertinent to the object of the study. These were narrowed to include only those approaches which purported to describe how phenomena are experienced. They included pure description such as phenomenology (van Manen, 1990); description, interpretation, explanation and action such as action research (Kemmis & McTaggart, 2001); and description and interpretation such as grounded theory (Glaser & Strauss, 1967) and phenomenography (Bowden & Marton, 1998). While both phenomenology and phenomenography describe how phenomena are experienced, phenomenography was more appropriate to the purpose of this study. Unlike phenomenology, phenomenography presents the experience of a group, and investigates variation within the perspectives of the group (Bowden & Walsh, 2000). Furthermore, phenomenography is an approach which allows the study of the dynamic relations among such aspects of learning.

Another appealing methodology was grounded theory (Glaser & Strauss, 1967) which differs from phenomenography in the way data are analysed. Grounded theory seeks to distil the underlying conceptions and intentions of the experience to produce a theory, which is not

the case in phenomenography. In contrast, phenomenography aims to discern situational and personal relations between experience and context of the whole cohort (Bowden & Walsh, 2009). Phenomenography was considered the more appropriate methodology to arrive at a concrete rather than an abstract understanding of the variation among students' experience of university learning and address the research questions.

A number of basic features of the phenomenographic methodology made it the most attractive method to address both the aims of the study and its research questions. Marton and Säljö (1984) noted that the original purpose of phenomenography was to improve learning and it is an approach which has a strong student focus. Phenomenography has its own defined pedagogical approach to learning and teaching which provides for a range and variation of perspectives to be presented. This includes similarities and differences between ways that students experience understanding, and thus provide insights into the complexity of first year learning. Moreover, the use of phenomenographic methodology to provide descriptions of the experience of learning was compelling: one in which learning can be categorised and described in particular situations. Because phenomenography has a focus on learning, it presented an ideal method for analysing and classifying data by using the qualitatively different ways students described their perceptions and understandings of learning and the learning context in written scripts.

A major appeal of phenomenography lay in its strength and focus on the lived experience of the student, which means that both researcher and teacher can come to know students through their written survey scripts and also through the interview transcripts. Entwistle (1997) echoed a similar sentiment when he wrote: "the test is not generally its [phenomenography's] theoretical purity, but its value in producing useful insights into teaching and learning" (p. 129). Its structure provides for understanding of meaning to be developed from the group as a collective, and not just as a single experience. Although phenomenography allows for the voices of the students to be heard, and each student's experience is analysed, individual transcripts are used to describe the total experience of the group. In this way, the total experiences of the group can be collected and the essence of different ways of experiencing aspects of learning in the group can be described.

One of the purposes of this study includes investigating change of learner perspectives over their first year that produces findings in a way that can improve practice. It is interesting in this context to consider Bowden and Marton's (1998) view of learning which relates strongly to the notion of change: "Developing new ways of seeing (situations,

phenomena) is, of course, not the only form of learning, but it is the most fundamental and neglected form of learning” (p. 278). Phenomenographic methodology allows an assessment of any shift in learning orientations over a period, which would address the second research question of the study.

With regard to practice, phenomenography provides findings on which teachers can base their decisions about intervention to assist student learning (Bowden & Marton, 1998), hence the methodology lends itself to practical applications. The methodology is useful because it produces very well defined categories which were used to generate a profile of learners, ranging hierarchically, for example, from the less able to the more able, and the conceptions of the learning context from the very structured to the disconnected. So, in arranging categories into a hierarchy, a direction is provided for the purposes of improving student learning, and as Marton and Säljö (1976) proposed, could also be used to help improve teaching.

Phenomenography represented an appropriate paradigm to address the key research questions. It was considered to be the ‘best fit’ solution in relation to the object of the enquiry, particularly in regard to the way in which learning and the learning context are treated in a systematic way. In its ability to gather, analyse and relate such information, phenomenography was seen as an appropriate approach to employ to answer the research questions, all of which relate to learning.

In summary, the use of phenomenographic methodology offered several advantages for the aims of this study. By exploring the lived experience of students, phenomenography opened up questions about the nature of learning and how students acquired the desirable learning competencies and understandings necessary for tertiary learning. It exposed the various dimensions of learning and their relationships as experienced by students entering university. In important respects its use extended the scholarship about first year pedagogy which is crucial for practitioners eager to enhance the teaching and learning experience, as well as those whose agenda is improving retention.

### **Limitations with the use of Phenomenographic Methodology in the Study**

During the conduct of this research there were five major limitations experienced with the use of phenomenographic methodology. The first three were largely overcome by using the advice in the literature (Bowden, 2000; Bowden & Green, 2005); however, when the limitations involved students, these were more difficult to address.

Firstly, a major delimiting factor in this study was that students' written scripts and interview transcripts were analysed by the researcher herself without the benefit of other viewpoints, whereas the analysis of data inherent in phenomenographic methodology is normally conducted collaboratively. A team of researchers engage in successive explicit discourse which allows debate, analysis and reflection in a sufficiently flexible way as to engage with the transcript data and categories of description. This approach is particularly useful when student responses are ambiguous or difficult to understand their meaning. Working collaboratively makes the exercise of categorising hierarchically easier than when a solo researcher attempts the task because it allows discussion of different ways of understanding what a student says or writes. Although this study did not involve a team of researchers in the process of analysis, the researcher attempted to avoid the problems mentioned above by taking a multi-visit approach to the analysis of data.

Secondly, the phenomenographic approach uses specific language to categorise student responses to derive meaning. The role of language in phenomenographic methodology is therefore very important as it rests heavily on examining the language which students use in written transcript surveys and in interviews. Because of the nature of the multiple different discourses and meanings inherent in language, it is difficult to ever capture completely the complexity of meaning of the action, concept, experience or perception that it describes. This issue was addressed by employing successive iterative analyses of analysis of the language in defining categories of description, which is an essential element of phenomenographic methodology.

Thirdly, the phenomenographic researcher is required to understand the perspective of the student and what they are expressing in their transcripts, "while simultaneously being open to contradictions or unexamined assumptions in their thinking" (Marton & Booth, 1997, p. 68). Moreover, a great variety of perceptions about learning held by commencing students further adds to the complexity of categorising what is written in narrative responses. Discerning meaning in scripts can often be problematic with phenomenographic analysis because it requires not only deciphering different and often contradictory interpretations of experiences, but also consciously avoiding subjectivity on the part of the researcher, while carefully considering each response in relation to those of the whole cohort. Hence the researcher had to be constantly aware of the need for objectivity in employing a meta-narrative approach, and attempt to understand language as a mix of competing discourses reflecting a wide variation in experiences.

Fourthly, students require a sufficiently good grasp of written language to be able to describe their learning in a written format. According to Bowden (2000), if this is not the case the researcher has to consciously avoid interpolation or extrapolation in gleaning meaning from transcripts which might be incomplete, ambiguous or poorly written.

Phenomenographic methodology makes the assumption that students have the skills and knowledge to be able to discuss learning and to use appropriate language to do so.

The task of staying with the transcript when interpreting meaning, as Bowden (1986) advised, was made more difficult in this study because of the paucity and brevity of students' written responses to the survey questions as well as their apparent lack of appropriate written language in those responses. The survey findings were severely delimited by the student's written language skills, with student responses to the survey averaging around one written paragraph, rather than longer scripts which are normal in this approach. Moreover, ambiguities in language meaning describing one's approach to learning made it difficult to determine sub scales of categorization in the analysis of results. This situation was hardly surprising given Bowden's (2000) assessment that students enter university with varying levels of language competencies and different language discourses. An objective approach was necessary in deciding exactly what the student was saying in the transcript without being tempted to second-guess, or preempt what it was that the researcher thought or may have liked the student to have written.

The final delimiting factor related to reflection. There is an assumption in phenomenographic methodology that students entering university have experience and skills in being able to reflect. The survey posed two questions for students to respond to, both of which required reflection as well as the ability to write about their reflections in a sufficiently fluent way allowing meaning to be derived and analysed. Consideration of students' ability to reflect and use appropriate language in a way that conveyed their intended response to the questions, served to moderate how the various transcripts were analysed and categorized. In this study it appeared to the researcher that students had not reflected on the survey questions adequately before writing their responses, despite being given adequate time to do so and the questions being read aloud and explained beforehand.

Most of these limitations which were also areas of concern in the literature, became obvious during the collection and analysis of data. The issues of poor language and reflectivity skills were not apparent in the literature but were manifested in this study, which led the researcher to consider they may have been specific only to this particular cohort.

In addressing these limitations, the advice offered by prominent phenomenographic researchers and methodologists (Akerlind, 2002; Bowden, 1996; Bowden & Walsh, 2000; Green, 2002; Dall'Alba et al., 1996) was followed, although dealing with generally poor language and reflexivity ability were more difficult challenges.

### **Establishing and Naming Categories of Description**

Phenomenography is an approach to enquiry which is empirical, descriptive, and accounts for the range of experience of a particular group. Its methodology relies heavily upon responses to open ended questions in written or oral surveys to record participants' experience of a particular phenomenon.

As a methodology, phenomenography generates a large amount of data from written transcripts or from interviews. These are analysed to provide the dimensions of variations as 'categories of description' which describe and classify variation in aspects of experience. Categories of description are defined as:

the structural relationships between ways of experiencing a phenomenon in terms of the increasing complexity or breadth of awareness across categories. These consist of groupings of logically related dimensions of variation, based on differences . . . and similarities in the ways that students describe a phenomenon (Prosser & Trigwell, 1999, p. 89).

Relationships between factors shown as categories of description, provide examples of the different ways that students experience the particular phenomena, and usually indicate a hierarchy of relationships. Investigating relationships between learning-related factors is common in phenomenographic research, and reflects theories of variation and constitutionalism, discussed previously.

A core assumption in phenomenographic analysis is that categories of description are varied, logically related to one another and linked via hierarchically inclusive relationships (Marton & Booth, 1997). Phenomenographic analysis explores the range of meanings within the group as a group, rather than the range of meanings for each individual within the group. Akerlind (2005) advised focussing on the emerging meaning of the group rather than just the individual script. The researcher also followed the direction of Green (2005) when analyzing similar data sets, except for one minor difference. In introducing the notion of sub-categories, this study deviated from the phenomenographical approach in that the term 'sub-category' was adopted to provide greater clarity of the variants within each category and is modeled on

similar practice by Prosser and Trigwell (1999). The literature more usually refers to categories as ‘first-order’ and sub-categories as ‘second-order hierarchies’ (Richardson, 1999).

There were four steps in the analysis process, namely, (a) to analyse the total pool of meanings in the set of student scripts and bundle these into broad groups in the first instance, (tentatively representing categories of description); (b) to analyze each bundle of scripts for meanings within groups of similar scripts to tentatively represent sub-categories of description (Bowden, 2000; Green, 2002); (c) to order these smaller bundles, or sub-categories, into a logical sequence to show a hierarchy and, (d) to give each sub-category an individual title which reflects the focus of each set of student responses in the sub-category. In naming each sub-category, words can be taken from the group of scripts to convey the sense and meaning for the group.

Illustrations of the end result of the categorization process can be seen in the following examples, each demonstrating the hierarchical organisation of the variation within a category. The first example is from Prosser and Trigwell’s (1999) study investigating motivation in learning that produced the set of student learning categories, labeled A-E, which are reported here:

- A Learning as accumulating more information to satisfy external demands,
- B Learning as acquiring concepts to satisfy external demands,
- C Learning as acquiring concepts to satisfy internal demands,
- D Learning as conceptual development to satisfy internal demand,
- E Learning as conceptual change to satisfy internal demands (p. 36).

These categories, labeled A- E, are related and hierarchical, shifting in quality from A to E, with E being the most desirable.

A second example is from Crawford, Gordon, Nicholas and Prosser’s (1994) study of intentional factors in learning a mathematics course:

- A Learning by rote memorisation, with an intention to reproduce knowledge and procedures,
- B Learning by doing lots of examples, with an intention to reproduce knowledge and procedures,
- C Learning by doing lots of examples with an intention of gaining a relational understanding of the theory and concepts,

- D Learning by doing difficult problems with an intention of gaining a relational understanding of the entire theory, and seeing a relationship with existing knowledge,
- E Learning with the intention of gaining a relational understanding of the theory and looking for situations where the theory will apply (Crawford et al., p. 337).

These categories were relational and hierarchical, marking a qualitative shift in learning orientations from A to E.

A primary feature of constituting categories of description was the search for key qualitative similarities and differences between the emerging categories. The process of producing a hierarchy involved continual searches for meaning within and between the bundles of student scripts and comparing the categories as they emerged. It was a process that was repeated as many times as necessary to arrive at the desired outcomes. In constituting categories of description the researcher interrogated the data for variations in meaning and focus. The process was guided by the researcher asking herself the following kinds of questions which Prosser (1994) proposed would help clarify meaning across the total range of responses: What do the written responses suggest? What is the range of learning approaches or the range of perceptions about the context which the students' responses indicate? and, What are the intentions and motives for learning? (p. 67).

Determining meaning in participant responses was sometimes very difficult because of the way in which language was used. One of the challenges of analyzing student texts in the study lay in reading and interpreting the language in the way it was intended. Language played a crucial role in phenomenographic analysis because in order to derive meaning, the researcher was often required to decipher the language which participants used. Because language is a mix of competing discourses which produces texts that can be contradictory, ambiguous, unclear and inconsistent, phenomenographic researchers take special care to distinguish purely linguistic differences in texts from differences that represent variation in underlying meaning (Bowden, 1994b, 2000; Prosser, 1994, 2000; Svensson, 1995; Trigwell, 1994, 2000). Moreover, linguistic differences need not mean differences in meaning.

The researcher had to be aware of the need for objectivity in seeking to find meaning in what students wrote in the scripts, which reflected Bowden's (2000) advice to "stick with what is written in the script" (p. 178). This may include learning to look at the words surrounding the text being analysed to discern participants' "underlying intention and attitudes towards the phenomenon they are describing" (Trigwell, 2000, p. 87). The advice of Säljö (1996, in Case & Gunston, 2003) about the importance of taking what students say in

interviews to be a direct reflection of the way they experience the world, was also heeded. Therefore, in the analysis of texts the advice of prominent phenomenographic researchers was taken and, in the process, the researcher took care to minimise both interpolation and extrapolation.

Categorisation can also be complex because it is an interpretative process, meaning that the researcher “tries to elicit the underlying meanings, intentions and attitudes towards the phenomenon” (Barnacle, 2005, p. 223), even when these are ambiguous or undefined. The challenge of interpretation in this study was to use what students wrote to derive meaning, to look for relationships between scripts, as well as account for both commonality and diversity of ways that students experienced learning. It was an iterative process in which interpretations were checked several times against the transcript data so that the sub-categories of description which emerged reflected the conceptions of the phenomenon from a pool of meanings, rather than just individual meanings (Akerlind, Bowden & Green, 2005).

Categories of description are often shown in table form. The use of tables to present outputs was recommended by Green (2002) who presented the structural relation between categories through tables, in much the same way as Prosser et al. (1997) did in their studies. Green (2002) used tables to provide a visual representative of the increasing complexity of breadth and awareness across categories, thus allowing a “perspective on the collective experience of the phenomenon, illustrating the variation within the whole” (p. 125). This study also employed tables to represent the results of the phenomenographic analysis.

Research quality in a phenomenographic study relies on its methodology and design processes, and there are various steps taken to ensure the fidelity of the methodology during the classification of data into sub-categories of description. The classification process in the study relied heavily on reference to the student scripts, therefore the meaning that was ascribed and its interpretation was faithful to participant responses. There were multiple iterations of interpretation of the same data which opened the analysis to all the possible meanings in student responses for that group, as suggested by Green (2002). Continual checks were made to monitor how faithfully the original meaning of the student response had been captured and retained, and whether its essence had been reflected in the constitution of the category of description and in its nomenclature.

Phenomenographic methodology provided for transparency in the way that categories of description revealed something distinctive about a way of understanding the phenomenon and the way categories were related in scope. According to Green (2005) the categories are to

be logically related, typically as a hierarchy of structurally inclusive relationships. This meant that relationships between aspects of the learning phenomena in the study were able to be made transparent. Firstly, representative student quotes were included to illustrate how each category was identified and named, which provided greater transparency. Secondly, the advice of Bowden (2000) about the timing of categorising and labelling was followed. Bowden suggested that when the analysis is conducted collaboratively a wide range of views are possible about the meaning and interpretation of scripts, but when the analysis is conducted by an individual researcher it is even more important to delay the labelling of the sub-categories until after several iterations of categorization occurs in order to reduce researcher bias. Accordingly, the categorisation and labelling of scripts was delayed until several iterations of analysis had occurred. Hence the analysis of student scripts in this study followed quality processes established in the methodology research.

### **Parameters of the Study and Limitations of the Methodology**

As an introduction and for the purpose of clarification, this section presents a brief description of the parameters of the study including details of the cohort, gender, some details relating to data collected and terms. It then discusses the relevant assumptions relating largely to the use of phenomenographic methodology.

#### **Cohort**

The study involved administering written surveys to 272 first year Business students who were enrolled in the core subject *Business Communication* at the beginning of the academic year, and interviewing by telephone 61 of this number at the end of their first year. Although all 272 students were phoned, some twice, only 61 of this number were available and prepared to be interviewed.

#### **Gender**

This study was concerned with first year learners - regardless of gender, and was therefore not a genderised study. Future research might pursue gender or other demographic and socio-economic factors of first year learners.

#### **Timing of Survey and Interviews**

Students were surveyed at the beginning of the first teaching session in semester one before the first formal lecture began. This timing was purposeful so that students could be

surveyed before they had the opportunity to be given any introductory information about the subject, or develop a deeper knowledge base about the subject. Telephone interviews were begun after the final examination period at the end of first year, and in order to maximize the opportunity for interviews, students were telephoned over a three month period.

### **Inclusion of Results of Skills Testing**

Skills test results for basic skills competencies in numeracy, literacy and information technology (IT) were included in the study as an indicator of prior learning. Numeracy, literacy and information technology skills were identified by academic staff as being essential for students of business to be able to learn *Business Communication*, a subject which included electronic as well as written, spoken and interpersonal communication, and numeracy skills required to read (interpret) financial records and statistics. The tests were intended to establish commencing students' competencies in these areas and contained prerequisite knowledge and skills which School of Business academic staff determined were essential for students to learn the business discipline, as well as contributing to the development of required graduate attributes. According to Barrie (2006), academics commonly express an understanding of graduate attributes in terms of necessary precursor skills that students possess on entry that are further developed during their university course.

The tests were designed by university learning advisory staff, based on standardised instruments and advice from School of Business (SoB) academic staff and the SoB Teaching and Learning Committee. Consequently, the design and analysis of the skills tests were not within the scope of this study.

### **The Use of End of Semester Subject Results**

End of semester one results for *Business Communication* were used as an indicator of the student learning outcome. Results, reported as high distinction (HD), distinction (D), credit (C), pass (P) and fail (N), were obtained from the faculty office and used for analytical purposes. These were obtained at the end of the academic year to allow for supplementary exams and remarking of papers to occur and results to be finalised.

### **The Use of Retention Data**

Retention data for the cohort was obtained from the faculty office after the first census date of the following year, which is in accordance with the Department of Education, Employment and Work Relations (DEEWR) definition of retention being those students who

have re-enrolled by the first census date of the following academic year. This also allowed for the return of results for students who had sat deferrals or supplementary exams for the subject.

### **Pivotal Terms related to Learning**

It is useful for the purpose of clarity to indicate the way certain terms were used in this research. The use of key aspects in this study, specifically approach to learning, perception of the learning context and prior experience of learning, as well as those terms related to phenomenography are briefly overviewed below.

Approach to learning refers to when a student enters a new learning situation such as beginning university study, and the context evokes an immediate response about how he or she is going to approach the required learning tasks. This response is “evoked from the student’s prior experience of learning” (Prosser (1999, p. 39).

Perception of the learning context refers to students’ understanding of the context they are about to learn, that is the subject *Business Communication*. According to Prosser and Trigwell this includes its aims and expected outcomes, content, assessment, the expected workload and clarity of the standards expected.

Prior experience embraces the wide spectrum of all prior experiences of learning and orientation (Watkins et al., 2002). In this study a more narrow definition was used, namely the set of numeracy, literacy and information skills were taken as indicators of prior learning. ‘Prior experience of learning’ in this study means the accumulated experience of students’ formal and informal learning prior to entering university, and might include work experience or any other form of experience where students learnt elements that are present in the study of *Business Communication*, such as, for example, communication, teamwork and report writing.

Phenomenography in particular utilizes a lexicon which is most specific and requires some explanation in order to align the reader’s perspectives to those of this research. Some of these terms were described in the previous chapter and some appear throughout this chapter. When first used these are highlighted for emphasis in italics. Definitions of these and other relevant terms used in this study are also included in Appendix A.

### **Assumptions**

There are certain assumptions inherent in this study which need to be identified to ensure that the analysis of results takes into account all possible limitations to drawing conclusions. The more important assumptions are listed below:

- a) Commencing students enter university with prior learning, experiences, understandings and perceptions about their learning and what they are about to learn;
- b) There is a relationship between ways of learning and learning related factors;
- c) Some ways of learning and perceiving the learning situation are more effective than others in terms of the quality of learning outcomes and critical success factors;
- d) Prior experience, proclivity towards certain learning styles and perceptions and understandings of the learning context of those students entering university can influence their decision to withdraw or stay;
- e) Prior learning embodies the corpus of knowledge, understandings and skills with which students enter their university studies. This approach is based on the assumption that students' understanding of learning is likely to be the accumulated result of their prior experiences of learning, and the various learning approaches developed in their previous experiences in learning environments such as primary and secondary school, TAFE and also in the workplace; and finally,
- f) Students are able to reflect, describe, and write about their learning because they have the necessary language competencies and understand the learning-related language to be able to complete the survey.

In the main, these assumptions arose not only from direct observation by the researcher during the conduct of the study but also from studies in the literature reporting similar assumptions.

### **SECTION 2: The Research Design**

The research paradigm or key understandings in this study in terms of what counts as knowledge, that is the epistemological issues, and how we know what we know, that is the ontological issues, positions it within an interpretist theoretical tradition (Guba & Lincoln,

1994). Green (2002) defined an interpretist position within a phenomenographic framework as “the process of determining structural relationships between the categories of description [and] represents a subjective epistemology” (p. 6). Furthermore, the approach to phenomenographic enquiry is both empirical and descriptive, with qualitative as well as quantitative methods employed. It is an approach that embraces the interpretative tradition of research in which “A central tenet [is] a commitment to documenting the way in which individuals and groups of individuals define and perceive their worlds. Hence the concern of those researchers is with subjective experience” (Hitchcock & Hughes 1989, p. 54).

An interpretivist approach to enquiry is based on the notion of multiple realities across different contexts which are constituted from interpretations made as a consequence of interactions within the world, and implies that reality is neither singular nor fixed (Green, 2005), and according to Prosser and Trigwell (1999), such realities are multiple as well as varied. Phenomenography enquiry is concerned with the ways in which students subjectively experience, and hence interpret, multiple realities, and the full range and variation of those experiences.

Green’s (2002) definition represents “a theoretical stance to enquiry that assumes a subjective epistemology in which the interactions and interpretations between the researcher and the research participants, create understandings that are value-mediated or subjective” (p. 7). Such a stance to enquiry underpins phenomenographical enquiry. In addition, Green proposed that a subjective epistemology is the result of transactions between the researcher and the research participants in an attempt to create understandings. It is these understandings or interpretations of meaning which can be value-mediated or subjective, particularly during the process of analyzing students’ written transcripts into categories of description, and is one of the criticisms of this approach (Richardson, 1999).

Phenomenographic enquiry has, as its focus, the individual and what is expressed by the individual, either in oral interviews or in written survey questions. The current research focuses on understanding first year learners by reading what the students themselves have to say about their learning experiences as they entered university, and again in reflection of what they say about their first year learning experiences at the end of the year. Its methodology analyses data, with interpretations of findings grounded in the raw data itself. Guba and Lincoln (1994) described the purpose of such enquiry as “understanding the constructions people initially hold about a phenomenon, aiming towards consensus but still open to new interpretations as information and sophistication improve” (p. 113).

Furthermore, Barnacle (2005) proposed that such interpretation is foregrounded, challenging the researchers to transform their understanding about how students experience learning.

As the previous chapter demonstrated, phenomenography has been used extensively by educational researchers who have shown, amongst other things, the positive relationship between approaches to learning and perceptions of learning context with learning outcomes, thereby producing useful insights into the way first year students learn and the impact of various factors on this process. Traditional phenomenographical research investigates the qualitatively different ways in which students understand a particular phenomenon. Bowden (1990) described this as:

In a sense phenomenographic research mirrors what good teachers do. It tries to understand what the students are doing in their learning. It attempts to discover what different approaches students are taking and to understand these in terms of outcomes of their learning activities (p. 9).

Such attributes reinforce the use of a phenomenographic framework for the research design in providing an approach to investigate a little-researched area of first year learning, and also gathering data which clarified the learning profile of students entering the business degree.

However, phenomenographic research does not only result in descriptions of different ways in which the same thing can be seen by individuals or a group of individuals. It also provides information about how that phenomenon is experienced in a particular way. For instance, Booth and Anderberg (2005) described a recurring theme in their research which was framed in terms of variations in ways in which students experienced the central concepts and principles of their studies, and where the concept of experience was the focal point. Not only was variation identified, but the researchers also found how these variations were experienced by students. These ranged from *vague and undifferentiated*, to *complex and connected*; and in regard to variations in the ways in which students tackled their learning tasks, they “ranged from surface to deep approaches” (p. 376). This example illustrates how a phenomenographic theoretical approach can be used, and the student voice employed to produce not only details of variation but also show how a particular phenomenon such as learning was experienced.

Context is important in phenomenographic enquiry, and in that respect its approach to enquiry can be described as naturalistic. However, in this study, context refers to students’ perception of *Business Communication* before they had studied it, and not as students who had actually experienced it. This perspective of enquiry is akin to a snapshot of students at

that moment of time, recording their awareness of the various learning-related factors simultaneously and constantly present; and an example of the phenomenographic principle of simultaneity. The findings of this research applied only to the students in the cohort who were participants in the enquiry, and only at that particular time at which data were being collected.

In the present research, data were gathered about the variation in ways students experienced their learning, ranging from surface to deep, and also variation in their understanding of the subject, ranging from fragmented to cohesive. The use of the variation theory of learning (Akerlind, 2005) to structure the analysis of the learning experience led to a rich description of the students' learning because it provided multiple realities, or perspectives, of the experience and outcomes of learning for researchers, teachers and students. In discovering the different approaches students intended to take for their learning, opportunities were provided for teachers to intervene to assist students, so that learning outcomes and retention in first year could be maximized.

In phenomenographic studies where the relationship between variables are investigated, the results are interpreted in complementary ways to address the research questions. This also allows for representation as categories of description of the full range and variation of experiences associated with learning. According to Bowden (1998), the relationship between qualitative differences in approaches to learning and in the outcomes of learning is “an empirical finding because the data is categorised and counted” (p. 50). Consequently, as the present study employed four kinds of data which were analysed, categorised and counted, its findings can be defined as empirical. Having provided an introduction to the research design and the key features of interpretative enquiry, the next section describes the three phases of the research design.

### **The Three Phases of the Research Design**

The research unfolded progressively over three phases, in an iterative fashion, and characteristic features of each emerged during the analysis. Its methodology produced contextual information and rich insights into the way students understood and perceived of their learning; demonstrated the ways in which they perceived they had changed as learners; and described and analysed relationships inherent in students' experiences of their learning situations and the way these were constituted. The three phases were:

PHASE ONE: Student Preparedness;

PHASE TWO: Description of change in learning approach and perception of context; and  
 PHASE THREE: Additional factors impacting outcomes and the description of the learner profiles.

The participants in the study comprised first year Business students at a regional university who were enrolled in the core first semester subject *Business Communication*. The cohort consisted of school leavers and mature age students. This latter group was classified as not having entered university immediately after high school with at least a 12 month gap. Of the total cohort who remained enrolled in the subject after the first census date ( $\approx 292$ ), 272 provided the necessary data for Phase 1 of the study. These data were generated by responses to skills tests and a survey. Semester results for the subject were collected for all 272 students. Of these students, 61 were subsequently interviewed by telephone at the end of the year for the purposes of the remaining three phases.

In total, four sets of data were collected over a 12 month period. At entry, skills tests results and survey responses were collected; at the end of first semester, once finalised, the grade results for *Business Communication* were collected, and at the end of the academic year the interviews were conducted. Each phase of the research design is discussed in this section in respect of (1) its purpose and how the research questions were addressed, (2) the data collected, (3) the analysis of the data as well as (4) the outputs produced as a result of the analysis.

## **PHASE ONE: Student Preparedness**

### **Purpose**

The purpose of this phase was to establish the preparedness of students to succeed in first year using three dimensions: students' prior learning, their approach to learning and their perception of context. These three variables were cross-tabulated with their end-of-semester grade results for the subject to address the following research question:

*How academically prepared are students to begin their first year of university studies in regard to three factors: prior learning experiences, approach to learning and perception of their learning context?*

The rationale for using such measures as indicators of preparedness rests on the assumption that preparedness is related to previous experiences of learning. It is an assumption which is supported by the notion that students entering their university studies arrive with what Green (1999) described as "baggage from their previous learning

experience” (p. 7). From this perspective students will understand learning and business communication in reference to the accumulated result of their previous experience of learning and of business communication. For example, the various learning approaches developed in their previous experiences in learning environments, such as primary and secondary school, TAFE and also in the workplace, are all connected to the notion of preparedness.

Prior learning was measured in terms of students’ results for a set of skills tests in numeracy, literacy and information technology, which were considered to be the most pertinent indicators of academic literacy, an assessment reflecting Krause’s (2006) view that “one cogent factor contributing to success of first year students [is] having the necessary academic literacies to enable them to do so” (p. 7). Skills tests in numeracy and literacy were based on standardised tests which were adapted to suit the needs of the business course by the university’s academic advisors, the School of Business (SoB) Teaching and Learning Committee and SoB staff. The School administered the skills tests for the purpose of early detection of students with basic skills deficiencies. The tests were trialled with a different group of first year students to ensure their relevancy. The content validity for the skills tests was established through the contribution of an annual skills test review panel comprising SoB staff who scrutinised each survey item for applicability, clarity, and fit-for-purpose requirements. Students with poor results in numeracy and literacy skills tests were offered support classes in those areas.

Students’ approach to learning was related to their particular predisposition or orientation to learning and their views or conceptions of learning (Prosser & Trigwell, 1999). Their approach to learning was determined by asking the following question in the survey. *What do you think you need to do to learn Business Communication?* Students’ perceptions of the learning concept were composed of the set of understandings which they had about the subject they were about to study: its aims, concepts and learning outcomes, and was determined by asking the following question in the survey: *What do you think Business Communication is all about?* Both survey questions aimed to identify multiple perspectives and perceptions which comprised student learning approaches and understanding of the subject. These data were subsequently analysed phenomenographically to produce categories of description to show variation in approach to learning and perception of the learning context.

In assessing the adequacy of students’ preparedness, reference was made to the end of semester results. Final grades were used as a quantitative measure of students’ learning

outcomes. Subject results were only one indicator of learning success, but they were readily observable, measurable and easy to collect from faculty records. These were used to cross-tabulate grade results against skills results and the categories of description for approach to learning and perception of the learning context.

### **Data**

Three sets of data were used in this phase. These were the pass and fail results of the skills tests, the responses to the two questions in the survey and the end of semester grades. All first year business students who were at the first lecture for *Business Communication* in the first semester completed the survey and the three skills tests. The skills tests were each 15 minutes in duration and 20 minutes was allowed for completion of the survey. Extra time was provided if required. The researcher administered both the survey and the skills tests. The skills tests were marked by a university Academic Advisor.

### **Survey Method**

The survey design and analysis drew primarily from the phenomenographic approach taken by Prosser (1994, 1996, 1997a, 1997b, 1999) who used two open-ended questions in several replicated studies primarily in the science disciplines, for example (a) *What do you think you need to do to learn biochemistry?* (b) *What do you think biochemistry is about?* Both questions were written in easy to understand, student-friendly language. These questions were replicated for this study but adapted to the business discipline. The questions used were:

*What do you think you need to do to learn Business Communication?* and,

*What do you think Business Communication is all about?*

The first question sought to establish how students intended to go about the task of learning and also to determine their knowledge of the learning process. It required students to reflect on the way they had studied in the past and their related learning skills. The question was designed to determine whether students were entering university with surface or deep learning approaches, whether they were strategic learners, and also whether they understood that there was likely to be a different approach to learning required in a tertiary environment from what they had previously experienced. The question: *What do you think you need to do to learn Business Communication?* might equally have been applied to any of the first year Bachelor of Business subjects, as the focus was on 'learn'. Because of the wide variations in

the educational backgrounds and experience of entry students and their demographics which are normal in Business students at this university, it was anticipated that their replies to this question would vary greatly. Consequently, their replies about the nature of learning would be extremely useful in answering the research questions and in compiling a learning profile of first year business students at the university.

The second question: *What do you think Business Communication is all about?* was designed to determine if students knew what the subject was about, and whether they acted as self-directed learners in being sufficiently interested and motivated to research the subject they were about to study. An assumption was made, based on anecdotal information from both academic and enrolment staff, that some students would enter university with high school approaches to their learning and wait to be told what the subject was about, while others would be operating as tertiary learners prepared to read, ask or access the internet to find out the aims and requirements for the subject. Moreover, because *Business Communication* was core and mandatory, it was anticipated that some students would be motivated and interested to find out what to expect from the subject they were about to study; others would not be. The replies from this question would also be used to help construct the learning profiles of this student.

The survey questions required students to reflect on their learning experience in reflexive written dialogue which, according to Cunliffe (2000), facilitates their learning by opening up the possibility of constructing new understandings. She proposed that the process of reflection helps students to connect their “tacit knowledge” with their “explicit knowledge” (p. 317). Therefore, the clarity of students’ reflexive language in the survey was dependent upon the extent to which they could extract their previously implicit and unstated knowledge about learning and extract their explicit knowledge about *Business Communication*, and be able to state this information in clear and definitive terms. This issue is raised here because the quality of written responses to the two survey questions was primarily dependent upon students’ prior experience in reflecting and writing about learning, as well as their prior learning experience.

A statement was read to students about the purpose of the survey and they were told that it would be anonymous. Because there would be follow-up telephone interviews at a later date to gather additional details, students were asked to supply their student identification numbers so their surveys could be matched to semester results and be referred to in later telephone interviews. The two questions in the survey were read aloud, with the word ‘learn’

emphasised. Students were asked to think about the questions and to complete their responses in sentences and not as points. They were told that the survey was open-ended with no correct or incorrect answers, and they could write as much as they wanted in answering the questions, or they could choose not to answer the survey questions.

### **Analysis**

The analysis in Phase One is presented in two parts. A general organizing principle was followed in the analysis to establish broad categories in the first instance, and then sub-categories subsequently. Part 1 deals with the phenomenographic analysis of the survey data in three parts: Step A discusses how the data were analysed into the broad categories of description for the first learning variable, approach to learning. Step B discusses how the data were analysed into broad categories of description for the second learning variable, perception of the learning context; and Step C describes the analysis of data into sub-categories of description for both learning variables.

Individual completed survey scripts were photocopied so that the two survey questions could be analysed separately for the entire cohort. None of the data were discarded because of the need to obtain the full range of responses. Answers to the first item relating to students' approach to learning were read and analysed for the whole cohort first, and then answers to the second item, students' perception of the learning context, were analysed for the whole cohort. The analysis of each student's experience contributed to the collective experience and pool of meanings for the group. In addition, the essence and variation of different ways of experiencing aspects of learning in the group could also be described.

Students' conceptions of learning and their perceptions of the subject were embedded in each written transcript. Therefore, in order to identify what students understood about their approach to learning and their perception of the learning context, it was important to examine closely what they wrote in an attempt to unlock its meaning. Deciding meaning in well written transcripts was relatively easy, such as . . . *discuss points of interest and relevance in appropriate groups* . . . which demonstrated that the student was developing knowledge about learning from different sources and there was a focus on learning what was relevant. However, finding meaning in poorly written transcripts was much more difficult. This required using contextual clues such as . . . *team project skills (although a lot of what is taught & [sic] back in primary school)*, which conveyed the meaning that this student understood that teamwork skills had been learnt in their prior experience of learning. Many

subsequent re-readings of each script were required in order to make sense of the writing and written expression, and to consider responses within the context of the total cohort rather than as individual responses.

The second step after reading all of the transcript responses to each question was to sort the transcripts into the broad areas of surface and deep, fragmented and cohesive, decide the sub-categories for each of these four areas and then sort the transcripts into these sub-categories. When student survey responses were read they were tentatively bundled into four broad categories of surface and deep approaches to learning and fragmented and cohesive perceptions of context as an initial guide for sequent sorting purposes. As in step one, many subsequent re-readings of each script were necessary in order to make sense of the writing and written expression, and to consider responses within the context of the total cohort rather than as individual responses. This point is important in phenomenographic methodology and analysis because meaning cannot be described in isolation. It must always be related to the total group of student transcripts being analysed because that is how the sub-categories of description for the group are decided (Bowden, 2005). For example, a first reading of the following script might lead to classifying it as a fragmented classification of the perception of *Business Communication* because of the student's emphasis upon the context of a 'business world' and 'business career' and little reference to communicating in business:

*I think the subject will give me a greater insight into the business world. It will teach me how to act and how to communicate with others in my business career. I look forward to learning the principles of business communication and other information that will assist me in my future business career.*

However, when this transcript was compared with all others in the cohort during the sorting process that occurs when categorizing, it was classified as illustrating a cohesive perception, particularly in comparison to the descriptions of the subject written by other students. Discerning meaning in this example was arrived at by noting the salient points in the transcript, and deciding whether they related to the broad fragmented or a cohesive category. At the early stages of analysis when there were usually several iterations of classification occurring, it was possible to move a particular script within the broad categories and also into another broad category if the discerned meaning indicated that the script contained elements in common with a particular category or sub-category.

In the third step, scripts in each of these bundles were reread, and resorted in successive stages into smaller bundles, including any undecided borderline cases. They were then further

refined and sorted progressively, then arranged according to variation in hierarchy and relationship within each group. As distinct themes for each emerged from the data, these were labeled tentatively with a title that captured the essence of meaning in the replies of each particular bundle of scripts making up a separate sub-category (Marton, 1986). This process occurred over a number of months, with the researcher returning to re-examine each group of scripts in order to assess their commonality and the appropriateness of the wording of the sub-category of description.

Deciding in which category to place a certain script proved to be problematic if the particular script did not exactly fit the particular description of a category or sub-category. In some cases, where scripts did not fit the meaning of a particular bundle of scripts in a particular sub-category, either the description of the category was modified to include the essence of the script, or a new sub-category was formed and given a draft title which corresponded to the common meaning in that bundle of scripts.

### **Part 1: Phenomenographic analysis**

#### **Step A: Establishing Broad Categories of Description for Approach to Learning**

The literature suggested that the broad categories of description useful in describing the approach to learning were ‘surface’ and ‘deep’ approaches to learning. As demonstrated in chapter two, surface and deep approaches to learning have long been described and identified in the research and pedagogy literature, and so these terms were adopted for this study and used for comparative purposes during categorisation. In considering the range of descriptors for learning and learning context, the work of a number of phenomenographic studies were used as guides, including Bowden and Marton (1998), Crawford et al., (1994), Entwistle (1997), Marton and Booth (1997), Marton and Säljö (1984), and Prosser and Trigwell (1999).

In using ‘surface’ to categorise an approach to learning, the study was guided by the following descriptors for surface learning: Students lack the engagement in learning-related activities required to make necessary conceptual change that accrues higher levels of learning (Biggs, 2001); they aim at reproducing knowledge and procedures (Crawford et al., 1994); they use available meanings to meet the requirements of a situation which, very often results in coping strategies of reproducing and memorising knowledge (Entwistle, 1997); they have an intention to complete only task requirements or who might misunderstand the requirements for completing the task, cram, regurgitate or rely on memorisation (Marton & Säljö, 1984); they view learning for external purposes such as passing exams or reproducing

knowledge (Prosser et al., 1995); and finally, they have a focus on unrelated parts of the task, associated facts and concepts unreflectively and fail to distinguish principles from examples (Ramsden, 2002). A matching process was used to categorise each student's approach to learning. If student's descriptions in their transcripts aligned with any of those 'surface' descriptions outlined by Biggs (1987a), Marton & Säljö (1984, 1997), Prosser & Trigwell (1997), Ramsden (1992) and Säljö (1976), then their approach to learning was categorised accordingly as 'surface'.

Similarly, in using the term 'deep' to describe an approach to learning, the study drew on seminal research of the qualitative ways students approach their learning tasks (Biggs, 1987a; Marton & Säljö, 1984, 1997; Prosser & Trigwell, 1997; Ramsden, 1992; Säljö, 1976) to match these with students' descriptions of their learning. In using 'deep' to categorise an approach to learning, the study was guided by the following descriptors for deep approach to learning: Students engage with the learning activity to construct their own knowledge or meaning (Biggs, 2001). They organise their learning material to make meaning and understand the concepts applicable to solving the problem as well as structure content into a coherent whole (Ramsden, 2002). They have a focus on understanding the meaning in the argument, the message, or the relationships but are aware of the goals and standards required; and finally, they engage with the learning task to construct knowledge and meaning, transform concepts and understand the ideas in a way that is personally meaningful and can be applied (Prosser & Trigwell, 1999).

The broad range of descriptors for surface and deep learning listed above was used as a guide to identify characteristics of student approaches during the initial stage of bundling the scripts into broad categories of description. Comparing student's descriptions of 'surface' and 'deep' learning with those of Biggs (1987a); Marton & Säljö (1984, 1997); Prosser & Trigwell (1997); Ramsden (1992); and Säljö (1976), served as an initial framework for forming tentative categories in the analysis of student scripts.

Approaches to learning are invariably more complex than simply either surface or deep. In the study there were additional considerations in the categorization process, particularly when student learning characteristics did not conform completely to either surface or deep, but were a variant approach, displaying characteristics of both surface and deep learning approaches. There were precedents for this phenomenon in the literature. Prosser and Trigwell (1997) examined learners displaying attributes of both surface and deep learning, while Entwistle (1997) found variations in the surface approach to include what he called the

“strategic learning approach” (p. 17) and Biggs (1987a) termed “achieving” (p. 37). According to Entwistle, students who adopt a ‘strategic’ learning approach were pragmatic learners whose intention was to achieve the highest possible grade by deft organising of their time and effort. They may well use strategic approaches whether they are surface or deep learners. The strategic learning approach was employed in this study with students who displayed the ‘strategic’ characteristics described by Entwistle, but were usually found in the surface learning category.

### **Step B: Establishing Broad Categories of Description for Perception of Context**

The approach taken to establishing and labelling the categories of description for perception of context was also strongly guided by the literature and a similar matching process was followed as with categorising approaches to learning.

There were only a small number of possible categories in the literature that could be used as a guide in classifying perceptions of context. Most commonly, the qualitatively different conceptions of the learning context were either fragmented or cohesive (Crawford et al., 1994; Marton & Booth, 1997; Trigwell & Prosser, 1999). It was decided that Ramsden’s (2002) description of fragmented and cohesive categories of context would be used as a guide in the initial stage of matching what students wrote about their perceptions of the subject, and using this for the purpose of broad categorization.

According to Ramsden (2002), a student with a cohesive perception of the learning situation has a more inclusive, complex and complete awareness of all the phenomena and variations of phenomena which relate to the context, and these are simultaneously present. There is a more realistic, complete awareness of a phenomenon. A variety of phenomena are evoked in the process of perceiving a new context, and the student is able to see the relationship between all the various elements (Matthew et al., 2010).

Conversely, fragmented perceptions are characterized by a limited awareness of a particular phenomenon. A student with a fragmented perception of the subject sees parts of the total picture, and therefore only part of the relationships between fundamental elements in the subject. Although varying and sometimes numerous components of the phenomenon may be discerned by students, these are not integrated into a coherent whole (Crawford et al., 1994). The terms ‘fragmented’ and ‘cohesive’ were chosen because of their relative simplicity in capturing the essence of understanding *Business Communication*. An example of the use of fragmented and cohesive classifications was shown in Prosser’s (1994) study of first year students’ perceptions of mathematics, for example:

Fragmented Perceptions:

- A Maths as numbers, rules and formulae,
- B Maths as numbers etc with applications to problems.

Cohesive Perceptions:

- C Maths as a way of thinking,
- D Maths as a way of thinking for complex problem solving,
- E Maths provides insights for understanding the world (p. 44).

While these discipline-specific descriptors could not be used directly in this study, they were useful as guiding examples. However, the development in the complexity of perceptions and understanding of the concept of Mathematics and its applicability to the wider world shown hierarchically from A to E, was perceived as being equally as important in the context of students' perceptions of *Business Communication*, and therefore analogous.

### **Step C: Analysing Data into Sub-categories of Description**

In establishing the sub-categories for the two learning variables in this study, the same process was followed as was employed in the examples above. In this study (a) four broad categories were used to enable the initial sorting and analysis; (b) sub-categories developed largely by other researchers were used, which, in most cases, required only minimal adjustment to suit the context of the study and; (c) new tentative sub-categories were added as distinctive groups emerged from the data and relevant scripts were assigned to the new sub-categories.

As distinct themes for each sub-category emerged from the data, categories were refined and sorted progressively into sub-categories according to variation in hierarchy and relationship. All sub-categories were reviewed, adjusted and polished until there was a reasonable and stable set of sub-categories with titles that reflected the commonality and the essence of meaning in the texts of each particular bundle of scripts in each. Where appropriate, this might mean that the labels for a category could carry particular words from a script or scripts or adapted from the literature. The scripts were not conclusively labelled until the very last stage when the various groups had been extensively sorted and refined.

Sub-categories were then structured hierarchically, showing a logical progression. For example, in the case of deep learning, one sub-category might be: displays elements which contribute to overall success and motivation. Where such a sub-category might sit in the hierarchy of descriptors for deep learning would depend on the nature and description of the other sub-categories for deep learning.

The final step was to select appropriate quotes which illuminated each sub-category. The judicious choice of representative quotes provided examples for each category and served to amplify the meaning of the category. They also provided additional evidence of the accuracy of classification, although it was likely that no one quote would exemplify the exact wording of the sub-category.

As a starting point it was useful to have a certain number of likely descriptors for the sub-categories, and the best way to arrive at these was to consider the descriptors which other researchers had established, such as those of Prosser (1994) illustrated previously, and to choose from these likely descriptors. It was nonetheless important to ensure fitness-for-purpose in the categories selected in this study; therefore, even where descriptors were used from other studies, these were adjusted to suit the particular bundle of scripts being classified.

## **Part 2: Statistical analysis**

A survey of published phenomenographical studies found that a number of different statistical approaches for analysing relationships between variables were used but, more importantly, demonstrated that either independent t tests or chi<sup>2</sup> tests are often performed to infer whether a relationship is statistically significant (Crawford et al., 1994, 1998; Matthew et al., 2010; Prosser & Trigwell, 1999; Prosser & Webb, 1994; Ramsden, Martin, Trigwell & Prosser, 1994; Trigwell and Prosser & Ginns, 2005).

Speaking at a Higher Education Research and Development Society of Australasia (HERDSA) conference in Brisbane in 2005, Hounsell described the advantage of employing two item congruence alignment for research with transition-level students, linking factors such as prior experience and learning with aspirations. The pairs of data in the present study were analysed using bivariate multidimensional analysis to show the statistical relationship between pairs of nominal variables, and to discover the probability of two variables being related. This involved the use of contingency (also called probability or cross-tabulation) tables to list the frequency of each combination of paired variables and to ascertain relationships between two nominal variables of each pair (Keller, 2005).

Bivariate analysis lists “the frequency of each combination of the values of the two variables” (Keller, 2005, p. 557). In the context of this study, bivariate analysis involved testing the dependency of the four learning-related variables under analysis. The utility value of using bivariate analysis was that joint probability indicated the dependency between sets of variables such as, for example, the intersection of a grade and a skills test result, and allowed

a question such as: What is the probability of a student with a HD (or D, C or P) result for the subject to have failed one of the Skills tests? to be answered.

As fewer students failed the skills tests than those who passed them, and following the advice of Keller (2005), that it would be simpler to list the most uncommon variable in multivariate analysis, it was decided that the smaller group, that is, those who had failed one or more of the skills tests, would be used for analysis purposes. This would avoid making probability reporting tables which are used in bivariate statistical comparative analysis, too lengthy. The paired variables were:

- (1) *Skills test results and Grade Achieved* (which asks the question: To what extent are Grades dependent upon Skills?);
- (2) *Approach to Learning and Grade Achieved* (which asks the question: To what extent are grades dependent upon Approach to Learning?);
- (3) *Perception of Context and Grade Achieved* (which asks the question: To what extent are grades dependent upon Perception of Context?);
- (4) *Skills test results and Approach to Learning* (which asks the question: To what extent are Skills related to Approach to Learning?);
- (5) *Skills test results and Perception of Context* (which asks the question: To what extent are Skills related to Perception of Context?);
- (6) *Approaches to Learning and Perception of Context* (which asks the question: To what extent are Approach to Learning and Perception of Context related?).

It is both valid and legitimate to cross-tabulate variables in this manner when all sets for learning outcomes, perceptions of context, skills test results and grade results are complete, (Keller, 2005) as they are in this study. Relationships determined in the bivariate analysis were used to show and discuss the relationship of learning factors to outcomes. This statistical analysis is discussed in detail below.

A contingency table technique is extended to statistical inference with the use of the Chi<sup>2</sup> test. This test determines if there is enough evidence to infer whether two nominal variables (such as approach to learning and perception of context) are related, and also to infer whether differences exist among amongst two or more sets of nominal variables (Armitage, Berry & Matthews, 2002); although caution should be exercised in the interpretation of relationships in the statistic. The Chi<sup>2</sup> statistic was used in this study to calculate distribution significance and to test for interdependence between the sets of variables listed above. The *Chi<sup>2</sup>* test statistic, which is:

$$\chi^2 = \sum \frac{(fa-fe)^2}{fe}$$

(Where  $fa$  = actual or observed frequencies and  $fe$  = expected frequencies)

was used for all of the sets of paired variables in the six tables, and the conventional 5% (0.05) level of significance was applied (Davies, 1986). For example, the results of this statistical analysis are presented in the following ways:

The null hypothesis (Ho) states that there is no relationship between the two variables. If the alternative hypothesis (Ha) is true, then the two variables are dependent. The test of significance is stated as follows:

Ho: The two variables are independent

Ha: The two variables are dependent

Reject Ho if  $\chi^2$  calculated test statistic is  $> \chi^2_{\alpha, v}$  (critical from tables)

where  $v$  = the degrees of freedom,  $v = (r-1)(c-1)$ . (Mehta, 1994).

The results of this statistical analysis for significance of the paired variables are provided in Appendix E (p. 330), and their discussion is provided in chapter six. In addition to this statistical analysis, the relationship between variables are shown as numerical bar charts of grade distributions for multi-dimensional data such as approach to learning, perception of the learning context and skills test results. Consequently, these two forms of analyses of the relationships between the variables, that is, statistical as well as numerical bar graphs, were used to discuss and demonstrate their likely impact on retention.

### Outputs

The outputs for this phase led to the classifications of the students as learners at entry. Two tables of categories of description were produced which showed hierarchically the variation in two of the three learning variables, namely, students' approaches to learning and their perceptions of the context. Cross-tabulation tables were also produced showing the relationships between subject grades, approaches to learning, perceptions of the context as

well as the variable pertaining to prior learning (skills test results). These tables and the accompanying discussion are presented in the findings chapters 4, 5 and 6.

## **PHASE TWO: Description of Change in Learning Approach and Perception of Context**

### **Purpose**

The purpose of this phase was to establish if students had changed either their approach to learning or their perception of the context over their first year. To do this, clarification of what students wrote in their surveys was sought where necessary. This phase addresses the third research question:

*Do students change the way they view their approach to learning and their learning context over the first year'?*

Exploring variation in how students reported change is important in phenomenographic pedagogy where learning is defined in terms of change (Bowden, 2000). Prosser (1994) described change in how students experience learning as “conceptual change” (p. 64).

In this phase the researcher sought to determine not only whether change had actually occurred but also how it may or may not have occurred. The categories of description for changed approach to learning and perception of the learning context arising from phenomenographic analysis of interview questions provided the information to allow an assessment to be made of the shift in learning orientations, hence change learning, over the period from the beginning of the first year to the end of that year. Therefore, the analysis of the interview data was expected to shed light on first year learning and to draw implications about how various aspects of learning were related to outcomes, thereby helping to address the third research question.

### **Data**

Telephone interviews generated the data for this phase. The follow-up telephone interviews were conducted at the end of the academic year and after semester two examinations. Interviews continued for a three month period because of the difficulty of locating students and finding suitable interview times. Each interview ranged from 15 to 20 minutes in duration. A total of 61 interviews were conducted. Students' responses to the two survey questions in Phase 1 were used. The researcher used a proforma to record student comments which were written in full immediately after the interview. The semi-structured

interview schedule comprised eight questions. Four of the eight questions pertinent to this phase and the purposes they served are summarized in Table 2.

Table 2: Factors addressed by interview questions (IQ) 1-4

Factor to be addressed	How factor was addressed in interview questions (IQ)
1. Clarification of the meaning and intent of the first original survey question.	<p>Students were referred to the first survey question: <i>What do you think you need to do to learn Business Communication?</i> Their response to that question was read aloud and students asked to clarify what they wrote with this question:</p> <p><b>IQ1:</b> What is your opinion of what you wrote in reply to this question?</p> <p>If the additional information affected the interpretation and categorisation of their original survey response, modifications were made accordingly to the survey categorisation.</p>
2. Clarification of the meaning and intent of the second original survey question.	<p>Students were referred to the second survey question: <i>What do you think Business Communication is all about?</i> Their response to that question was read aloud and students asked to clarify what they wrote with this question:</p> <p><b>IQ2:</b> What is your opinion of what you wrote in reply to this question?</p> <p>If the additional information affected the interpretation and categorisation of their original survey response, modifications were made accordingly to the survey categorisation.</p>
3. Variation in meaning associated with students' current approach to learning.	<p><b>IQ3:</b> <i>Is your opinion about your approach to learning still the same, or has it changed during the year? Why? How?</i></p> <p>Example of prompt: <i>What is your Approach to Learning at present?</i></p> <p>Current approach to learning was compared with student's original response to the same question in the written survey. Differences were noted under the Changed Approach to Learning category of description and classified into categories and sub-categories of description.</p>
4. Variation in meaning associated with students' current perception of the learning context (that is, <i>Business Communication</i> ).	<p><b>IQ4:</b> <i>Is your understanding of Business Communication still the same, or has it changed during the year? Why? How?</i></p> <p>Example of prompt: <i>What is your present understanding about Business Communication?</i></p> <p>Current perception of the subject was compared with student's original responses to the same question in the written survey. Differences were noted under the Changed Perception of Context category of description and classified into categories and sub-categories of description.</p>

The first two questions sought clarification of the written responses students had provided approximately a year earlier. The use of post-survey interviews is sometimes employed in phenomenographic research as a means of clarifying details provided in the survey and for gathering additional information which the respondents might not have given previously. Prosser (2000) for example, highlighted the “importance of embedding follow-up probes in the methodology because the quality of the data obtained [is] crucial to clarifying the original survey data” (p. 36).

### **Interview method**

When each student’s written script response to the first original survey question, *What do you think you need to do to learn Business Communication?* was read aloud, the interviewee was invited to comment on whether their opinion had changed from that which they wrote at the beginning of their first semester at university and, if so, what their present opinion was. Students were probed about whether they had developed any new approaches to learning in response to the demands of tertiary learning needs, and whether they perceived they had adequate study skills from high school or their previous formal learning experience. They were also encouraged to discuss wider aspects of learning which they might not have considered such as their motivational level, interest in the subject, time management skills and focus.

The same process was followed for the second original survey question: *What do you think Business Communication is all about?* After this question was explored, students were asked where they obtained their understanding of the nature of the subject and its goals. If students said they had no understanding until the lectures began, they were asked why they had not investigated the subject prior to the beginning of lectures. It was also important that the interviewer did not raise any ideas that had not been previously written in the survey responses.

Students were then asked questions 3 and 4 outlined in Table 2, and were given time to think about each question before answering. In seeking data about change in approach to learning and perception of the learning context, the interviewer evoked participants’ experience by asking them to reflect on the questions and to describe their perceptions of their learning experience over the period. This would capture their awareness of how their internal focus of learning and perception of *Business Communication* had changed over the

period. In essence, the process required that students evaluate their learning and their understanding of what they had learnt in *Business Communication*, with questions such as:

*Is your opinion about your approach to learning still the same, or has it changed during the year? Why? How?* and, *Is your understanding of Business Communication still the same, or has it changed during the year? Why? How?* During this process, the researcher had to ensure that each interviewee was receptive to engaging in the required reflexivity to be able to evaluate and provide responses which were thoughtful and meaningful. As a result, the interview process was lengthier than the original survey and more demanding in terms of leading students to reflect on what they wrote originally, as well as encouraging insights about their learning experience over the year.

In preparing for the interview, a semi-structured interview proforma of the type recommended by Moni et al. (1996), was developed and trialled with a group of first year students in another discipline. Green (2009) noted that piloting interviews is recommended to check that the questions set yield information on the phenomenon. Trialling of interview questions in the study allowed for fine tuning the interview instrument to improve the wording of certain items.

Bowden and Green (2005) recommended that phenomenographic interviews be semi-structured, with the researcher clearly setting the topic and using a number of set questions, but then making substantial use of unstructured follow-up questions to further investigate interviewees' responses which need clarification. The interviews in this study were semi-structured in that they were neither highly structured nor did they allow free conversation. It was a guided process, although in some cases the interviewer probed students for clarification of meanings which might have been somewhat ambiguous or incomplete, particularly with those students who found great difficulty in reflecting on whether or not they had changed in these aspects of their learning. This approach followed the guidelines laid down by Minichiello et al. (1990) who contended that such an interview should focus on the issues, and that questions should allow for discussion and greater flexibility, explaining that "the interview takes on the appearance of a normal conversation, but it is a controlled conversation, the task being to keep the informant relating experiences and attitudes that are relevant to the issue being considered" (p. 260). It was an approach which not only aimed to obtain the desired information, but to also engage students in the process of thinking about their learning and evaluating it.

Guiding the students in this process entails prompting them to relate their experiences and to provide details to substantiate their view. DeVault (1990) suggested that the interviewer's role is to provide an environment conducive to the production of the range and complexity of meanings that address the relevant issues. To provide this environment, interviewers need to actively explore any incompletely articulated aspects of the student experience and suggest orientations and linkages between aspects of their experience. Also of importance to the success of the process is the active role which the interviewer needs to play in stimulating respondents' narrative, and using what they say about their learning experiences to harness a wealth of responses.

These approaches were particularly pertinent in encouraging students in this study to conceptualise problems they may have encountered in learning. The interaction and collaboration between the interviewer and the interviewees were important because of the dynamics of asking and answering questions, which produces what De Vault (1990) referred to as an "active and spontaneous narrative discussion" (p. 104). Therefore, students in this study were prompted to think about different ways of considering the issues raised, as well as precedents in their range of experiences that were appropriate.

The importance of using 'why' questions rather than 'what' questions was highlighted by Geralese (2005). In phenomenography, 'why' questions aim to explore the intention or purposes with regard to the phenomenon and the underlying meaning. A similar approach to interviewing was outlined by Holstein and Gubrium (1995) who viewed interviews as a form of interpretative practice where meaning is constituted at the nexus of the 'hows' and 'whys' of experience. In this study, the researcher attempted to draw out the substantial issues and clarify student understandings and interpret these during the interview. The aim of the interviews was not to search for the best answer, one that was germane to the interests of the researcher or that supported the argument of the thesis. Rather, the aim was to activate different ways of understanding and knowing by the student and to explore a range of possible answers to the 'hows' and 'whys,' however diverse or controversial these might be.

When the reasons for the interview were explained, each student was asked to reflect on a set of interview questions and provide honest comments on each. One-word replies were discouraged. If respondents wished to discuss the questions in a wider context, this was encouraged in an attempt to capture the range and complexity of meanings. The researcher listened to students' in-depth accounts of their experiences of learning, and was also cognizant that these accounts were students' own constructed interpretations of reality. All

students were asked the same set of questions and provided with explanations if required. Participants conversed with the interviewer and were encouraged to discuss and reflect on the various phenomena which made up their learning experience in *Business Communication*. In this way, interviewees were able to structure the progress of the interview according to their own experience. Below is an example of an interaction between the interviewer and the student in regard to the first questions about approach to learning:

Student: *I expected to participate in learning. I was motivated and I kept working consistently. But time demands affected my results.*

Interviewer: *Despite this you still got a HD for the subject. How did you manage to do this?*

Student: *I had good study skills to start with but I was also very organized.*

In regard to the second question about perception of context:

Student: *It was easier than I thought. But also it was more practical than I expected.*

Interviewer: *How did you know what the subject would be about before lectures started?*

Student: *There was an accurate description of Bus. Com. on the web site. That's where I went to find out about the subject.*

This fragment of an interview shows the relaxed interaction between the student and the interviewer, while at the same time the student was being encouraged to answer the ‘how’ questions and others relating to relevant experiences and attitudes.

The interviewee also had to consider the effect of language-related issues such as students having the language to describe their learning and the conceptual understanding of what learning is. The problem of commencing students writing or speaking about their learning as a construct which they might never previously had to describe in written or spoken language, was anticipated with the written survey at the beginning of the year. It was also anticipated that, by the end of their first year, students would be familiar with the relevant language of learning, and have a sufficient understanding of the nature of tertiary learning to be able to speak about it in the interview. Their direct experience of the world of tertiary learning was likely to be much greater by the end of first year than it had been at the beginning, and hence students’ ability to view their learning in a tertiary context was likely to be better developed.

Telephone interviews allowed the interviewer to ask students to clarify their survey responses to ensure that what was written initially was what was meant. The analysis of telephone interview transcripts sought to discern meaning. Given the opportunity which interviews presented to probe questions further and to clarify, it was expected that their

analysis would be a little easier than discerning meaning from what had been written earlier in the surveys.

### **Analysis**

The phenomenographic approach to analysis of the interview transcripts was the same as that used for the analysis of survey scripts. Categories of description to do with change in students' approach to learning and perception of the learning context were developed. The analysis teased out the critical aspects of variation evident in the students' responses. These data allowed an assessment to be made of the shift in learning orientations over a period from the beginning of the first year to the end of that year.

### **Outputs**

The variations in the ways students changed their approach to learning and perception of the learning context are presented as a set of tables in chapter five. The findings of this phase contributed to an understanding of how change may be related to outcomes and retention and contributed to the description of the learning profiles in Phase 3.

## **PHASE THREE: Additional Factors Impacting Outcomes and Description of Learning Profiles**

### **Purpose**

The purpose of this phase was to address the third research question and to develop profiles of first year students as learners. This required additional data provided by the last four interview questions. These questions sought the importance that students attached to the learning variables which were explored in the study, as well as seeking other information pertaining to their experience. For those students who had left university, the interviews provided the opportunity to explore whether the reasons for discontinuing related to their learning experience. Interview narratives conveyed a story of how learning-related factors were involved in students' decisions to stay or withdraw during their first year at university.

Learning profiles were produced to highlight the range of learning styles and characteristics of the student cohort in the study. They provide insights into the nature of first year student learning as distinct from learning in subsequent years at university. The profiles are presented as narratives with useful information for academic staff to design teaching and learning activities to cater specifically for student learning characteristics.

### **Data**

The data set analysed for this phase were student responses to questions 5 to 8 in the telephone interview schedule. Those questions and the purposes they served are summarized in Table 3. In respect of the learning profiles, a synthesis of all the data from this study was included to provide a broad spectrum of characteristics of students as learners in each of the result grades, HD, D, C, P and N.

Table 3: Factors addressed by Interview Questions (IQ) 5 to 8

Factor	How factor was addressed in interview questions (IQ)
1. The importance students allocated to literacy, numeracy and IT skills in learning Business Communication.	<p><b>IQ5:</b> <i>Did your performance on this skills test affect your ability in achieving a positive outcome in Business Communication?</i></p> <p>Students who had failed any of the skills tests were also asked to comment on the importance of these skills in passing the subject. Responses were analysed using inductive thematic analysis.</p>
2. Aspects of students' previous learning (other than skills) which they believed may have impacted their learning outcomes.	<p><b>IQ6:</b> <i>Did you do any previous study or have experience related to Business Communication before university?</i></p> <p>If so, this question was asked:</p> <p>Additional question: <i>Did this influence the way you approached learning Business Communication at university?</i></p> <p>Responses were analysed using inductive thematic analysis.</p>
3. Troublesome aspects relating to learning or related to the subject which may have hindered successful outcomes.	<p><b>IQ7:</b> <i>Were there any aspects of learning Business Communication in first year that you found difficult?</i></p> <p>Responses were analysed using inductive thematic analysis.</p>
4. Learning related factors that impacted retention.	<p><b>IQ8:</b> <i>What were your reasons for non completion? or Why do you think you have remained in the course?</i></p> <p>Students who had completed the year and were progressing to second year were also asked to comment on aspects of their learning experience which might have influenced their decision to stay. Students were invited to make any additional comments about their learning experience during their first year.</p> <p>Responses were analysed using inductive thematic analysis.</p>

Data also included retention figures which were obtained from the faculty office. These included retention figures for the group interviewed, as well as the total subject cohort and the first year cohort which complied with the Department of Education, Employment and Workplace Relations (DEEWR) official definition for retention. Sub-categories of description were also used to identify how learning-related factors might contribute to attrition.

### **Analysis**

Data for the last four interview questions were analysed using an inductive thematic approach in which themes were discerned for what students said (Boyatzis, 1998). Phenomenographic methodology was not used to analyse these latter questions because the detailed variation in experience that phenomenographic analysis produces was not required for the purposes of the enquiry. Retention figures were compared per interviewed group, subject cohort, and first year group and implications for learners were discussed. Retention metrics were compared per result grade to show trends.

### **Outputs**

The most common characteristics of students' learning experience per result grade were described in the learning profiles. The profiles represented a synthesis of data about learning variables in addition to anecdotal information. A comparative table of attrition figures was produced for the interviewed group, the cohort of *Business Communication* students and the total first year Business cohort.

### **Conclusion**

Section 1 of this chapter described phenomenographic methodology and its approach to analysis, most specifically the way it interprets and classifies data into categories of description. A rationale was provided that showed phenomenography to be a suitable methodology for providing a systematic and detailed analysis of students' accounts of their varied approaches to and understanding of learning, and for mapping the variation in ways that students changed their approaches and perception of learning over their first year at university. Section 2 presented the research design which detailed how phenomenography was operationalised in three phases in the study, and focus on the three research questions. The following chapter presents the findings from Phase one of the study.

## CHAPTER FOUR: PHASE ONE: STUDENT PREPAREDNESS

This chapter presents the findings from Phase one and discusses these in reference to the literature. It examines how prepared commencing students were for their tertiary studies in business. Within the present context, this meant assessing aspects of their prior learning, their approaches to learning and their perceptions of *Business Communication*, although additional findings from Phases two and three also served to moderate this assessment. Phase one addresses the first research question:

*How academically prepared are students to begin their first year of university in regard to three learning related factors: prior learning, their approaches to learning and their perceptions of the learning context?*

Phase one used the analysis of two survey questions to show the variation in two of the three learning variables, namely, students' approaches to learning and their perceptions of the context, which were used to indicate whether they were prepared for their university studies. Cross-tabulation tables were also produced to show the relationships between subject grades, approaches to learning, perceptions of the context as well as prior learning (skills test results). These sources allowed an assessment to be made of the level of student preparedness.

In general terms, students were unprepared for their first year at university in respect of their prior learning, approach to learning and perceptions of the learning context. The major findings from the phenomenographic analysis were that commencing students had qualitatively different approaches to learning, and qualitatively different perceptions of their learning context, the key concepts, ideas and understandings expected to be delivered by the subject. In addition, the statistical analysis confirmed that those students who had less developed approaches to learning, poor perceptions of the learning context and had failed one or more of their skills tests were more likely to obtain poorer results for the subject.

The chapter is organized into three sections. Firstly the findings of the survey which were analysed into categories of description for approach to learning and perception of the learning context are presented and discussed. Included in this section is a discussion of the issues affecting student responses. Section two presents the findings of the statistical analysis of the learning variables and also a discussion of the relationships between these shown in graphs. Section three is a discussion of the findings for Phase one with reference to the first research question.

## SECTION 1: Analysis of the Survey

The findings of the written survey were important because of the power these had to convey details about the students' previous experience of learning (Marton & Booth, 1997; Prosser & Millar, 1987), and therefore whether they were prepared for their university studies. The written survey was analysed in terms of how students would go about learning *Business Communication* what they thought they were about to learn in the subject. Their prior experience of learning and of business communication evoked different responses to the two survey questions, and produced a wide variation within the cohort. Survey findings pertained to the two questions about first year students' approach to learning and their perception of the learning context, namely:

Question 1: *What do you think you need to do to learn Business Communication?* and,

Question 2: *What do you think Business Communication is all about?*

The analysis resulted in a number of categories and sub-categories describing the different ways that learning was perceived and experienced, and also detailed the way these categories were related, which is consistent with phenomenographic methodology. According to Biggs and Tang (2007) such relationships and conclusions about the quality of students' learning are in turn associated with the quality of students' learning outcomes. This premise was important in addressing the research questions arising from a consideration of the high attrition rates of first year Business students.

The analysis of the two survey questions produced a variety of sub-categories of description defining the range and variation of the cohorts' approach to learning and their perception of the learning context. Arranging sub-categories into a logical order provided a clear overview of the range and variation in students' collective approaches to learning and their collective perceptions of the learning context across the total cohort. This knowledge contributed largely to building a profile of the cohort as learners as they entered their first year of their business studies, and to providing their teachers with a clear indication of the range of learners to be catered for in their teaching approaches. The sub-categories were not generalisable as they applied only to this particular cohort of Business students at the particular time that they were surveyed, and categories were thus context specific as well as open to transformation.

### **Categories of Description for Approach to Learning**

This section presents the phenomenographic analysis of the survey responses into categories of description for deep and surface approaches to learning which were defined in the previous chapter, plus an additional category termed ‘emergent’ which was identified during the categorisation process through a process of logical inclusiveness. Table 4 presents a summary of the range of sub-categories of description for approach to learning which allows for “a holistic perspective on the collective experience of the phenomenon” (Akerlind, 2005, p. 237). To ensure that the entire range of responses was considered, none of the survey responses were discarded and thus a holistic perspective of the approaches to learning for the entire cohort could be presented.

There were 22 sub-categories which emerged from the analysis of the survey scripts. These were arranged in a logical and hierarchical sequence, although it was difficult to decide an exact hierarchy for some surface sub-categories. Where it appeared that a natural hierarchy was present, the categories were arranged according to a logical sequence. The hierarchy is important only in regard to demonstrating the range of categories, although in this case, the exact sequence might be considered to be less important. The sub-categories ranged from A-G for deep approaches to learning, H-N for emergent approaches to learning, and O-V for surface approaches to learning. These sub-categories involved students having more complete or less complete understandings, with those in the highest sub-categories (A-G) having a more integrated structure and a more complete understanding of meaning, while those at the lowest level (O-V) having a very limited understanding.

Sub-categories A-V are illustrative of the extremes of variation for approach to learning held by the cohort, ranging from deep through emergent to surface approaches. To illustrate: *A: Displays elements which contribute to overall success and motivation*, demonstrates highly desirable motivational traits and one which is attributed to a deep learning approach. Conversely, *V: Treats learning as an imposed task*, is one of the least desirable learning traits as it describes a student who has a surface approach to learning with no evidence of self-directed goal behavior of the type found in a deep learning approach.

Alpha values in Table 4 indicate the order of the range and variation of the 22 sub-categories of description for approach to learning, although it should be noted that in phenomenographic methodology it is the range and variation which are important, and not the alpha or numerical values of each sub-category.

Table 4: *Deep, Emergent and Surface Categories of Description for Approach to Learning*

DEEP Approach to Learning	
Alpha listing	Descriptor of the sub-Category
A.	Displays elements which contribute to overall success and motivation.
B.	Shows a clear intention to integrate what is learnt.
C.	Organizes and structures content into a coherent whole, and views the larger concepts rather than the smaller, discrete issues and tasks.
D.	Shows well developed learning strategies.
E.	Relates theoretical ideas to everyday experiences, investigates and solves authentic real life problems.
F.	Relates knowledge from different sources and new ideas to previous knowledge as an aid to more efficient learning.
G.	Intends to understand and focus on concepts applicable to solving the problem.
EMERGENT Approach to Learning	
H.	Shows some intention to understand the nature of learning.
I.	Is developing strategies for effective learning.
J.	Attempts to relate theoretical ideas to everyday experience.
K.	Espouses some motivation and positive attitudes towards learning.
L.	Is developing awareness of the need to take responsibility for own learning outcomes.
M.	Demonstrates awareness of the skills and knowledge needed to be developed.
N.	Identifies skills needed to solve problems in their learning.
SURFACE Approach to Learning	
O.	Aims to gather information which is sufficient to pass assessment requirements.
P.	Focuses on task requirements and hence process activities.
Q.	Fails to see the complete picture or distinguish principles from examples.
R.	Does not reflect on the connection between learning the theory, conceptual understanding and everyday experience.
S.	Focuses on non-specific and generic aspects with little intention to understand the whole.
T.	Uses rote memorization for learning and assessment.
U.	Intends only to reproduce subject content.
V.	Treats learning as an imposed task.

The focus on the sub-categories for deep learners was an intention to use strategies which would maximise understanding of the learning situation, and to adopt a comprehensive approach to learning in which the larger concepts and theories are applied to practical situations and for problem solving arising from those situations. The focus for emergent learners was a greater motivation towards developing self-directed learning attributes and interest in acquiring better learning outcomes, as well as an emerging awareness of higher approaches to learning. The focus for surface learners was on using lower-level learning strategies with the sole intention of passing the subject. In all three categories, there was a general absence of an overall conception of what was being learnt because of limited understanding at the time of the 'big picture' concepts related to learning the subject. Representative quotations from students' scripts for each sub-category for approach to learning are included in Table 6 of Appendix B. Representative samples of students' comments, or part responses, illustrated a particular sub-category of description and suggested the theme for its title. For instance, one script which read:

*Turn up to lectures and tutorials. Read textbooks. Study at home,* was included in sub-category P: *Focuses on task requirements and hence process activities.* Such quotes indicated the connection between how typical student comments were grouped and categorized according to similarity in how particular categories were defined. Although only a sample of representative student comments was chosen to illustrate each sub-category, it needs to be noted that any one student comment would not be expected to illustrate the entire sentiment of the whole sub-category, as reflected in its title, because of the nature of variation within each sub-category. Moreover, using every quote would be somewhat problematic because any single quotation represented only a fragment of the sub-category. In accordance with phenomenographic methodology (Bowden, 2000), the number of student responses in each category was not given because it is the range which is important rather than the number. Another point which needs to be emphasised is that often a student quote could be classified into several sub-categories which appeared to be equally applicable. For example the statement: *I need to be persistent, put in a lot of hard work, be dedicated and have time management skills* could equally be classified into sub-categories K, L or M because there were aspects of each sub-category reflected in the quote. In such cases, the advice of Bowden (2000) was followed and the quote was considered within the context of the total response to

the question, which could consist of several sentences or phrases rendering the quote a different meaning.

At times it was somewhat problematic to differentiate between two or more variables needed to order the categories hierarchically, for instance, U: *Intends only to reproduce course content* and V: *Treats learning as an imposed task*. In deciding hierarchical order, the advice of Barnicle (2005) was considered: that content be interpreted on the extent of variation, taking into account students' senses and perceptions, and their intentions as related to the students' experience of learning. Consequently, a student *who intended only to reproduce course content* (U), for example, was considered to be logically at a higher level in their approach to learning than a student who perceived *learning as an imposed task*, rather than something they were motivated to do (V). The task of deciding hierarchical order was complicated because a student's response could contain several varying statements such as those highlighted above, and each statement had to be analysed in relation to the context and what the researcher thought was the intended meaning.

Relationships were found to exist between sub-categories which are consistent with phenomenographic epistemology. Categories A to G in Table 4, for instance, reflected an internal relationship that relied on the sub-category's constituent parts (Marton & Bowden, 1996) which contribute to a deep approach to learning. In other words, any one of these descriptors in the sub-category was a complex of different ways of understanding the context, some of which were allied with other descriptors in that group. For example, E and F sub-categories of deep approach shared an internal relationship in the way their approach to learning related to application, and to the attributes of deep learning. Similarly, K and J sub-categories of emergent approach were related in regard to attitude, but also demonstrated a relationship to the attributes of the emergent learning. Descriptors O-V of the surface approach shared a relationship in the way that each posed a potential problem for the learner, and also related to the wider characteristics of surface learning.

Students in the surface learner category were of particular interest in this study because the lower grades and poorer outcomes came from students with surface approaches. The surface learner category ranged from students who could not understand what 'learning' meant in the first question: *could not understand the question properly*, to students in the P sub-category describing lower-level learning approaches in their scripts:

*I need to show up to class and hear what it's all about. That should put me on the right track . . . Read the prescribed text cover to cover (sub-category P) and, take notes on*

*important lectures or borrow them from my friends* (sub-category U). Responses of this kind confirmed Hazel and Prosser's (1994) finding that when first year students lack knowledge and learning skills, they show a tendency to compensate with lower quality approaches to learning.

It was obvious from the scripts that those students who entered university with better quality learning approaches could identify these and, as a consequence, were more likely to reflect on their effectiveness in terms of achieving the desired learning outcomes. To illustrate:

*My language both written and spoken will need to improve. I expect my computer skills will also need some work in order for me to learn BUI001*, (sub-category L), and also, *I need to develop skills and abilities in effectively identifying, establishing and practicing appropriate communication methods and procedures in a variety of business situations* (sub-category M). Student comments such as these were instantiations of the role that prior learning played in the adoption of particular approaches to learning and their relationship with outcomes.

Students' approaches to learning related to what they thought the subject was about. This was evident in their comments relating to their notions of *Business Communication* and how they would approach studying the subject, such as:

*In order to learn BUI01 you would need to know and understand a range of business applications, some of these may include commonly used business terms and their meanings, different authorities and some facets on the daily running of business* (sub-category M).

To further illustrate, students with experience of prior learning in the area of business communication perceived that they knew what the subject was going to be about, and, as a consequence, thought that studying the subject would be easy:

*I learnt business communication at high school and so I shouldn't have any problems learning BUI01* (sub-category Q). This perception was strongly correlated with their reported approach to learning, for example,

*One important area to educate myself in will be public speaking and working in a team environment, although I have worked in retail and picked up skills there* (sub-category F).

Conversely, students with informed perceptions of the subject were more likely to focus on achieving the desired learning outcomes and employing higher level learning approaches, such as:

*I guess to learn BUI01 you need to learn how to communicate effectively. This would mean studying the different methods e.g. written, verbal, interpersonal and via computers. With an*

*understanding of these methods you should have no problems learning how to communicate with fellow employees and clients alike, but there will be other aspects of learning which will have to be improved if I want to do well* (sub-category A).

If students had few preconceived notions of what the subject was about they were more likely to display an open attitude towards accepting the challenges it offered, including how they would approach and accept its learning tasks, such as:

*Read text book. Read lecture notes before lecture. Go to lecture and write any notes needed. Complete tute [sic] questions before you go to the tute [sic]. Sit the exam* (sub-category O), and also:

*Although the subject is based around communicating, I believe to learn BUI01 one would be better of [sic] observing and listening to everyone else's communications* (sub-category H).

Such responses show firstly, little evidence that students had reflected on the desired outcomes and the most suitable approaches to be taken to achieve those outcomes and, secondly, that there was scant understanding of what was required to learn successfully at a tertiary level.

Moreover, prior experience of business communication gave certain students unreasonable expectations about the difficulty level of studying the topic at university. Scripts indicated that they underestimated the level of challenge required for university learning, which suggested that they were unprepared to cope with what was required for success in first year, such as:

*. . . use to my advantage the communication I've learnt before. That shouldn't be too hard because uni [sic] can't be so different,* (sub-category S). Few students with surface

approaches showed any indication that they needed to develop tertiary level study skills in addition to those acquired at high school or via previous studies, although they may have acknowledged the need to improve their literacy, numeracy or computer application skills. Such students felt confident about entering university with the learning approach that had previously proven adequate at high school or other study, and with little awareness of the rigours of tertiary level learning, for example:

*I learnt business communication at high school and it was a breeze" (sub-category S), and,*

*. . . team project skills which I learnt in primary school* (sub-category S); and,

*I might have to sharpen up my maths skills but I'll be okay with Bus. Com. because I did it at high school* (sub-category S). Such perceptions indicated a basic inability for many, and

particularly those with surface approaches, to address the central issue of learning, and what this entailed at a university level.

In addition, many surface learners, particularly those with fragmented perceptions of context, held unrealistic notions of their approaches to learning with comments such as:

*I'll need the correct materials and an interest in the topic or at least an interest in management* (sub-category H); and also,

*I think its[sic] about the quest to find truth . . . so all I have to do is study hard and hold the lecturers in high regard* (sub-category S). Other comments showed how unaware students

were of the need to develop a set of tertiary learning skills which were different from those they had used in their previous studies; for instance,

*I entered university with good study skills, I was very academic at high school, and I found the subject Bus. Com [sic] easy at TAFE so this will be easy too* (sub-category Q).

Moreover, they held unrealistically high expectations of how they would perform in the subject even though they were not apprised of its context or showed little interest in understanding its aims or requirements, nor had they espoused any need to be informed of the learning objectives and content of the course.

Surface learners entering university often acquire strategic ways of delivering basic subject requirements to meet their employment and personal commitments (Ramsden, 1992). There was evidence that surface learners in this study intended to use strategic ways of coping with the course requirements such as applying the minimum effort and time at their disposal in order to achieve a pass. However, strategic approaches were also used by students with emergent and deep learning approaches, and for equally pragmatic reasons.

For those who viewed learning as passing the subject, adopting a strategic approach to learning often represented the best compromise approach to achieving the objective to pass. Such students held reasonable expectations about the strategies they would adopt to pass the subject. For instance, one student later explained in interview that because of her high workload and employment commitments she had to adopt a strategic approach where possible, which meant that she sometimes had to be content with a pass grade for an assignment. Despite these obstacles, the student obtained a D grade for the subject, which meant that adopting a strategic approach was, in this case, a reasonable approach.

To describe their current approach to learning and their understanding of the learning context, students made the necessary connections with their prior associations of these concepts (Prosser et al., 1996). Poor survey responses to the questions, which were most

often from those in the surface or fragmented categories, indicated that such students either held few relevant prior conceptions such as, *listen and study and, be aware of different types of business and, listen to what BU101 entitles and listen to the lecturers to learn valuable information* (all sub-category S); or they had poor prior experience of the phenomenon; for instance,

*I need to be persistant [sic]. I need to put in a lot of hard-work. [sic] I need to be dedicated. I need to have time-management skills* (sub-category S). This finding was consistent with a body of scholarship which demonstrated a positive relationship between approach to learning and prior experience of learning (Biggs, 1987; Miller et al., 1989; Trigwell et al., 1998).

Analysis showed that students used their previous experience of business communication and their previous experience of learning which they were familiar with from high school or prior forms of learning, to answer the two survey questions. These prior experiences were used as a referential framework or ‘gateway’ to describe their approach to learning at university, thereby reflecting Meyer and Land’s (2005) description of threshold concepts. For example:

*I studied at Tafe and learnt enough techniques to pass the exams and university will be no different* (sub-category O); and,

*I worked in an office where I had to develop and use communication skills* (sub-category J), and, *I learnt to study at high school and in year 12 the teachers were always talking about ways of learning*, (sub-category H). Examples such as these reinforced the notion that

students’ approaches to learning and their perceptions of the learning context were not only influenced by their prior experience of learning and the learning context, but were also related to the sum total of their experience with such concepts in the past, which confirmed findings by Biggs (1987); Gibbs (1999); Marton et al., (1997); Meyer et al., (1990); Prosser et al., (1995, 1995); and Ramsden (2002).

During the analysis of scripts it became evident that in addition to deep and surface approaches, the cohort included an intermediate category of learners who might be described as being on the continuum between surface and deep learning approaches. These students employed some of the elements associated with both deep and surface approaches and also exhibited variations in their approach depending upon context-related factors. Students with these characteristics were given the title ‘emergent’, reflecting Meyer and Land’s (2003) metaphor of learning that, as a student passes through the threshold of learning towards

deeper understanding, if the threshold concepts required are negotiated successfully, the student emerges through the portal towards deeper levels of understanding and learning.

Although not identified in the literature, the possibility was suggested of an intermediate learning approach, and one which was more dynamic and less static than surface or deep approaches might appear (Biggs, 1987, 2003). In addition to deep and surface approaches, Prosser and Trigwell (1999) proposed there was a broad group of students whose approach would change according to context, and used Laurillard's (1997) description of this group as being "not stable" (p. 85). This study departs somewhat from that view. It contends that there is an intermediate group demonstrating specific learning attributes, but also acknowledges that an approach to learning is often related to the requirements of the context. Students with an emergent approach to learning are a group of transitory students who occupy a medial zone between deep and surface approaches. They may occupy this zone for unspecified and varying periods while they are developing the necessary higher order learning attributes required to function as a deep learner, although they might also employ strategic approaches to learning when required by the context.

As previously intimated, deep learners adopt strategic approaches when required, but it would be more difficult for surface learners to use deep approaches when required in particular contexts if they had not already developed deep learning traits. As a sequitur, if students' approach to learning is entirely context dependant, as proposed by a substantial body of research (Biggs, 1987; Crawford et al., 1998; Eley, 1992; Gibbs, 1993; Laurillard, 1979, 1997; Marton et al., 1993; Marton & Booth, 1997; Meyer et al., 1990; Miller et al., 1989; Ramsden, 1979), an underlying assumption would be that students have developed all the necessary attributes of deep learning to be able to vacillate between deep and surface approaches according to the context. However, it was quite apparent from the responses in this study that students with surface approaches demonstrated few, if any, deep learning traits, although those with an emergent approach certainly did.

From the perspective of the current research, the presence of an emergent approach to learning does not represent a passive 'stable' group because it is a non-static group by its very transformative nature. Meyer and Land's (2003) premise that a threshold concept is irreversible applies to the emergent learner because once a threshold concept has been learnt, the learner will not revert to a previous set of understandings or way of behaving, and instead will move on to the next level of learning. In other words, the emergent learner will always be accruing improved attributes of learning and transitioning towards deeper learning. For

instance, one response was categorized as emergent because the student listed various aspects of learning not only in terms of process activities (such as *attend, complete, revise*), but also according to the level of skills to be developed (such as *good understanding of English, good listening skills . . .*) which showed evidence that the student was thinking about the variables inherent in learning and the desirable level at which these should be executed.

Moreover, the presence of emergent learning does not mean that other factors relating to prior learning experience and perceptions did not impact the student's approach to learning. In fact, the emergent approach is consistent with a phenomenographic paradigm in that it ascribes to the pedagogical tenet of transformation resulting in learning. It also accommodates concepts of relationships between learning factors and the theory of variation in which the student embraces a range of learning attributes from both deep and surface. Students who were categorized as having an emergent approach were interesting in terms of their transitional position between surface and deep learning approaches, and their relationship with other learning related phenomena being investigated.

A key to discerning emergent learners was to find contrasting statements on their scripts about their approach to learning. For example, one statement might ascribe deep learning while another statement might ascribe surface learning traits, a third might have a combination of both deep and surface learning traits. These students described learning traits which were supportive of both deep and surface approaches, and adopted an approach which contained elements of both, such as, *attend lectures regularly and use recommended tests in preparing for exams . . . take note of informed opinions relating to the subject and discuss points of interest and relevance in appropriate groups* (sub-category M), and, *turn up to lectures and tutorials, read relevant materials pertaining to the subject, revision and also put into practice what is learnt* (sub-category M). While the first part of this latter description portrays a surface approach, "put into practice" shows an intention to apply what is learnt, which is a higher order learning attribute. Even though aspects of their conceptual understanding of learning at a tertiary level may have been underdeveloped, there were indications that these were being developed.

Students in the emergent group also described approaches which were different from those displayed in either deep or surface approaches such as:

*Learn how to make all of my communication professional, clear, concise, accurate . . . and take on extra maths classes* (sub-category I), and another, *. . . write clearly and effectively, speak persuasively and listen effectively* (sub-category I). Students with deep approaches

generally did not describe how they would like to learn to communicate in a qualitative way, nor were there any other instances of students having the level of awareness and intention to state (prior to skills testing) that they would need additional ‘maths classes’ in order to learn Business Communication. Additionally, students in the emergent group espoused an approach which exhibited both strategy and intention towards improving their learning; to illustrate:

*... ask the lecturer questions that I don't understand and . . . participate in the wider group to get the best possible results during the semester to enable myself to leave with a wider knowledge* (sub-category I). Common elements in such scripts referred to understanding, applying, developing skills, having intentions to improve and achieve better outcomes, and also having commitment.

Other important aspects of an emergent approach included perceiving the subject in terms of its core components and considering ways to relate better to the subject such as: *Not only understand the core components of business communication . . . but also obtain hands on experience which would help me relate to the subject more* (sub-category J).

Students perceived of ways to link their learning so as to optimise the experience as in:

*. . . look at taking part in work experience so that will link to what I learn in the subject and; . . . give thought to general communication and ways that you can apply it in business and also, relate working situations that you currently maybe [are] involved in to areas of the subject* (all sub-category J). These examples show that, as part of the transition process towards deeper learning attributes, students were thinking about aspects of their learning and exploring ways to improve, even though in other respects their perceptions and approach bore the hallmarks of surface learning. All of the student comments above were instantiations of particularly emergent responses to learning, providing insights into the distinct profile of an emergent approach to learning.

Finally, there was also a noticeable variation in students’ ability to express themselves in written form and to describe properly what they thought and understood about learning which some of the quotes above demonstrated. Compare, for example, the difference in content and expression between:

*I need to establish that the information I am gathering is important, to take it in and find ways to use it* (sub-category J), and the less than adequate written responses in:

*To learn BUI001 you need [sic] turn up to lectures attend tutorials for better understanding but most importantly you have to enroll [sic] into the subject first* (sub-category P), and:

*To make sure I understand the question and ask questions if I don't understand. Read, give out sheets and study week [sic] area, which is my writing* (sub-category N). Poorly written responses made the analysis of scripts difficult, and many iterations were necessary before final meanings were discerned and a classification was possible. Even so, the researcher was undecided as to whether students did not understand the question: *What do you think you have to do to learn Business Communication?* and subsequently misinterpreted it, or whether they could not answer because of an inadequate perception of learning, or perhaps they did not have the necessary written language to answer the question. Nonetheless, it was clear that, with the exception of students with a deep approach whose responses were more thoughtful and generally well communicated, students appeared to be largely unpractised in being asked to reflect on their learning and the strategies they intended to take and describe this in clear and appropriate written language. This finding confirmed studies by Biggs (1987); Marton et al., (1997); and Ramsden (1992), which identified the need for students to have an appropriate understanding of learning to be able to reflect upon it and describe it in a meaningful way.

Despite the certain paucity of written language ability across the cohort, there was a wide variation in the volume and range of what students wrote, in the quality of their writing, and in the ways they understood and viewed learning based on their prior experience. This variation was reflected in the breadth of sub-categories of description for both approaches to learning and for perceptions of the learning context and the representative quotes provided.

### **Categories of Description for Perception of the Learning Context**

This section presents the phenomenographic analysis of responses to the second survey question: *What do you think Business Communication is all about?* Significant differences were found across a variety of perceptions describing variations in what entry students understood about the subject. These ranged from cohesive to fragmented perceptions, as indicated by the ten sub-categories of description which emerged from the analysis of student responses. The categories ranged from A-F for cohesive perceptions of the learning context and G-J for fragmented perceptions of the learning context. The overall finding was that there was a wide range of ten different perceptions of *Business Communication* held by students as they commenced their study of the subject, with a greater variety of cohesive perceptions.

Table 5 presents a summary of the range of sub-categories of description A-J for perception of the learning context. Alpha values indicate the order of the range and variation

of descriptors for each sub-category, and Appendix B (p. 299) provides additional representative quotations from students' scripts for each sub-category.

Table 5: *Cohesive and Fragmented Categories of Description for Perception of the Learning Context*

COHESIVE Perception of the Learning Context	
Alpha listing	Descriptor of the sub-Category
A.	Views the subject accurately from a variety of perspectives, foci and/or processes.
B.	Relates the subject to evaluating the processes of business communication.
C.	Views the subject as learning to apply theory to practice.
D.	Involves a desirable outcome or outcomes.
E.	Understands how various elements of the subject relate.
F.	Views the subject in relation to learning to use a variety of methods or skills in a real life situation.
FRAGMENTED Perception of the Learning Context	
G.	Views the subject from one perspective or entity only.
H.	Understands the subject as a generic entity.
I.	Fails to see any connection between business communication and practical applications.
J.	Holds incorrect perceptions and misunderstands the subject.

Sub-categories A-J shows the range of perceptions of *Business Communication* which were held by the group, while the titles of the sub-categories were chosen to indicate the qualitative difference in students' perceptions. The range of variations in both cohesive and fragmented perceptions were arranged logically and hierarchically from a cohesive perception which viewed the subject more holistically. For example, A: *Views the subject accurately from a variety of perspectives, foci and/or processes*, to a fragmented perception which viewed only part of the total subject, and J: *Holds incorrect perceptions and misunderstands the subject*. Some descriptors, for example C, D and E, were difficult to arrange hierarchically because each appeared to be an equally important aspect of a cohesive perception.

The focus on the sub-categories for cohesive perceptions was on understanding *Business Communication* in a logical and consistent way, where the various integral parts were related together into a whole. Students perceived a relatedness of theory to practice and their perceptions had both structure and meaning. Conversely, sub-categories for fragmented perception of *Business Communication* presented an incomplete, limited or even incorrect perception of the subject, and detached or unconnected aspects were described which had no relation to the whole.

According to teachers of first year students in the School of Business, first year university students are less likely than students in other years to be informed about what to expect in their subjects. Although commencing students might reasonably be expected to know what their subjects were likely to be about, or at least know where they might access this information, many students did not know what *Business Communication* was about, and their scripts reflected this situation. Furthermore, students tended to draw on their past experiences of business communication to provide a clue as to what the subject would be about, rather than taking active measures to investigate what the subject was about, for instance,

*It's about communicating in the business world with customers and the skills required to do that, same as I learnt in customer service at Woolies, (sub-category E).*

However, in some cases, commencing students knew little or nothing about its content or learning objectives because they had no prior experience with business communication and had not taken steps to investigate subject details, so they took a cue from the title, such as, *BU1001 is about communicating in the business world* or; *Communicating in a buisness [sic] sense like the title says* or; *Communicating in the 21<sup>st</sup> century*, (all sub-category G). These demonstrated, at best, a very superficial understanding of the subject. This was particularly the case with the sub- group of students who entered university with surface learning attributes and whose previous learning outcomes were poor.

Moreover, there was a strong indication that such students entered their university studies with little or no appreciation of the need to understand what their subject was about, its intended outcomes, content and relatedness to other learning, for instance:

*that's what I'm waiting for the lecturer to tell me* and;

*I don't know. I just enrolled. I suppose the meaning will eventually come out however long this lasts and, I am in the first lecture so it is to [sic] early to know, and also:*

*All I want to do is to learn how to run a business [sic] and make money* (all sub-category G).

Such students espoused little interest in or motivation towards discovering these details:

*I think that BUI001 is about something like basic stuff of business study. It doesn't really matter because it's compulsory and;*

*It's the building block for other business subjects so I suppose itll [sic] have all sorts of stuff in it about business* (both sub-category H).

In the absence of a specific understanding of the subject, students gave a generalized and rather disparate account, for instance:

*Business in general. Communication, computers [sic], presentation, production, success, advertising, stastitics[sic], staff & clients, English & Maths* (sub-category F), and;

*Communication in all ways and all walks of life* (sub-category G) or,

*ways that you can communicate in a business like style in the world* (sub-category H).

For those students in the lower fragmented sub-categories, their understandings of the subject were clearly misinterpreted and incorrect, and there were numerous examples of this:

*[It] helps us to understand the ins and outs of operating businesses;*

*It may be about how businesses transfer funds or organize pay for employees;*

*It helps us to become future businessmen; Business ediquite [sic] and,*

*Marketing yourself to climb the corporate ladder to success* (all sub-category J).

*Business Communication* is a core subject of the degree and an understanding of its role in the structure of other first year subjects and subsequent subjects was rudimentary.

Therefore, a likely assumption was that if students did not have a clear and correct understanding of the aim of the subject, neither were they likely to have an understanding of its course structure and desired outcomes. This assumption is important in respect of the impact such a situation might have on student outcomes. A number of researchers including Kift and Nelson (2005), Krause et al. (2005), and Nelson et al. (2006), found that students who do not understand the nature of the subject/course they are about to study have a greater likelihood of failure.

In attempting to describe their understanding of what they thought *Business Communication* was about, and in the absence of any actual definitive knowledge about the subject, students with fragmented perceptions demonstrated various ways of responding. These included drawing on their prior knowledge and experience of the topic, being prepared to wait and find out as the subject was delivered, guessing about its meaning, making generalizations or simply expressing misperceptions about the nature of the subject. The

finding that these students were likely to be less informed of the subject than anticipated was at odds with the national first year experience survey findings by Krause et al. (2010), which reported that in the previous ten years the level of students' understanding of their subjects improved because they were better informed and took measures to ensure they understood what they were about to study.

Students with a cohesive perception of the subject displayed an entirely different approach to the way they perceived the subject particularly in the holistic view of its aim, content, approach and outcome, to illustrate:

*Providing students with the basic concepts needed to communicate in the business world. It focuses on developing relationships between employer/employee, organizations/public, and employer/employee/customer. It provides real life skills in order to work, organize or manage a business (sub-category A).* This particular response was most likely informed by a reading of the subject outline because students with a cohesive perception of the subject often took the time to find out what the subject was about prior to the beginning of lectures. Students with a cohesive perception frequently espoused an aim or outcome, and could appreciate the benefit of particular aspects, such as:

*I expect it to develop my knowledge and ability in getting ideas and presentations across to both large and small groups of people. I believe that this is a subject that will allow me to carry its skills across all of my other subjects (sub-category D), and;*

*It also includes the process of creating various written records needed to make informed decisions and to communicate these professionally to facilitate the flow of information (sub-category B).* These excerpts also demonstrated the way students perceived that *Business Communication* was linked to other aspects of their learning.

Another aspect of a cohesive perception apparent in student responses to the second question was the importance they held of theory and application, for instance:

*We will learn the theories of communication and how to use these in the most appropriate ways in a business context;*

*Learning effective communication techniques that can be applied in a business environment; theories of communication can be applied and the skills practiced and also;*

*theories will further our knowledge of communication in business and expand our way of thinking about the need for effective communication (all sub-category C).* Application was an important attribute for students because it meant the subject carried a greater utility value,

especially for those students who were keen to learn the skills of *Business Communication* because of the advantage these might afford for future employment opportunities.

Students' cohesive perception of *Business Communication* included a wide range of components, quite unlike the narrow definition of those students with a fragmented perception. The range of elements thought to comprise the subject included:

*Communicating effectively and efficiently with colleagues, customers/clients to obtain a desirable result;*

*. . . how to overcome barriers in communication and teach us ways of communicating with our audience with ease and;*

*It explores how we communicate in effective and ineffective ways to different audiences and written, spoken, non-verbal and verbal, inter-personal, using technology, internal and external and various levels (all sub-category A).*

Most importantly, students with a cohesive perception could relate various parts of the subject together in a cohesive way, such as:

*Communicating to achieve business outcomes and acquiring skills to analyse business communication patterns, content, motives, goals and,*

*. . . acceptable forms of communicating in business, both internal and external communication. Software and its application in business. Basic computer communication, Global Communication . . . all are needed in business in order to be efficient and effective and to maximize success of the business (both sub-category E).*

The spectrum of responses which were categorized as cohesive demonstrated a variety of different and correct perceptions of *Business Communication*. These were generally well written and good examples of communication, particularly in regard to the way they conveyed the intended meaning and depth of understanding held about the subject. Students' responses also indicated how seriously they viewed an informed understanding what *Business Communication* would be about before lectures began.

### **Issues Affecting Student Responses**

This section discusses three closely related issues which not only impacted the survey results but also appeared to have contributed to the level of preparedness for students' tertiary study. The first issue concerned students' ability to reflect on their learning. The second concerned the difficulty they may have experienced with understanding the concept of learning, which was briefly discussed earlier in connection to the variation of students'

responses to the survey questions. Both of these were related to the third issue, which was their ability to describe learning using appropriate language.

Issues relating to students' reflectivity, their understanding of learning and language ability became apparent during the analysis of scripts. These issues impacted the researcher's ability to discern meaning from the scripts and had a bearing on the accuracy of interpretation and categorization of students' responses. Consequently, it seems possible that what students wrote when asked to describe their approach to learning and perception of the learning context, might not necessarily have conveyed the true and accurate meaning they intended at the time. This may have been because they had not properly reflected on the concepts inherent in the question, held incomplete or inaccurate understanding of learning or failed to use adequate written language to express their ideas. For these reasons, students were asked later to confirm their survey responses during the interviews.

To accurately describe what they understood about the nature of learning and the learning context, it was important for students to be able to reflect on their learning and to take the time to reflect. Although the literature on reflection was discussed previously, a definition is useful at this point. In this study 'reflect' means to be able to thoughtfully cogitate on the subject or concept and make meaningful connections with past associations or experiences of it, and relate these to the present context. The ability to reflect was important because it appeared to be related to the quality of students' written scripts.

To illustrate this point, it was apparent in the way some students wrote their survey responses that they had not put sufficient thought and reflection into their responses because they could not adequately explain their own understanding about the nature of learning. A few students left the first question about how they would learn the subject unanswered, or noted that they did not understand the question, for example stating that they ... *could not read the question properly*. Others gave rather obscure replies such as, *Study hard; Be interested in the subject; Be motivated; Do consistent study and study smart; Go to all required lectures, listen, concentrate and learn in them* and to ... *talk about it with people to get different opinions*. It can be seen that none of these responses show any great depth in the way their approach to learning has been described.

Accordingly, some responses showed no evidence that students gave any consideration to the word 'learn' in the question: *What do you need to do to learn Business Communication?* Instead, they preferred to focus on aspects of the business communication discipline which they may have found easier to describe than learning, for instance, *you can*

*know how to start off easier [sic] in the bussines [sic] world.* Nevertheless, describing the concept of learning was generally more troublesome for students than describing *Business Communication*, and although many students entering the course were relatively unable to reflect on and describe their learning, they were more able to reasonably describe their understanding of what *Business Communication* was about.

Even so, certain written responses to the second question evinced little evidence that students had either reflected on, or used adequate written language to properly describe their understanding and perception of *Business Communication*. Examples of student perceptions included, *bussiness [sic] awareness; how to communicate and what under given circumstances; . . . effective business environment; find out what BU1001 entitles and; consistency in work; techniques used to develop skill and to be able to work in the real.* Some responses comprised two or more phrases strung together with no obvious connection, such as what one student wrote: *Communication in all walks of life and in all ways. Business Communication and its workings.* These excerpts illustrate how the quality of student responses not only made discernment of meaning during analysis a challenge, but also may have served to mask the true meaning which students intended in their responses.

Furthermore, it was also apparent from the researcher's observation during the administration of the survey that some students did not take the time to properly reflect before answering the questions. As the questions were being read aloud many students were already writing their responses, even though they were given sufficient time to make a considered response. It was also manifested in ill-written and sometimes partial responses and sentence fragments which made little sense, and made it difficult for the researcher to understand and decipher their meaning during analysis. This indicated that students were generally inexperienced with the use of an appropriate learning discourse, which was accompanied by a paucity of appropriate learning-related language to describe learning. For example in respect to the first question: *What do you think you have to do to learn Business Communication?* Comments such as *like what your [sic] knowing; Be comprehensive in all different areas of business and communication in such an industry; practice methods in your own life; try to change into uni [sic] life; learn what it is all about; basics is to contain the information that is presented and, be positive with the workload for the subject* all illustrated that while certain aspects such as 'practice', 'change' and 'positive' may be desirable, in important respects, such responses failed to address the matter of learning in any coherent or meaningful way. Moreover, in addition to the paucity of written language ability,

the examples showed little evidence that there was any adequate understanding of the nature of learning or the subject and, as a consequence, lacked the necessary insights. This finding had serious implications for the level of student preparedness.

Students who provided well written, insightful and thoughtful comments were found mainly in the emergent or deep learning categories, or they held cohesive perceptions of the learning context. For example: *I need to develop skills and abilities in effectively identifying, establishing and practicing appropriate communication methods and procedures in a variety of business situations* and; *For me learning isn't just about recording information and hoping you remember it for the exam. In order to learn BU1001 I need to acknowledge that the information I am gathering is necessary. I need to take it all in and find ways to use it . . . to integrate my knowledge learned in the subject.*

Conversely, students who were categorized as surface learners and held fragmented perceptions of the learning context generally produced responses which showed little evidence of understanding the nature of learning and therefore often produced inaccurate responses. For example: *It's basically a business dictionary lesson* and; *its [sic] all about a lot of skills like writing speaking and listening skills which need to be examined if a person wants to be successful* and also, *to further my skills in all business practices.* It was obvious from their comments that many students were unfamiliar with being asked to consider learning and being asked to describe their learning or, indeed, to be challenged to make the connection between understanding the nature of learning and being able to identify and describe their own approach to learning.

Learning as a concept appeared to be a somewhat intangible entity for some students because of their limited perception and experience with the concept. This resulted in narrow descriptions that mainly focused on one, or perhaps only a few aspects of learning. Although there was a wide variety of perceptions of learning reflected in the 22 sub-categories of description, most responses did not present a comprehensive view of the various facets which constitute learning. Some of these rather truncated views of learning included aspects of the following major themes.

Learning was commonly equated with knowledge, as in *To obtain knowledge and learn one has to read the textbook* and also; *Go to all required lectures, listen, concentrate and learn the knowledge in them.* Learning was viewed as keeping an open mind, as in *Be open minded to all topics addressed whether one knows about it or not* and; *Be willing to give everything a go,* or as understanding, as in: *I will try to understand all the relevant content*

and; *To study to the max [sic] and be able to understand* and also; *Show that I understood and consolidated my learning.*

For quite a few students reading was considered important in describing learning, such as, *Read and absorb materials given out* and; *reading the course to gain knowledge about the course*, as was technology, for instance; *Learn about using technology to learn*, and; . . . *understanding of computer knowledge for business* and; *Learning about how to communicate in the internet, using computer software and programs*. Few students provided a description of learning which was holistic, embracing a range of higher learning attributes as might be expected of students who were prepared for their university study.

Findings suggested that entry students commonly had poor understandings of the concept of learning. Students' responses indicated that they often found difficulty with the ontological aspects of relating to and understanding the concept of learning, and what it meant to be a learner at university. For example, although word 'study' can be said to accrete learning, students frequently used 'study' synonymously with 'learning' and were confused with the distinction between the two terms. In this context, descriptions such as *hitting the books* and; *Studying is another answer. Go over my notes so the information will sink in easier* or; *spending time memorizing the lecture content* were often used in reference to learning, although they mostly described techniques or skills, rather than aspects which are demonstrative of a more holistic approach to learning.

Asking students to consider and write about their learning presented some with a challenge of the 'uncertain' in regard to not knowing how to reflect or understand what the concept of learning entailed. With one exception, (Bowden, 1996), phenomenographic literature does not raise the issue of commencing students having to develop suitable reflective skills to be able to discuss or describe aspects of their learning. Nor does it raise the importance of students' ability to describe their learning using appropriate discursive language. There was no doubt in this study that inexperience with reflection, lack of a clear understanding of learning and also lack of suitable learning-related language skills to describe it, all had an effect on the quality of responses.

This section has demonstrated that certain students handled reflection about their learning well and, accordingly, produced insightful transcript entries. Others with less experience of being asked to reflect, and being uncertain about how to describe learning, produced transcripts that displayed minimal connection with the concept of learning and its application to their forthcoming tertiary studies. In summary, some entry students could

reflect well but many could not, while others who might have been able to reflect and describe this reflection, most likely did not because they were uncertain about the meaning of learning in a tertiary context. As a consequence, their reflections about their learning were not substantial enough to enable them to describe the approach to learning they expected to take at university with any degree of depth or accuracy.

It was evident that many students had given very little thought at all to the question of their learning. Furthermore, very few responses contained language which described attributes of learning or the learning process which are more usually associated with tertiary learning such as constructing, accumulating, building, practising, reflecting, reviewing, revising, testing and evaluating what has been learnt (Biggs, 2003; Bowden & Marton, 1998).

While they were able to describe the process of study, preparing to pass exams and assignments or perhaps even acquiring the skills for future employment, students' responses to the first question generally indicated the difficulty they had in describing the process of engagement in learning and the learning experience. Moreover, asking students to relate their experiences as they perceived them, resulted in a very subjective narrative, especially in regard to how they perceived their new role as tertiary learners. Students' perception of learning was connected to the problem of their inexperience with writing about their learning as a construct and, at the same time, being sufficiently comfortable to make sense of learning as a discourse. In addition to their impact on the quality of student survey responses, these were important issues because they demonstrated how prepared, or unprepared students were to begin their university studies.

## **SECTION 2: Relationships between Learning Variables**

This section examines relationships between the three factors which were considered to be indicative of how academically prepared students were, as learners, to begin their university studies. Aspects of students' previous experiences of learning, that is, prior learning, approach to learning and perception of the learning context are demonstrated, and their use in this study rests on the assumption that preparedness is related to previous experiences of learning. For example, according to a phenomenographic perspective (Prosser & Trigwell, 1999) students understand their learning in reference to the accumulated result of their previous experiences in learning environments such as primary or secondary school, TAFE and also in the workplace. Similarly, students enrolled in *Business Communication* will relate their perceptions of the subject to any previous experiences with business

communication - either at school or in the workplace. In respect to the study, these three factors corresponded to:

- (a) students' prior experiences, that is, their skills test results;
- (b) their approach to learning as classified into surface, emergent and deep categories of description; and,
- (c) their perception of the learning context as classified into fragmented and cohesive categories of description.

When the three factors in research question 1: *How academically prepared are students to begin their first year of university in regard to three learning related factors: prior learning, their approaches to learning and their perceptions of their learning context?* were compared by table and graph with the outcomes for the subject, as indicated by the final grade achieved for *Business Communication*, the correlation of these factors was strongly indicative of their connection to academic preparedness.

Table 6 presents a cross-tabulation of Prior learning (as indicated by Numeracy, Literacy and IT results), Approach to learning and Perception of the learning context with end of semester grades for *Business Communication*, as defined by High Distinction (HD), Distinction (D), Credit (C), Pass (P) and Fail (N) grades.

Table 6: *The relationship between Prior Learning, Approaches to Learning, Perception of Context, and grade results for the total cohort (n=272)*

Grade	Number	Prior learning			Approach to learning			Perception of the learning context	
		Numeracy	Literacy	IT	Surface	Emergent	Deep	Fragmented	Cohesive
HD	2	-	-	-	1 (50%)	-	1 (50%)	1 (50%)	1(50%)
D	32	4 (13%)	2 (6%)	2(6%)	22 (68%)	8 (22%)	3 (10%)	14 (44%)	18(56%)
C	82	12 (15%)	2 (2%)	5(6%)	68 (83%)	13 (16%)	1 (1%)	54 (65%)	29(35%)
P	123	31 (25%)	8 (6%)	11 (9%)	105(86%)	15 (12.5%)	2 (1.5%)	103 (84%)	19(16%)
N	33	9 (27%)	1 (3%)	4 (11%)	32 (97%)	1 (3%)	-	31 (94%)	2(6%)

This table shows the comparison between prior experiences, as indicated by failure in one or more of the skills test results, approaches to learning and perceptions of context with student outcomes (HD, D, C, P and N grades). It is important to note that there were only two students in the HD results group, and hence the correlation (as in ‘mutual relation’) is not as readily observable. Shaded areas in Table 6 show significant trends, for example:

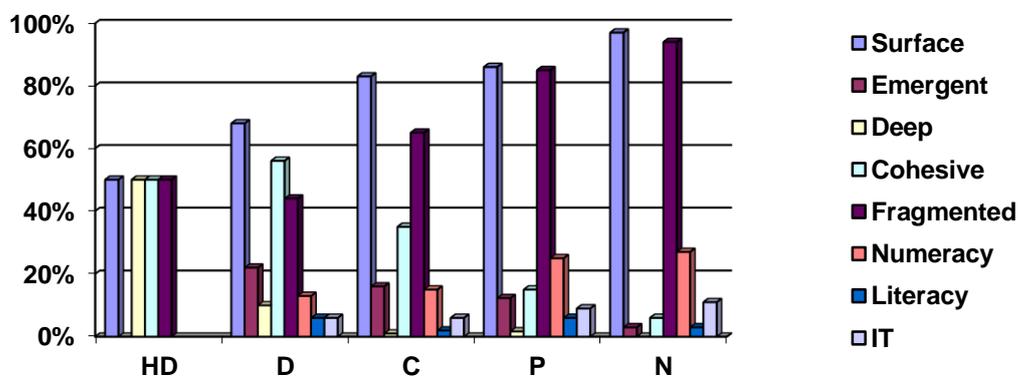
- Numeracy skills had the higher proportion of failures, and these occurred in students with Credit, Pass and Fail results;
- Surface learning approach was the most common approach, occurring primarily in students with Credit, Pass and Fail grades;
- Emergent learning approaches occurred mostly in students with Distinction and Credit grades while deep learning approaches occurred almost exclusively with those who had High Distinction and Distinction results;

- (d) In regard to Perception of the subject, the results were polarised approximately evenly, with fragmented perceptions occurring mostly in the Pass and Fail grades, and cohesive perceptions occurring mostly in those with High Distinction and Distinction results.

The cross-tabulation produced some important trends. Failures in numeracy skills, which were the most common skill failed of the three skills tests and the most problematic for business studies, occurred most often in students with surface approaches to learning. Accordingly, numeracy skills failures were most prominent in the Fail (N) group. Emergent learning approaches were found mainly in students with Distinction and Credit grades, which is consistent with the profile of emergent learning as students in a medial zone between surface and deep approaches, but developing attributes of deep learning. Fragmented perceptions of the subject were held primarily by students with Pass and Fail grades and, to a lesser extent, Credit grades. Conversely, students with Cohesive perceptions were mainly those with Distinction and High Distinction grades.

These observable trends reinforced the notion of a relationship between the quality of students' knowledge, skills, attitudes and understandings on entry, including their perceptions of their subject and the approaches to learning they intended to adopt, and ultimately the quality of their learning outcomes. This relationship can be observed in Figure 1 which reflects the relationship shown in Table 6 between all of these factors including the correlation within the HD, D, C, P and N grade groups.

Figure 1: *The Relationship between prior learning, approach to learning, perception of the learning context and outcomes for the cohort*



X axis= Percentage of HD, D, C, P and N Grades achieved for subject

Y axis=Percentage of total cohort with Surface, Emergent and Deep Approaches to learning; Deep and Cohesive and Fragmented Perception of the context, and failures in Numeracy, Literacy and IT skills tests.

As the graph illustrates, when desirable attributes of prior learning such as numeracy, literacy and IT skills, deep approach to learning or cohesive perception of the subject are reduced, poorer grades result. The reverse also applies. Students who passed skills tests, held deep or emergent approaches to learning and cohesive perception of the context obtained better grade results. These trends are consistent with the view that there is a relationship between these factors which indicate not only the level of academic preparedness, but also their connection to outcomes.

The relationship between the three factors in question 1 was also demonstrated by bivariate statistical analysis of the following pairs of factors:

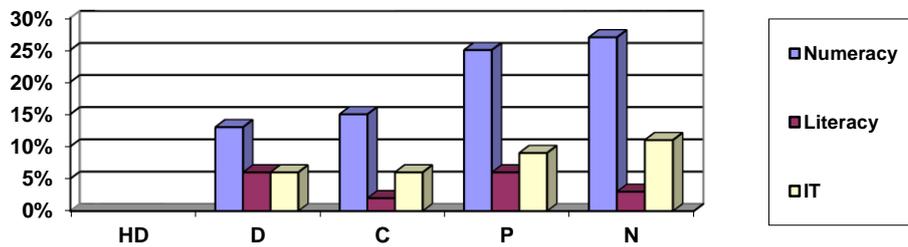
- (1) Skills test results and Grade achieved
- (2) Approach to learning and Grade achieved
- (3) Perception of context and Grade achieved
- (4) Skills test results and Perception of context
- (5) Approaches to learning and Perception of context
- (6) Skills test results and Approach to learning.

Bivariate analysis was described in Chapter 3, and details of the statistical analysis of each pair appear in Appendix E (p. 330). In summary, the statistical analysis showed a positive relationship between the pair of factors in each set (1) to (5). There was no relationship found between the two factors Skills test results and Perception of context in set (6). The interview analysis supported certain of these results. A discussion of the findings for each set of paired variables in sets (1) to (6) follows:

### **Skills Test Results and Grade Achieved**

Statistical bivariate analysis demonstrated in Appendix C showed there was a relationship between skills test results and grade achieved. An analysis of the end of semester results for the subject using aggregate figures also showed a relationship between the results of skills tests and grades, as shown in the following graph in Figure 2:

Figure 2: *Distribution per grade of deficiencies in numeracy, literacy and IT skills for the cohort*



X axis= Percentage of HD, D, C, P and N Grades achieved for subject

Y axis=Percentage of students in HD, D, C, P or N grade who failed numeracy, literacy or IT skills tests

The graph shows a tendency for students who passed the skills tests to have higher grades, particularly HD, D and C. Both HD students passed their skills tests, 81% of D and C students passed all their skills tests, while only 60% of P and N students passed all of their skills tests. Conversely, students who failed one or more of the skills tests were likely to obtain lower P and N grades. Numeracy skills caused the biggest problem for incoming students, followed by literacy, and lastly, IT. Students were more than four times likely to fail the numeracy test than the other tests. A pattern emerged of students in the most populated group, (P), having a substantial number of skills failures (38 of 123), the largest number of students who failed two skills tests (n=6) and, the largest number of numeracy skills failures (31 out of the total number of 38 who failed skills tests).

In terms of proportions, this meant that one in eight students with a D grade failed a skills test, one in five students with a C grade, and one in four students with P and N grades. This confirmed that students in the lower grades were more likely to fail a skills test, while students in the higher grades were more likely to pass all the skills tests. Furthermore, while interviewed students with an N grade displayed a tendency to discount the importance of their proficiency in relevant skills, almost a third (30%) of them failed numeracy, in addition to 15% for literacy, and 15% for IT. This indicated the likely role that skills deficiencies played in failure and subsequent attrition for this group, and also confirmed the positive relationship between these factors. Although most (95%), students in the total cohort failed one of the Skills tests, only students in either P or N grades failed two or more of the skills tests. Of particular interest in regard to those students who left the subject because of failure, 25% failed the numeracy skills test, 10% the IT test and 3% the literacy test. This demonstrated that numeracy skills in particular played a pivotal role in students' ability to pass the subject.

Prior learning experience played an important role in outcomes, a relationship which was supported by the interviews. Although discussed more fully in chapter five, interview comments provided some insights into why numeracy skills was integral to students' passing the subject. For example, students thought that *some indication should have been provided that maths skills were necessary to study business*, which suggested poorly developed and inappropriate understandings of the requirements for business studies. Four interviewees in the N grade complained that *Business Communication should not require maths* and were surprised at having to sit the skills test, although, in hindsight, they could see how literacy and IT could be important to future employment in business. It is clear that this subgroup of students were reflecting their inaccurate perceptions and also the shortcomings in their prior learning experience. Accordingly, such student sentiments reinforced the connection between prior learning and outcomes.

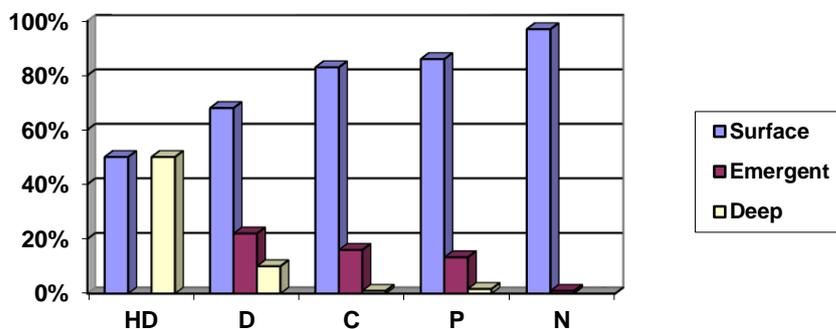
Interviewees who obtained a P grade reported drawing on a range of skills developed in previous learning experiences to assist them with understanding and learning *Business Communication*. Interviewees described various other examples of skills and knowledge which they thought were helpful in studying and passing *Business Communication*. These included skills and knowledge acquired in previous employment, TAFE and pre-university courses and other university subjects or courses, and also teamwork and leadership skills learnt in sport. Students cited general life experience as providing an opportunity to acquire certain useful skills, such as the way they practised communication, negotiation and group work. Students thought that these examples of previous learning experience were beneficial in passing the subject. This result aligned with the finding of the bivariate analysis, which also established a relationship between prior learning and the grade achieved. The impact of such additional prior learning represents a point of departure which would be of interest for subsequent research.

### **Approach to Learning and Grade Achieved**

Statistical bivariate analysis demonstrated in Appendix C showed that Approach to learning and Grade achieved were related. To better understand this relationship, a consideration of the grade distribution of students with surface, emergent and deep Approaches to learning was relevant. Survey results showed that 84% of all students entering *Business Communication* had surface learning attributes and were found in each of the outcome groups: HD, D, C, P and N. The percentage of surface learners increased

progressively from 68% of those with a D grade, 83% with a C grade, 86% with a P grade to 97% of those with an N grade. Only a small number of students, (3%), had a deep approach to learning, and these were located in the upper range of grades. In common with students from other grade results, the approach to learning was directly commensurate with the result for the subject. This finding aligned with the result of the bivariate analysis, which also clearly established a relationship between approach to learning and the grade achieved. This relationship is discernible in the graph shown in Figure 3:

Figure 3: *Percentage of students with HD, D, C, P and N grades with Surface, Emergent and Deep Approaches to learning*



X axis= Percentage of HD, D, C, P and N Grades achieved for subject

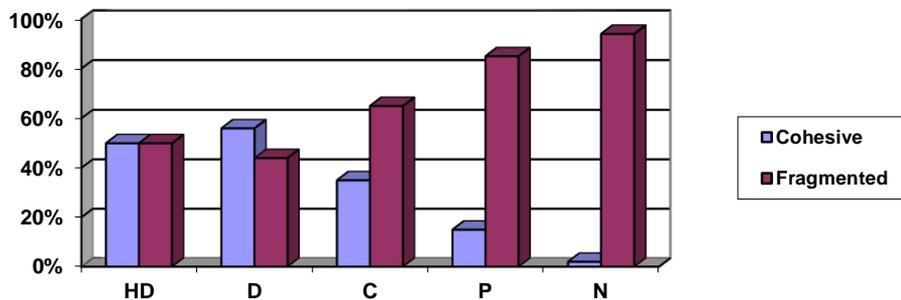
Y axis=Percentage of total cohort with Surface, Emergent and Deep Approaches to learning

The graph clearly shows an increasing proportion of surface learners from HD to N and, correspondingly, a decreasing proportion of deep learners in each of the final grades, HD to N. Students with emergent approaches to learning also shared this pattern, with decreasing percentages from the D grade to the N grade. A comparison of the patterns of distributions for approach to learning and outcomes demonstrated a relationship between these factors, and aligned with the result of the bivariate analysis, which also established a relationship between approach to learning and subject outcome.

### **Perception of Context and Grade Achieved**

Statistical bivariate analysis demonstrated in Appendix E (p. 330) showed there was a relationship between perception of context and grade achieved. In order to better understand this relationship, consideration of the grade distribution of students with fragmented and cohesive perceptions of the subject shown in the following graph is relevant:

Figure 4: *Proportion of students in each grade with cohesive and fragmented perceptions of the Learning context*



X axis= Percentage of HD, D, C, P and N Grades achieved for subject

Y axis=Percentage of total cohort with Cohesive and Fragmented perceptions of the subject

The highest percentage of students with fragmented perceptions were those in the N grade (94%), followed by P grade (84%), C grade (65%) and 44% of all D grade students. This pattern demonstrated the relationship between fragmented perceptions and poorer grades. Conversely, students with cohesive perceptions of the subject were found mainly in the D grade (56%), followed by C grade (35%), and P grade (16%). It is evident from this distribution that students with higher grades were more likely to have cohesive perceptions of the subject, and students with lower and failing grades were more likely to have fragmented perceptions of the subject.

Although some students in the upper range of grades also had fragmented perceptions of the subject, they were able to achieve good results because they reported that their perceptions of the subject had improved over the semester. Chapter five reports what interviewed students said about their changed perceptions of the learning context. Of the 39 (of 61 students interviewed) who reported that their understanding of the subject had changed, 27 said that this was a gradual process as the semester progressed. However, N grade students were less likely to comment during interviews that they had changed their perception of the subject or that they had an improved perception of the subject. In this respect, successful outcomes were related to the extent to which students with fragmented perceptions were able to change their perceptions. Interviews also confirmed that there was a positive correlation between those who said they did not know what the subject was about, and failing, which confirmed the positive relationship found in the bivariate analysis between perception of the subject and grade achieved.

### Skills Test Results and Approach to Learning

Statistical bivariate analysis demonstrated in Appendix C confirmed there was a correlation between prior learnt skills and approach to learning. Because of this relationship, it may be that the quality and extent of prior learning, especially in regard to students' approach to learning basic skills, influenced their general approach to learning, and ultimately impacted the success, or otherwise, of their learning outcomes.

A third (91 of 272) of the cohort entering the first year business course had poorly developed basic skills in one or more of the numeracy, literacy and IT areas considered essential for the study of business. The majority of surface learners (93%) failed one or more skills tests. Not surprisingly, there were very few deep and emergent learners who failed skills tests. Four deep learners (1.5% of the cohort) failed a skills test (numeracy), while two emergent learners (0.7% of the cohort) failed the numeracy test. There were no failures in literacy or IT skills tests by deep and emergent learners. The pattern indicated a high correlation of failed skills tests with students with surface approaches and, a high correlation of students who passed the tests with emergent and deep approaches. In addition to numeracy, literacy and IT skills, students acquired certain skills of learning in their prior learning experiences, which contributed to the approach to learning they adopted when they started university. These attributes of learning need to be raised briefly because of their demonstrated relationship.

Interviewed students with deep and also emergent approaches to learning were aware that their prior experiences of learning, and skills of learning, were able to be capitalised upon when they began their university studies, for example; *I was able to build on my study skills*, said one emergent learner, and another; *I developed more independent approaches to learning [than those held at entry] while at the same time having to work in groups which I always avoided previously*. These examples demonstrated a constitutionalist view of learning (Biggs, 2003) as students' previous learning approaches were able to be extended at university, particularly as tertiary learning skills were being developed. Students could perceive the relationship between their prior learning experiences and those required at university.

The reverse of this situation was obvious in students who entered university with poorly developed learning skills, espousing a poor appreciation of how pertinent the skills and knowledge gained from their previous study or work experience were to the study of *Business Communication*, for instance:

*It was too hard to learn and understand the work at university. I didn't know how to do it before, and;*

*. . . nothing like it at high school and I'm a fruit picker, you don't practise any communication skills there.* As a result, such students could not capitalise on their prior experience in their approach to the study of *Business Communication*, and did not develop attributes of emergent or deep approaches to learning.

For example, five interviewed students who were surface learners with an N grade thought there was no connection between their prior learning experiences and those needed to study *Business Communication* (and other Business subjects) at university. One of these students saw no relation between the way she learnt the skills required to work at a fast food chain, and the skills required for learning *Business Communication*, even though:

*They trained us in customer service and team approaches. They taught us to review our performance, to discuss our problems. We learnt how to speak properly to customers and to handle difficult customers.* Obviously, the student failed to understand the relationship between her work-related skills and those required for learning *Business Communication* at university and, as a segue, the impact that applying such prior learnt skills and knowledge might have on the subject outcome.

To apply a phenomenographic perspective of learning to this situation, the participant must be simultaneously aware of the similarities and differences in variation for learning to occur (Bowden, 2000), which was apparently was not the case with this group of N result students. Being 'simultaneously aware' implies that, in the first instance, the student recognises that there are variations in the way learning can be approached, and in the second instance, is aware of similarities and contrasts in their prior learning experience with that of the present learning experience. If they do not hold these awarenesses, then it is likely that students will not understand the connection, even though there might well be a relationship that could assist them in developing improved learning approaches. Consequently, those students who understood the transferability of learning skills to their new university learning environment, and more specifically to the study of *Business Communication*, were more likely to report the relationship and build on their learning skills and approach to learning, than those who saw no connection.

### **Approach to Learning and Perception of Context**

The statistical bivariate analysis demonstrated in Appendix C found a relationship between approach to learning and perception of the learning context. An analysis of the grade distribution of students with surface, emergent and deep approaches to learning and fragmented and cohesive perception of the subject clarified this relationship.

As previously shown in Table 6, most students in the cohort were surface learners with fragmented perceptions of the subject, and they were more than four times likely to have fragmented perceptions if they were also surface learners. This combination occurred primarily in those who failed (N) the subject, of whom 97% were surface learners and 94% held fragmented perceptions of the subject. A similar relationship between approach to learning and perception of the learning context was found in students with C and P results, also in deep and emergent learners, but not as pronounced as those students with C, P and N results. The relationship was confirmed by interviewees with surface approaches to learning who indicated from what they said that they had held fragmented perceptions of their learning context at commencement.

It was evident that a strong correlation existed between surface learning approach and fragmented perception of context in students with D, C, P and N result grades. Conversely, there was a correlation between deep approach to learning and cohesive perception of context, with this combination occurring mostly with students having HD, D and C results. A similar correlation was identified with emergent approach to learning and cohesive perception of context, which occurred primarily in students with D and C grade results. In comparing the distribution and proportion of students with approaches to learning and perceptions of the context in each of the results groups, it was possible to reason a logical relationship between these factors. This finding supported the bivariate statistical analysis.

### **Skills Test Results and Perception of Context**

The statistical bivariate analysis of survey transcripts reported in Appendix E showed no relationship between the results of skills tests and perception of context. An average of 75% of all students held a fragmented perception of the subject at entry, which suggested that even students who were skills-competent had difficulty in understanding what the subject was about. A salient point was that numeracy, literacy and IT skills were not part of the *Business Communication* subject *per se*, but desirable attributes for learning this subject and other business subjects. While perceptions of the role of skills in the subject were not related to the

results, it is understandable that students might misperceive their role as being part of the subject content, which was the case with some students interviewed from the P and N results group.

Chapter five describes the wide range of perceptions of the subject held by interviewed students, including incomplete understanding and perceptions, misperceptions and poor perceptions or no idea at all of what the subject would be about. Eight students with fragmented perceptions indicated in their survey response that they had *no idea what the subject was about*, which was further confirmed when five interviewees made similar comments to that effect. Furthermore, not only did the majority of students with fragmented perceptions have poor or inaccurate perceptions of the subject, but they also held misperceptions about the role of numeracy, literacy and IT skills in learning and understanding *Business Communication*. Rather than thinking that the skills were prerequisites for learning the subject, certain students with fragmented perceptions thought the skills would be taught in the subject because, at the time of completing the survey, they had just sat the three skills tests. They had taken these tests as a cue to perceiving that skills competencies would be taught in the subject.

Students with coherent perceptions quite clearly saw no relationship between numeracy, literacy and IT skills and *Business Communication*, even though they might have understood that such skills would be useful for other business subjects and indicated their transference value, for instance, *I can see how important maths skills will be in accounting and economics, and IT skills are used in all subjects*. Even so, none of these students suggested that numeracy and literacy were forms of communication, or that IT is more often considered as ‘information technology communication’, and therefore that their inclusion as a component of *Business Communication* might be justified.

Another contributing factor to poor perception was that interviewees with fragmented perceptions did not understand the importance of the skills to their future as students of business, which was borne out in the way they approached attending supplementary classes in skills areas they had failed. Although a large number of students (91 of 272) failed one or more of the three tests and were offered opportunities to attend supplementary classes early in semester, only a small number (averaging six to 11) availed themselves of this opportunity on a regular basis because they thought the skills were relatively unimportant to the study of *Business Communication* if they were not part of its content.

Several (n=23) students mentioned that they thought *Business Communication*

involved learning modern technology, computers or some form of information technology, and it was significant that students who described this relationship were from the P and N result groups who had the highest number of fragmented perceptions, as well as the largest number of failures for the subject. It is also unsurprising that this group of students, many of whom were of X and Y generation, should have misperceived the importance of IT because of their characteristic interest with technology.

This section has examined the relationships between the three factors inherent in prior learning namely, skills tests, approach to learning and perception of the learning context, and the impact these had on preparedness and final outcomes for the subject. All of these factors were shown to be positively related, with the exception of skills test results and perception of the context. Establishing relationships between factors and their impact on results for the subject was important in respect of establishing the level and importance of student preparedness, and are discussed in greater detail in Chapter six.

### **SECTION 3: Discussion of Findings**

Chapter four began by asking the question: *How academically prepared are students to begin their first year of university in regard to three learning related factors: prior learning, their approaches to learning and their perceptions of their learning context?* This section summarises the approach that this study took to measuring student preparedness and discusses what the survey findings indicated about how prepared the students were for their first year of business studies. It also compares how these findings aligned with the relevant literature.

As discussed in Chapter two, the literature reviewed a broad range of factors impacting academic preparedness and offered a multitude of ways of approaching preparedness of students entering university studies. A recent report by Palmer et al. (2011) summed these various approaches as having a focus on university selection processes and prior academic achievement, with the most reliable predictors of first year success being standardised tests of preparedness and aptitude. None of these approaches considered the use of learning related variables such as prior learning experience, approach to learning and perception of the learning context as crucial indicators of academic preparedness, as does this study.

The perspective taken to determining academic preparedness in this study marks a point of departure from the predominant approach mentioned above. It has elements in common with the approach taken by Byrne and Flood (2005) in the field of accounting who found “a

significant association among prior academic achievement, prior discipline knowledge and students' academic performance" (p. 202). They also found that additional background factors such as students having a positive prior experience of learning accounting and an accurate perception of accounting were significant in explaining the variation in first year academic performance. Boyle et al. (2003), however, found no correlation between learning styles and academic performance. In building on previous learning models by Biggs (1978), Ramsden (1988) and Prosser (1994), the present study investigated certain antecedents of student performance, namely, prior learning, approach to learning and perception of the learning context, as likely factors in assessing academic preparedness. Chapter four demonstrated that these factors, as indicators of preparedness, contribute to subsequent approaches to learning and to how students understand the subject, and consequently can have an influence on their learning outcomes.

The telephone interviews of business students at this university at the end of their first year conducted by Bode (2006), an independent researcher employed by the School of Business, produced relevant findings which related to preparedness. The interviews aimed to obtain information about a number of areas including their transition experience from secondary school to university; the level of teaching and learning support available; the effectiveness of supplementary teaching in literacy and numeracy workshops and also the students' overall experience of first year. Bode concluded, *inter alia*, that students with low university entrance scores at entry were at greater risk of discontinuing their studies. She also found that students had a high level of uncertainty about course and subject requirements, and that there was a general level of unpreparedness for tertiary study in terms of the set of basic numeracy, literacy and information technology skills deemed necessary for the study of business subjects (p. 3). Although Bode's report did not provide specific numbers, she quoted certain students who reported that they felt the course had not lived up to their expectations, which indicated that their entry expectations and perceptions might have been unrealistic and/or uninformed. Students suggested in their interviews that they *should receive more advice at enrolment and during the course*, and also *be taught the skills to learn at a tertiary standard*. Bode's findings made an important contribution to the present study in respect of the impact that various student factors, particularly perceptions of the learning context and prior learning, had on success and persistence.

The present study's survey findings established a wide variation in classifications for the qualitatively different ways students' approached their learning and perceived the subject,

which demonstrated that students entered with vastly different levels of background understanding and experience from their prior experience. Despite this, the distribution of responses suggested that the majority of students had surface approaches to learning and fragmented perceptions of the subject, and that these related to their P and N grade outcomes. The survey results showed that in terms of their largely surface approach to learning and fragmented perception of context, most students in the cohort with those characteristics were unprepared for their university study and, consequently, the likelihood of academic success was likely to be precarious. In developing a learning profile of the cohort such students were considered to be ‘precariate’ learners, which is a new term this study contributes to the scholarship of first year learning. Student learning profiles are reported in Chapter six.

Another important aspect of the findings was the nature of the various relationships established. Relationships, described as both ‘logical’ and ‘functional’, were found between prior learning, approach to learning, perception of the context and outcomes, and also between approach to learning and prior learning, which is consistent with the literature (Biggs, 1993; Marton, 1981; Prosser & Trigwell, 1999; Ramsden, 1984, Säljö, 1975). Such relationships were considered to be logical or functional because they implied a chain of reasoning about these factors, which emanated from the way they were previously experienced (Bowden & Marton, 1998; Marton & Booth, 1997). For example, the way students experienced learning before entering university and their understanding of learning impacted the way they approached learning at university, which eventually influenced their grades. Similarly, their understanding of business communication prior to beginning university affected their understanding of *Business Communication* as a university subject, and also influenced their final grades for the subject.

Moreover, in establishing the wide variation of approaches to learning and perception of the context, the categories of description also demonstrated a mostly hierarchical relationship, in terms of structure and meaning, between each sub-category. This outcome was consistent with the literature about hierarchical relationships between learning factors (Ashworth & Lucas, 2000; Bowden, 1996), and the importance of establishing dialectical relations between the categories of the type which reasons and synthesises the ways such categories are constituted (Bowden, 2000; Tan, 2008). ‘Dialectical’ implies the art of reasoning and logical debate. The process of categorisation inherent in phenomenography provided an avenue for dialectical analysis and synthesis of data in this study. Categorisation allowed the range and hierarchy of students’ approaches to learning and perceptions of the

context to be defined. Most importantly, relationships between inherent learning factors were identified. The idea that factors inherent in learning are related is well documented (Crawford et al., 1994; Dahlgren, 1975; Prosser & Miller, 1989; Prosser & Trigwell, 1999; Marton, 1992, Walsh, 1994). In this study the demonstrated relationship between factors is particularly important because knowing how factors interact provided a framework for understanding the complex nature of first year learning.

Finally, of particular interest to addressing the first research question and the issue of preparedness was the central role played by prior experience. Approaches to learning and perception of context, as aspects of prior experience, were shown to impact outcomes, and if such aspects of prior experience were underdeveloped this was shown to affect students' preparedness to begin university study. By logical extension, prior experience also affects the likelihood of successful outcomes.

### **Conclusion**

This chapter presented the survey findings from phase one of the study in which students' preparedness for their tertiary studies was measured in terms of their prior learning, approach to learning and perception of the learning context. The responses to the two questions about what students thought they had to do to learn *Business Communication* and also what they thought the subject was about produced a wide variation of qualitatively different ways in which students approached their learning and perceived *Business Communication*, and hence provided an indication of their preparedness for university study.

A range of 22 categories of description for approach to learning and 10 categories of description for perception of the learning context demonstrated that students entered university with deep, emergent and surface approaches to learning and also cohesive and fragmented perceptions of the context. While surface and deep are familiar and well used terms describing approaches to learning, 'emergent' is a relatively new term in the first year learning literature. It was used in this study to capture the attributes of a third learning approach occupying a position between deep and surface learning and, as such, contributes to the scholarship about approaches to learning and first year learning.

A bivariate statistical analysis of the relationship between prior learning, approach to learning and perception of the learning context and the outcomes for *Business Communication* established that all of these variables were positively correlated, with the exception of the skills tests (indicating prior learning) and perception of the learning context,

which were not related. These findings were generally consistent with those established in the literature. In addition to bivariate analysis, all of the learning variables were cross tabulated to show the connection of these variables to grades, and the trends shown were used to indicate student preparedness.

Students used their previous experience of business communication and their previous experience of learning as a framework upon which to answer the two survey questions. Such connections to their past experience were influenced by their ability to reflect, recall, recognize and describe these experiences using appropriate language, which was somewhat problematic for some.

The survey found that students entered university with different approaches to their learning, different levels of background understanding and experience of learning and different perceptions of *Business Communication*. They were generally unprepared for their university studies. Most often they entered university with poor perceptions of the subject, and held inappropriate understandings about learning and what was required for success in the subject. Findings suggested that entry students commonly held poor understandings of the concept of learning and were confused by the distinction between study and learning. Because of the risk these factors posed to the success of their first year, such students were given the term 'precariate' learners in this study.

The next chapter presents and discusses the findings and analysis of phase two of the study, the analysis of interviews, which complements the survey findings presented in this chapter.

## CHAPTER FIVE: PHASE TWO: CHANGE LEARNING

This chapter presents the findings of Phase two of the study that used the telephone interviews of those students who had completed the written surveys earlier in the academic year to explore change in learning. The purpose of this phase was to address the second research question:

*Do students change the way they view their approach to learning and their learning context over the first year?*

This question is important in this study because according to phenomenography change results in learning, and evidence of change indicates whether students developed as learners over their first year. In investigating the relationship between learning factors and outcomes, it was critical to understand the students as learners and their development as learners over their first year at university. The interview took place at the end of their first year.

Conducting follow-up interviews as a means of confirming earlier student feedback and gathering additional information is a common approach in phenomenographic research. There were 61 students, approximately one quarter of those originally surveyed, who were available to be interviewed. A detailed comparative breakdown of the interviewed group with that of the total cohort indicated complementarity and also allowed extrapolation of the interview findings to the wider cohort. This analysis is provided in Section 4 of the following chapter. To this end, the interviews were successful in gathering a large amount of information relating to the issues under investigation in this study.

The purposes of the chapter are threefold: firstly, to use the interview findings to establish whether students, with reflection and hindsight, changed their views about their approach to learning and their perception of the learning context over the first year and, if so, what these changed viewpoints were; secondly, to compare and contrast information obtained during interviews with that of the survey to confirm what students wrote earlier about their approach to learning and their perception of the learning context; and thirdly, to provide an understanding of how change was related to students' outcomes and retention. As the result, a more complete picture emerged of the cohort as learners at commencement and at the end of their first year, and a clearer understanding was gained of the reasons for retention.

Chapter five is organised into four sections: The first section presents the categories of description developed from students' responses concerning changes in their approach to learning and in their perceptions of the learning context. The second section provides evidence of students' change in approach to learning and perception of context. This was

examined in a number of ways including what students reported in their interviews, their result grade for the subject and whether they had deep, emergent or surface approaches and cohesive or fragmented perceptions. The third section presents a comparison of interview results with survey results and student feedback on the interview process. The fourth section presents a discussion of findings.

### **SECTION 1: Categories of description for Changed Approaches to Learning and Perceptions of the Learning Context**

This section presents findings from the first four of the eight questions asked during the interviews. These four questions aimed to discern whether students had changed their view on the way they approached learning and perceived *Business Communication* over the first year, and, if so, what these changes were and the extent of their variation. The final four questions are discussed in the following chapter. The interview method was previously discussed in the methodology chapter. In brief, students were reminded of their responses in the survey they had completed at the beginning of the subject.

Interview question one, *What is your opinion of what you wrote in reply to this question?* sought to clarify the meaning and intent of the first original survey question which was: What do you think you need to do to learn Business Communication? Each student's written response to this question was read aloud and each student was asked to clarify what they had written. If the additional information affected the interpretation and categorisation of their original survey response, modifications were made accordingly to the survey categorisation.

Similarly, interview question two, *What is your opinion about what you wrote in reply to this question?* sought to clarify the meaning and intent of the second original survey question which was: *What do you think Business Communication is all about?* Each student's written response to that question was read aloud, and each student was asked to clarify what they wrote in their reply. If the additional information affected the interpretation and categorisation of their original survey response, modifications were made accordingly to the survey categorization.

Interview question three sought to determine the variation in meaning associated with students' current approach to learning: *Is your opinion about your approach to learning still the same, or has it changed during the year?* If necessary, students were prompted with: *Why? How? What is your present approach to learning at present?* Students' current

approach to learning was compared with their original response to the same question in the written survey. Differences were noted under the ‘changed approach to learning’ category of description and classified into sub-categories of description according to the phenomenographic methodology discussed in Chapter three.

Similarly, interview question four sought to determine the variation in meaning associated with students’ current perception of the learning context with the question: *Is your understanding of Business Communication still the same, or has it changed during the year?* If necessary, students were prompted with questions such as: *Why? How? What is your present understanding about Business Communication?* Students’ current perception of the subject was compared with their original response to the same question in the written survey. Differences were noted under the ‘changed approach to perception of the learning context’ category of description and classified into categories and sub-categories of description.

The analysis of the first four interview questions produced a range and variation of ways in which students perceived they had changed their approach to learning as well as their perception of the learning context. Thus the categories of description chosen for the analysis of both phenomena were ‘Changed approach to learning’, and ‘Changed perception of the learning context’. The range of the sub-categories defined the extent of changed experiences and changed perceptions which the students reported.

As anticipated, most students interviewed reported change in their approach to learning and their perception of *Business Communication* over their first year at university and there were qualitative variations in the ways these changes occurred. In summary, a total of eight sub-categories of description describing ‘changed approach to learning’ and six sub-categories describing changed perception of the learning context emerged during the analysis of the interview transcripts. These sub-categories ranged from major change to minimal perceptible change, and are summarised in Tables 7 and 8, together with representative student comments to illustrate each. Appendix D (p. 316) provides greater detail of these categories. It should be noted that it is the sum of student comments that constitutes the particular sub-category, rather than each particular comment which is a fragment of the descriptor. Therefore, individual comments would not normally be expected to reflect the entire description for a particular sub-category of description. It is the total of all transcripts in each sub-category which constitutes the description, and there will be variation of comments within the group.

### (A) Categories of description for Changed Approach to Learning

The focus of analysis for changed approach to learning was on the ways that students perceived they had changed in relation to developing approaches to learning that are appropriate at a university level, including a greater interest and understanding of learning, awareness of higher learning attributes and the need to develop these.

Table 7 shows the eight sub-categories describing changed approach to learning which are arranged logically (A-H), indicating a variation from most desirable to least desirable attributes, and a transition in approaches to learning ranging from a major transition to a minimal transition. These are discussed in relation to student comments that exemplify the hierarchical relationship between sub-categories and, according to Dall'Alba (1991), in terms of these being more or less complete conceptions.

Table 7: *Categories of description for Changed Approach to Learning*

<b>CHANGED Approach to Learning</b>	
A.	Major transition occurred in understanding and approach to learning.
B.	New approaches to learning developed incrementally.
C.	Heightened awareness and understanding of learning, increased ability of students to reflect on learning and their progress as learners occurred.
D.	Greater responsibility taken by students for their own learning; concomitant development of independent learning attributes.
E.	Improved confidence, motivation and opportunities allowed increased understanding and knowledge about learning.
F.	Heightened awareness of individual learning approaches and the need to develop these.
G.	Beliefs, perceptions and assumptions of learning challenged.
H.	Minimal change with residual resistance to employing deeper learning approaches. Interest levels in learning remained low.

In sub-categories A: *Major transition occurred in understanding and approach to learning* and, B: *New approaches to learning developed incrementally*, the focus was on students perceiving that they had made a substantial change in the way they understood learning in the context of university. Although the change took time and was different from their previous experiences of learning, they were able to negotiate new and appropriate ways of learning. They had also acquired the necessary skills to develop a more comprehensive approach to learning in order to maximize their understanding of a particular learning situation. Larger concepts and theories were applied to practical situations and for problem-solving arising from those situations. For example:

*I wasn't prepared for university, had lots of distractions, wasn't focussed and found the subject boring. After the first assignment I had to really change my approach and put in greater effort. Then I found that I began to enjoy the subject and learnt to work better in lectures, in tutorials and with group assignments. I discovered LearnJCU which really helped with my learning;*

*I hadn't really understood what learning meant and what I had to do to learn. I thought it was the same as high school but I soon found that if I was to get a good mark I would have to change how I was studying, and so I started to be a better student and take on board what the lecturer was saying about needing to be better prepared, to revise and think about how the content can be used in the business world;*

*. . . preparing assignments at a tertiary level and to specific standards and rubrics; and, I learnt new and better research skills and how to locate information to suit particular circumstances. I even began to understand how the theory applied.*

In sub-category C: Heightened awareness and understanding of learning, increased ability of students to reflect on learning and their progress as learners occurred, shows change because students had developed greater ability to reflect and understand learning and were aware of their own learning style. They were developing an interest in learning and in monitoring their learning progress. For example:

*I was an A student at high school and already had good learning skills developed. All I had to do was to build onto these;*

*I learnt to think about how to get better results and how to learn like a university student;*

*By changing my approach and putting in a greater effort I learnt to work better in lectures, in tutorials and with group assignments; and,*

*I needed to study more consistently and be more organised because of the way time demands affected my performance.*

Sub-category D: *Greater responsibility taken by students for their own learning; concomitant development of independent learning attributes*, students were becoming self directed tertiary learners because they were more motivated and willing to engage in independent learning activities and acquiring better learning outcomes. For example: *I found the move from high school difficult because there the teachers pushed you and at university. I had to develop self-directed study skills. The lecturer talked a lot about the need to develop self-directed study skills and how to be a successful student. Some of it stuck; Assessment standards were a problem to start with until I learnt to clarify these and make an effort to use the rubrics. These were very useful in knowing the standards required by the lecturer; and, Group work went well. I had a good team although I had to lead the group and shouldered most of the workload. It was a good experience.*

With sub-category E: *Improved confidence, motivation and opportunities allowed increased understanding and knowledge about learning*, students were beginning to understand what it means to be a university student and have an emerging awareness of the academic learning skills required for success. This gave them more interest and confidence to learn improved approaches to learning, and to avail themselves of opportunities to acquire the new knowledge and skills required. For example: *I needed a challenge because I learnt Bus. Com. [sic] at high school and I thought it was going to be the same and easy. In the second half of semester I realised there was a lot of new material and my attitude had to change; I needed to be more motivated and organised in order to get a better pass; and, I became focussed and disciplined about my study and take every opportunity the university offers to learn new ways of learning. I've done several courses e.g: the use of the internet, LearnJCU, blogging and how to use the library for research.*

Sub-category F: *Heightened awareness of individual learning approaches developed and the need to develop these* refers to the phenomenographic precept of awareness as an element in learning in which conceptual understanding of learning is foregrounded. Students developed an awareness of their own learning and the learning approaches needed to be developed, in the context of the subject. For example:

*I thought I understood what the subject was about but when we got critical thinking exercises to do I didn't know how to tackle them so I had to learn; and,*

*I couldn't keep up; note taking was a problem. I think I have learning problems. I tried to form a study group. Working on the group assignment was better, I started to learn better study skills.*

Sub-category G: *Beliefs, perceptions and assumptions of learning challenged* refers to the way in which students evoked prior experiences of learning to constitute present understanding and approaches to learning. If these proved inappropriate or inadequate, they were forced to re-evaluate the basis of their beliefs and assumptions of learning. This process leads to new and improved ways of understanding and conceptualizing. For example:

*Too great a transition from high school. I didn't realise the amount of time required to be put in;*

*A different approach was needed and the learning had to have more meaning. Assessment didn't just test facts or content that could be memorised. Some of it really stretched me into doing extra and delving deeper into topics; and,*

*University was vastly different to what I'd imagined. I thought I could approach study in the same way as high school.*

In sub-category H: *Minimal change with residual resistance to employing deeper learning approaches* interest levels in learning remained low, students made some effort to improve the set of conceptions about learning that they brought to university. They still had some resistance to changing the set of conceptions they held, and their progress towards developing improved approaches to learning was slow. Because they were relatively uninterested in learning about learning, the focus was not on wishing to improve. For example:

*I had not thought about how I learnt and didn't know much about learning when I started university;*

*I was only aiming for a pass because of my outside work commitments so I had to learn to take a few short cuts, like skipping lectures. I did use LearnJCU though and I shared notes with a friend; and,*

*I don't have any serious learning problems. My problem was not the study skills but the fact that I wasn't interested in the subject.*

These examples show that the conceptions of learning held by students changed gradually over the year as they became more interested in and aware of the nature of learning at university. They became more reflective of their own learning strengths and weaknesses and began taking control over the progress of their learning. Each sub-category defined a

different stage in that development, with each having a slightly different focus for the student. As such, a sequence of transformation was depicted over the range of sub- categories.

### **(B) Categories of description for Changed Perception of the Learning Context**

A similar variation to that of approach to learning was found with the responses to question 4 which produced six sub-categories (A-F), for ‘changed perception of context’.

The variation is shown in Table 8, and expanded with definitions and representative quotes are provided in Appendix D. The sub-categories are arranged broadly in descending order of desirability. For example A, *Deep understanding and appreciation of the subject developed over the period, showing a high level of change and development*, is more desirable than F: *No firm perception of the subject held at entry but perception developed slowly during the semester*.

Table 8: *Categories of description for Changed Perception of the Learning Context*

<b>CHANGED Perception of the Learning Context</b>	
A.	Deep understanding and appreciation of the subject developed over the period, showing a high level of change and development.
B.	Holistic understanding of the subject emerged which included the role of theory.
C.	Understanding developed about how the subject relates to practice.
D.	Initial perception broadened and understandings expanded as the subject progressed.
E.	Understanding developed that original perception was inaccurate or inadequate, and appreciation of the need to change. Misperceptions corrected.
F.	No firm perception of the subject held at entry but perception developed slowly during the semester.

Table 8 provides an indication of the variation of changed perceptions of *Business Communication* which students held by the end of their first year at university. The titles of the sub-categories emerged from the analysis of the student transcripts and captured the essence of each group of similar transcripts. Sub-categories were arranged logically and hierarchically and, according to Dall’Alba (1991), from a high level of change to minimal

perceptible change, and from most desirable to least desirable. There was a wide range of perceptions about the subject which included incomplete understanding and perception, misperceptions, poor perceptions, or no perception at all - and therefore no understanding of what *Business Communication* would be about. Anecdotal evidence suggested that the amount of change which students experienced appeared to be strongly influenced by the perception of the subject they held at the beginning of the year and prior to the first lecture. Those students with very little knowledge and perception of the subject were more inclined to change as they learnt more about the subject.

The focus of analysis for changed perception of the learning context was on the different ways in which students changed their perceptions of *Business Communication* and gradually developed more accurate and informed understanding of its context. These included appreciating the need to change from a narrow or inaccurate perspective to a broader understanding and appreciation of the subject, in which students could perceive its breadth and relation to practice.

In sub-category A: *Deep understanding and appreciation of the subject developed over the period*, shows a high level of change and development. Students had developed accurate perceptions about the nature of *Business Communication* and its aims in relation to outcomes. They also appreciated its content and useful skills. For example:

*Now that I've learnt it, I can appreciate when communication is good and when it is used badly at work. I find myself trying to apply the principles it taught and to use better forms of communication;*

*My skills and knowledge about communication really improved over the semester. It taught every sort of communication you need in your job; and,*

*I liked the way the subject led from one aspect of communication to another. It all made sense. I hadn't expected it to all relate so well.*

With sub-category B: *Holistic understanding of the subject emerged which included the role of theory*, students understood the subject as being much more inclusive than they had originally perceived. They could see how parts were related and also perceived the use of theory to the practice of the subject in different contexts. For example:

*I carried out research on the subject before I enrolled so I knew what it was about. There were no surprises but it was much wider in scope than I expected and more useful;*

*The subject taught everything you need to know about how to write, speak and communicate with others in a business situation;*

*It even gave you the theory behind it so you could understand the psychology of human communication better; and,*

*More grounded in various parts of practice than I thought and I began to see how parts were related, even the theory.*

In Sub-category C: *Understanding developed about how the subject relates to practice* students developed an understanding of how the knowledge and skills taught in *Business Communication* could be applied to the work environment and in other practical ways. For example:

*There certainly was a lot in the course and most of it was very useful for solving problems in the business world;*

*It was a very practical subject and was taught in an applied way; and,*

*Now that I've learnt it, I can appreciate when communication is good and when it is used badly at work. I find myself trying to apply the principles it taught and to use better forms of communication.*

With sub-category D: *Initial perception broadened and understandings expanded as the subject progressed*, students developed a more complete understanding of the subject.

They began to see that *Business Communication* comprised many aspects embracing technology, interpersonal, written, spoken and group communication. They also discerned the interrelatedness of these aspects. For example:

*The subject was like the chapters of the textbook, several big topics which were divided into parts which taught theory, skills and facts;*

*I began to understand that even the theory was necessary. The skills were transferable and provided "stepping stones" to other subjects; and,*

*I liked the way the subject led from one aspect of communication to another. It all made sense. I hadn't expected it to all relate so well.*

Sub-category E: *Understanding developed that original perception was inaccurate or inadequate, and appreciation of the need to change. Misperceptions corrected.* Students changed their perception as they realised the breadth of the subject, and that it was more complex than they had originally thought, or when they realized that they held an inaccurate perception of the subject. For example:

*It delivered genuine knowledge of business communication practices as I expected, but there were underlying concepts that I hadn't understood that applied;*

*More grounded in various parts of practice than I thought and I began to see how parts were related, even the theory; and,*

*It wasn't until we started to work through some of the examples that I began to see what a big topic communication is, how it was all connected.*

Sub-category F: *No firm perception of the subject held at entry but perception developed slowly during the semester.* Students may have originally had no real understanding of the subject, but by the end of semester, due largely to the class learning activities and assessment requirements during the semester, they had a much clearer understanding. For example:

*When I started I thought it would be like my work situation but it wasn't. For starters we learnt the theory behind communication, not just the skills of communicating. I resisted this for a while which meant that my first two assignments got a poor grade. I wasted a lot of time and effort until I understood theory;*

*I thought I knew all about Bus. Com. [sic] from the subject I did at high school. After I got the first assignment back with a poor mark I realised I had underestimated how difficult it was;*

*I felt a bit annoyed because I had no idea that there would be so many assignments, and that they would involve actually using the communication skills being taught; and, I didn't really understand what the subject was about to begin with. If I had, I would have not done so poorly, but by the end of the semester I just passed. They could have been clearer to start with.*

The range of these sub-categories indicated how most students changed their perception of the subject over a period and in a number of different ways. They began to understand the breadth of the subject and its various applications, and appreciated that its theories were useful in practice, and they could relate parts of the subject to other situations.

This section has presented findings from the analysis of interview transcripts which were categorised hierarchically into ways in which students had changed their approach to learning and their perception of the learning context. In so doing, part of the second research question: *Do students change the way they view their approach to learning and their learning context over the first year?* was addressed. To ascertain the extent of this change, the numbers of students who made these changes per result grade were examined. This comparison also indicated where most change occurred.

## SECTION 2: Evidence of Change in Approach to Learning and Perception of Context

While the previous section examined the range and variation of changes in approach to learning and perception of the learning context, this section addresses the extent of that change in two parts: (A) presents evidence of change in students' approach to learning and also why change did not occur in their approach to learning; and (B) presents evidence of change in students' perception of the learning context and also why change did not occur in their perceptions of the context. Knowing why students chose not to change was useful in examining the factors which adversely affected outcomes and retention.

There were qualitative differences in the way students with HD, D, C, Pass and N grades reported that their conception and approach to learning had changed, ranging from virtually no change in the HD grade, to a sizeable shift and increasingly complete understanding in students with D and C grades. The distribution of students with changed approaches and perceptions per HD, D, C, P and N result grades, shown in Table 9, was analysed in respect of trends occurring and the broad areas of change reported by students in their interviews. There were only two students with a HD result. Therefore, it must be noted that the two "no change" students in this group is an unrepresentative sample and cannot be extrapolated to the wider group in order to discern broad areas of change, and the impact on retention.

Table 9: *Numbers of Interviewed Students with Changed Approach to learning and Changed Perception of the Learning context per Result Grade*

Grade	Number	Changed Approach to learning	No change to approach	Changed Perception of learning context	No change to approach
HD	2	0	0	0	0
D	9	8	1	4	5
C	18	16	2	14	4
P	19	10	9	15	4
N	13	5	8	6	7
Total	61	39	22	39	22

This table shows that proportionately two thirds of the 61 students interviewed changed their approach to learning and the same proportion changed their perception of the learning context. Highlighted cells in the table are noteworthy. They show a similar pattern where the majority of students changed both their approach (39 of 61) and their perception in the same proportion (39 of 61). This means that most students with D, C and P grades made changes, more particularly with their approach to learning.

Because this study probed how learning related factors impacted outcomes and retention, it is apposite at this point to also examine the reasons why students did not change, and most particularly those students with fail (N) results. Recalling the phenomenographic proposition that change results in learning, it was thought likely that there was a relationship between students not making the desirable changes to approaches and perceptions and not passing. Students provided a number of reasons why they did not change in these two aspects which are discussed in the following section.

### **(A) Evidence of Change in Approach to Learning**

Evidence of change in approach to learning was examined in a number of ways namely, what students reported in their interviews, characteristics of the variation between each sub-category of description describing change in approach, their result grade for the subject, and whether they had deep, emergent or surface approaches. It was this mix of factors and their relationship which demonstrated the variety of changes which were evident. Moreover, using a relational perspective to examining the complexities of change in aspects of learning reflected a phenomenographic approach (Marton & Booth, 1997).

Students who reported a changed approach to learning were found in all grades: D, (eight of nine); C, (16 of 18); P, (10 of 19) and N, (five of 13), with the exception of the two students with a High Distinction (HD) grade who remained unchanged. Students with better results namely D, C and P grades, had the highest proportion of those who had changed their approach to learning. When interviewed, these students generally understood the conceptual transformations that had occurred in their approaches to learning over their first year of study. Accordingly, students with C and P grades had the highest proportion of those with changed perceptions of the learning context. When interviewed, these students displayed a variety of more inclusive and complex awareness of all the phenomena and variations of phenomena which related to the context. Table 10 provides details of the number of students with Surface, Emergent and Deep approaches to learning who changed their approach.

Table 10: *Numbers of Interviewed Students with Surface, Emergent and Deep Approaches to learning who Changed their Approach to learning*

Grade	No. of students who changed	Number of students who changed their approach to learning per surface, emergent and deep categories		
		Surface	Emergent	Deep
HD	0 of 2	0	-	0
D	8 of 9	5 of 5	1 of 2	2 of 2
C	16 of 18	13 of 13	2 of 4	1 of 1
P	10 of 19	7 of 16	1 of 1	2 of 2
N	5 of 13	4 of 12	1 of 1	-
Total	39 of 61	29	5	5

The two students with a HD grade viewed change a little differently from other students. Although reporting no change in their approach to learning, these students said that in first semester they had talked with peers about learning, related class material to work situations and had formed study groups which made them feel ‘connected and supported’, and were quite comfortable with talking about their learning experience to others even at the beginning of their first year at university. This was an approach they had been familiar with previously at high school. Students with D and C grades were less reluctant than other students to provide evidence of changes in their approach to learning.

By the end of their first year, a large proportion of the students with D and C grades (24 of 27) reported developing an understanding of the conceptual transformations which had occurred in their approach to learning over their first year of study. Change appeared to be more evident with surface learners and less so with emergent learners. These groups were of interest because as students progressed towards deeper understandings of learning, they changed in their approach to learning and often also in their perception of the learning context.

Two emergent students with C grades said they developed tertiary learning skills as the semester progressed, and had built substantially on what they perceived to be appropriate learning skills from secondary school or previous study. Because they were surprised at the

amount of work required for university and particularly for this subject, they adjusted by devoting more time to assignments and preparing for tutorials than they had imagined at entry. Students with C grades who had a Surface approach described a wide variety of ways in which they were developing the necessary tertiary learning skills, which were frequently referred to as 'study skills'. In addition to making better use of time when studying, they took better notes and used questions more effectively in class and tutorials, aimed for more interactive participation in tutorials and with others during class, and also developed skills in group work. In preparation for lectures they revised notes, added summary notes to lesson notes and referred to PowerPoint slides, read the text book and worked through examples. In order to prepare assignments at a tertiary level they learnt to use the library and its resources, spent considerable time using the LearnJCU platform, and generally reported an increased use of web resources. Students in this group demonstrated that they could identify their learning problems and found ways of dealing with these, all of which involved change.

Those students with P and N results who described a transformation in their attitudes towards study were willing to admit that the transition from high school to university had been more difficult than they had anticipated, although two students from the N group also said the subject was not sufficiently challenging, which indicated unrealistic expectations. Those students with P and N grades who had changed their approach to learning reported that they now felt more confident with the better approach to learning they had developed, even if their conception of learning remained unrealistic. They continued to prefer assessment which was primarily recall based, avoided cognitive challenges in classroom learning activities, and disliked group work but acknowledged the benefits of collaborative work to later employment circumstances. Although students described the 'poor' study habits and attitudes acquired at high school, they were less likely than those in other grade groups to change those habits and attitudes, and also less likely to seek advice from academic staff than were high achievers with HD, D or C grades.

In addition, when half of the P group (10 of 19) and a smaller number of interviewees from the N group (five of 13) changed their approach to learning they still did not appear to understand the complexities of learning or the differences between learning and study, despite students saying their understanding of learning was better than when they began their university studies. Moreover, the researcher noticed that they were more comfortable with using the language related to learning to describe their approach to learning and discuss their

learning than they had been at the beginning of the academic year. Students attributed this development to lecturers who discussed learning and the concepts related to learning.

In general, those students in the fail (N) grade were identified as failing to acquire or exhibit any transition towards more appropriate and successful learning approaches because they still held unrelated and inappropriate understandings of university learning. Although students held an improved comprehension of learning and understood the need to make substantial changes, they often chose not to change because of certain cognitive, perceptual and personal factors. Because of their attitudes towards learning and misperceptions of their role as tertiary learners, it was apparent that barriers to change had developed that prevented the full development of the attributes required for success. Common instantiations of such barriers included that they lacked the ability to understand and acknowledge the connection between different approaches to learning and the quality of outcomes, and also lacked the interest and motivation to change. These examples suggested that if students failed to value the role of improved approaches to learning, there was little likelihood they would be motivated to change their current approach to learning and acquire improved and higher order approaches to learning.

In summary, there were several areas of change identified from across the grades. During the transformation in students' approaches and perceptions, certain major themes were identified by students. These included taking greater responsibility for their own learning, developing a greater awareness and understanding of deep learning traits and of their desirability, and concomitant development of an appreciation of the subject, its breadth and application. Students also gained insights into inherent relationships in both learning and the learning context.

Such transformations were reported by students to have developed incrementally, as did the ability to understand and reflect on their learning. Students reported that the acquisition of these traits resulted in improved confidence and motivation to learn, which enhanced the organisation of their learning strategies. New approaches to learning emerged as a result of increased opportunities for authentic learning opportunities in class and tutorials, authentic assessment, and particularly with opportunities for practice based learning and work related learning. These examples demonstrate the variety of ways in which change learning occurred in the study.

### **Why Students did not Change their Approach to Learning**

There were primarily three groups of students who persisted with their approach to learning and did not change. These were two students with a HD grade (of 2), eight (of 13) students in the N category and, to a lesser extent, nine students (of 19) with a P grade. Each provided reasons for not changing their approach to learning. Although interviewed students offered several reasons for not changing, the interviewer concluded that the common underlying condition indicated a basic inability to address the central issue of learning and what it entailed at a university level. Students were also reluctant to make the necessary changes.

To begin, HD grade students saw no reason to change their approach to learning because they entered university with sound learning approaches which allowed them to obtain a successful result for the subject. Students found no new or relevant approaches to learning from what they had acquired and used in previous learning, or in work experience.

Likewise, three students (of 27) with D and C grades who did not change, justified their position on the relative success they had with using the approaches to learning with which they entered university. Although stating they had not changed, eight students commented that they had 'extended' their approach to learning and learnt some additional approaches not previously experienced. This position is not surprising given that there were more emergent learners in the D and C grades, and students might not have realised that they were developing higher level learning attributes. The way in which such interviewees described their approach to learning suggested that they had not yet developed a sufficiently broad conceptual understanding of the way in which an approach to learning is accreted over a period, and the desirability of this to happen. These students were unable to appreciate that approaches are extended and added to as part of the process of learning how to learn, or to recognise that their own approaches had indeed developed over the first year at university. While students may have added to their repertoire of learning approaches, their understanding had not changed. They remained adamant that their original approach did not need to be changed, and therefore these students were included in the 'unchanged' group. Students with P and N grades who did not change their approach also did not grasp the notion that it is desirable for tertiary learning attributes to be developed. One third of those interviewed whose approach to learning remained unchanged, and also one quarter of those whose perception of the context remained unchanged, reported that they were sufficiently confident

in the accuracy of their initial understandings and approaches to justify not wishing to change.

A common cause for not changing their approaches to learning appeared to be unrealistic expectations, which was particularly common in students with C, P and N grades. Students assumed that certain approaches to learning they held when they commenced would suffice at university, even when it was obvious from their results that these were not successful and needed to be changed. Interviewees often reported not understanding the amount of work required and also the standard this entailed, which is related to an inappropriate understanding about the nature of tertiary learning and what is required to be a successful university student. If students held confused and unrealistic conceptions of learning they were unlikely to be interested in, or motivated to make the transition to acquiring deeper learning traits. As a consequence, such students appeared to fail taking responsibility for their own learning, often denied there was a problem with their learning and skills, or tended to blame external or personal factors for their poor learning outcomes.

P and N grade students (17 of 32) described employing strategic approaches to their learning from the beginning of the academic year and did not change because they were quite satisfied with these approaches. Such students were task-centric and seemed not interested in the process of learning. They appeared to resist to adopting other approaches to learning which would allow the development and use of deeper learning attributes because of pragmatic imperatives associated with the need to pass assessments in the most expedient way. Moreover, students who continued to dislike group work remained unchanged because they were not interested in learning desirable teamwork skills, even though such students may have understood the importance of teamwork in the workplace. Rather, their focus was on passing assessments in the most efficient and effective manner without extending their repertoire of learning approaches to the group situation. Furthermore, students indicated a minimum connection between different approaches to learning and the quality of outcomes and consequentially, a minimum understanding of the need to acquire higher level learning approaches.

The group of students with the P and N grades was of particular interest to this study because it was from this group that non-completion and withdrawals were most likely. For instance, Table 8 in the previous chapter showed that 97% of students who obtained an N (failed) grade for the subject had surface learning attributes. Furthermore, 14% of those interviewed with P or N grades had also withdrawn from the course. It was these students

with the greater likelihood of withdrawal who were termed 'precariate' in this study. An enduring trait of students with an N result was the tendency to apportion blame for their lack of success on other sources, for example, personal situations, poor learning resources, the quality of the lecturer's delivery, the structure of the course and the irrelevancy of course content. Eight (of 13) students who failed were quite adamant about the reasons for their poor results, which they attributed primarily to a variety of personal, motivational and interest factors or other people. There was little evidence of reflection by these students on the focal issue of how they approached learning and the impact this might have had on their results. Despite admitting that their study habits were weak and there were better ways of approaching learning, they failed to see the connection between results and the acquisition of tertiary learning skills and understandings, and, as a consequence, the need to change.

Even though reasons were offered, nonetheless, it was difficult to comprehend why N grade students did not change their learning approach, especially considering that six of the 13 in this group recognized their poor study habits and acknowledged that there were better approaches to learning. Although some felt confident about entering university with the skills that had previously proven adequate, these had been found inadequate for the purposes of gaining successful outcomes for the subject. Few students said they needed to change despite most (81%) N grade students admitting that they found tertiary study more difficult than they had expected, and were surprised by how unprepared they were. It would be easy to cavil at the insouciance of such students who, even when admitting that they needed to do a study skills course, for example, none availed themselves of any of the several opportunities provided for such study. The experience of students with D, C and P grades, who declared the beneficial effect on results of changing their approach, provided a sound case for asserting that if N grade students had adopted improved learning approaches their grade result might also have been better.

In the light of the complexity of these wide-ranging factors, it was difficult to determine whether students' decisions not to change their approach to learning influenced their final grade and subsequent academic pathway or conversely, whether the various personal and other factors, including intransigence and disinclination, also had an impact on their decision to persist with an unchanged approach to learning. Although this is an intriguing aspect of student learning in first year, it is not within the parameters of this study and will be reserved for future investigation.

### (B) Evidence of Change in Perception of the Learning Context

Evidence of change in perception of the learning context was examined in terms of several factors, including characteristics of the variation between each sub-category of description describing change in perception, their result grade for the subject, and whether they had cohesive or fragmented perceptions, and what students reported in their interviews. It was this mix of factors and their relationship which demonstrated the variety of changes which were evident. Moreover, using a relational perspective to examining the complexities of change in aspects of learning reflected a phenomenographic approach (Marton & Booth, 1997).

The issue of students' cohesive and fragmented perceptions of context was also relevant in examining evidence of change in perception. Ramsden (2002) described the cohesive perception as holistic, in which the student preserves the structure, focuses on the whole in relation to the parts. This is distinctly different from a student with a fragmented perception of the subject who will perceive only parts of the total picture, and therefore only part of the relationships between them (p. 44). The interviews sought to establish whether students had changed in the way they perceived *Business Communication* and whether they could see the relationship between all the various elements of the subject. The following table shows the numbers of interviewed students with fragmented and cohesive perceptions of the learning context who changed their perception.

Table 11: *Numbers of Interviewed Students with Fragmented and Cohesive perceptions of the Learning Context who changed their Perception*

Grade	No. of students who changed their perception	Perception of the Learning Context	
		Fragmented	Cohesive
HD	0 of 2	0 of 1	0 of 1
D	4 of 9	3 of 5	1 of 4
C	14 of 18	8 of 10	6 of 8
P	15 of 19	12 of 14	3 of 5
N	6 of 13	6 of 12	0 of 1
Total	39 of 61	29 of 42	10 of 19

To begin, the 39 students who reported a changed perception of the learning context were found in all grades: D, (four of nine); C, (14 of 18); P, (15 of 19) and N, (six of 13), with the exception of the two students with a HD grade whose perception remained unchanged. Students reported many qualitatively different ways in which they changed their perception of the context. Most often they stated that they had developed a better understanding and appreciation of the subject over the semester. Of the students who achieved C and P grades, a little over three quarters from each group reported change of perception, while little fewer than half of those in the D and N grades changed their perception (77% and 44% respectively). This means that, like the trend in changed approach to learning, most students who changed their perception of the context were in the middle result range of students with C and P grades.

Although HD, D, C and P results students who had fragmented perceptions were successful in passing the subject, it was the students with lower grades with fragmented perceptions who were of interest because of the likelihood of their failure and withdrawal. Of particular concern were N grade students, 12 of 13 (92%) of whom held fragmented perceptions with very limited views of the subject. When compared to other groups by grade, a smaller proportion (six) reported they had changed their perception or that they had an improved perception of the subject by the end of the first year.

The variation in the sub-categories of description from A-D shown in Table 8, demonstrated more complete perceptions such as appreciating the breadth of the subject in relation to practice; viewing the subject holistically and also developing a realisation and appreciation of the role of theory in the subject's overall structure. It also demonstrated less complete perceptions evident in sub-categories E and F. However, even though students with E and F descriptors may have had misperceptions, if they understood that their original perceptions of the context were inaccurate they may have been able to appreciate the need to change and did so. This was particularly evident in the group of students with C and P grade results.

On the other hand, students who entered with accurate perceptions of *Business Communication*, primarily those with better grades such as HD and D, felt they did not have to change because they believed their perceptions were properly informed or developed through experience in context. They explained their perception of the subject was exactly as they had originally thought. In one case, an office manager said she understood exactly what *Business Communication* was about based on her current work experience. It is interesting

that of the two students with a HD grade, one held a fragmented perception of the subject while the other held a cohesive perception of the subject, yet both achieved a very good final result. It was relevant that these students took a global view, made the connections between theory and practice, thought conceptually, integrated skills knowledge and application, and could also reflect on both their learning and the usefulness of the subject. The student with the fragmented perception said she did not change because she had actually understood the subject but had failed to express that properly in her written response. Certain students with D and C grades who said they had not changed their perceptions, attributed their better perception of the subject to extending their range of learning and study skills, but did not, *per se*, view this as ‘changing’ their perceptions of the subject. These students were classified as being “unchanged” because they failed to appreciate that their understanding and perception of *Business Communication* at a tertiary level developed conceptually and sequentially over the course of the semester.

In contrast, students who entered with poor or undeveloped understandings of the subject or appreciation of the need to understand the subject were generally disinclined to change this position. These were primarily students with lower P and N grade results as detailed in Table 11. Comments from these students varied a great deal and were generally more negative towards the subject than those with higher grade results. Common sentiments about the subject from students with P and N results, which comprised more than half of the total number of students interviewed, demonstrated frustration and disappointment with the subject, its content and delivery. A common theme was they considered the subject to be generally disorganised, lacking any real challenge, not practical, boring, and they believed it was poorly taught. Such comments were generally not evident from students with higher grades. Interviews confirmed that students who entered with poor perceptions or misperceptions about the subject and had not taken the initiative to become better informed about it, and exited with no better notions of *Business Communication* and consequently their perceptions remained unchanged.

Appendix D (p. 316) provides student comments about their change in perception. There were students with C results who held misperceptions (12 of 18) at entry. While most of these corrected their perceptions during semester, a third of this number persisted with negative outcomes and opinions about the subject, its aims and its deliverables. Of those students in sub-category F of the categories of description for changed perceptions of the context who reported having no clear perceptions at entry (25% of all those interviewed),

seven were surprised by either the quality, lack of quality or by its wide range of content. A large number of students with C (15 of 18) and P (17 of 19) grades reported that they had not realised the need to investigate the subject before enrolment and tended to discount the importance of investigating *Business Communication* because it was a core subject. Given that C and P grade groups contained high percentages of students with fragmented perceptions of the subject (55.5% and 73% respectively), it was encouraging that students from these groups reported changing their understanding of the subject. This indicated that they were able to recognise the need to develop a more comprehensive understanding of the subject and to find ways of doing this.

Students described a number of different ways their perceptions of the subject had developed and therefore changed. In addition to learning about *Business Communication* during lectures, in the textbook or online, also mentioned was the contribution of two guest lecturers from the community who discussed how the skills of business communication were assimilated into the operations of their companies. One student said she changed her understanding of the subject when asked to do the major assignment which required the application of knowledge and skills learnt during the lectures and tutorials. Another said he learnt more about what was in the subject when he failed the first assignment and had to do extra support tutorials. Some also reported gaining additional perspectives when aspects of *Business Communication* were used in other subjects taught concurrently in semester one, which provided a deeper understanding of how the knowledge and skills of *Business Communication* links to other disciplines. Students described ways in which their prior experience in the workplace gave them an understanding of the concepts inherent in *Business Communication*, although at the beginning of the year they may not have made the connection between their prior experience of business communication and the subject.

Students made such changes at different paces. Those who chose to make large changes to their perception of the subject did so primarily because they entered with a rudimentary perception or no firm perception at all. Other students made minimal changes because of attitudinal or other reasons which affected their motivation and willingness to do so. Of the 39 students who reported that their understanding of the subject had changed, 27 said that this was a gradual process and, as the semester progressed, they began to understand that their original perception was inaccurate, or inadequate, and needed to be changed. Only four students of those interviewed said that they had changed their understanding of the subject soon after the beginning of lectures when they read the subject outline on the university

website, read their textbook or had the subject explained in lectures. In summary, they learnt about *Business Communication* cumulatively, as the subject progressed, and as they learnt the subject they gained greater understanding of its concepts, content and outcomes.

### **Why Students did Not Change their Perceptions of the Learning Context**

Students offered a number of reasons to explain why they had not changed their perception of the subject. To begin there was uncertainty about what to expect, which students only later saw as an impediment to their ability to change. Students had been largely unaware that because of the lack of pre-course advice, their original perception was often incorrect or inappropriate and, as a result, a certain state of unpreparedness and lack of understanding about the subject persisted. For example:

*I didn't get enough advice about the subject to start with. I'm not interested in business; and, I really didn't have a clue about the subject even though I have worked and reckon I have got some of the skills already.*

When interviewed, students said they had been surprised by the content and also the academic standard, and were disappointed and annoyed that the subject was not what they thought it should have been. For example:

*It had things in it I didn't expect. I didn't like role plays but I thought the quizzes were useful even though these things have nothing to do with business; and, I attended all lectures because I didn't know what to expect in the subject but I thought it would teach me how to operate a communications business. I was surprised at what ended up being in it.*

In addition to the reasons provided, there were also a number of factors which were not immediately obvious to students, such as a certain lack of understanding about the importance of being fully informed about the subject and its aims. Moreover, because students held an insufficient understanding about the goals of the subject, it was difficult for them to develop the goal-centered attitudes of the type needed to make perceptible changes. Furthermore, comments indicated that the general lack of understanding about the subject lead to disinterest and a general lack of motivation in developing any deeper understanding of its content. For example:

*I had good enough study skills. I just had no interest in the subject and didn't put the effort into it.*

It was obvious during interviews that there were students who remained unaware that they held poor or misperceptions of the subject and the impact of such poor perceptions, such as: *It was supposed to be about how to operate a business and it wasn't. No wonder I wasn't too interested.* They therefore did not appreciate the need to develop any accurate or more realistic understanding of the subject, a factor which became clear when students could not describe the practical applications of *Business Communication*. Certain student responses indicated a reluctance to change their rudimentary perceptions - even when they understood the need to have clear perceptions of the subject. For example, one student commented: *I knew what the subject would be about but quite a few things were different such as terminology and techniques. I don't think they were important and so I only listened to the parts that interested me. Lot of it was useless.*

Others believed that their perceptions of *Business Communication* were sufficiently accurate and appropriate, and thus they had little need to change, such as: *It offered me no more than what I already knew from high school. I already had better computer skills than most people.* They held somewhat unrealistic and inappropriate assumptions that certain perceptions they held from prior learning experiences would suffice at university, without any additional broadening of understanding or refinement to suit the tertiary context. For example: *It reinforced what I already knew about Business Communication but I didn't think that it would be at such a high standard.*

If students in this group had obtained successful results, they took that success as confirming that their original perceptions were accurate, and therefore had not needed change. This rather simplistic view, which had a focus on limiting learning to what was known or prescribed rather than being exposed to new and broader perceptions, could be interpreted as preventing students developing deeper understandings of the structure of content and epistemological underpinnings of the subject.

Students who held entry perceptions which were centered on rudimentary understandings of content, knowledge and skills, expected that the subject would deliver generic communication skills such as numeracy, literacy and information technology and some other academic study skills. For example: *it was nothing like I thought. I wanted to learn better people skills to help me in my job. It didn't really teach me any of those sorts of things.* They failed to appreciate that this set of understandings was not appropriate, and so their original set of understandings of the course persisted. It was apparent from their comments that if such students were not apprised of the subject before beginning they

continued with misconceptions and, as a result, persisted without a clear understanding of *Business Communication*, including the role of theory.

Students with P and N results frequently failed to recognize the important role of theory and concepts in the subject, and their comments indicated that these remained underestimated and misunderstood. One such student commented:

*... Much more theory than I expected. I thought this wasn't very useful and I still can't see why we had to learn theory because you don't need it to work; and, Actually the theory was very complicated with lots of things thrown in like psychology, management and sociology. I think the level was far too hard for a first year subject and I don't know why we had to do it.*

Their poor understanding of the role of theory occurred because they had no prior experience of the application of theory and, as a result, were often resistant to learning the theories related to *Business Communication*.

Finally, students underestimated the content and workload of the subject, perceiving it to be easier than was the case, such as: *Although I probably had no idea what to expect from the subject and still don't fully understand it, I still thought it was worthwhile. I thought it would have been easier but I am a bit disappointed that I only got a P.* For those who were overcommitted with other study or employment obligations, this meant they could not devote the amount of time required even though they might have realized that it was necessary and, as a result, their perception of the level of work required persisted.

This range of impediments for students not changing their perception of the subject were indicia of problems arising from lack of preparedness in terms of understanding, awareness, assumptions and expectations, interest and motivation, all of which had the potential to limit learning, and have a deleterious impact on outcomes.

### **SECTION 3: A Comparison of the Interview results with the Survey results and Student Feedback about the Interview process**

#### **Student Reflections on Survey Responses**

The three main purposes of the interview questions were to gauge whether change had occurred, to confirm what students wrote in the original survey and to obtain any additional comments which would add to the understanding of how students perceived their experience of learning *Business Communication*. The issue of student change has been already been

addressed. This section outlines whether what students wrote in their surveys was able to be confirmed in the interviews and also provide additional information.

Earlier survey transcripts showed little evidence that, in general, students had a clear conception of what was required for successful learning at a tertiary level. Students generally drew on their prior experience of learning to describe their approach to learning and their perception of the learning context. If this experience was appropriate to the study of *Business Communication*, and they had a cogent understanding of learning and the requisite skills necessary for university, the transition from secondary or other forms of pre-university learning to university learning was likely to be successful, as evidenced by their final results. Nevertheless, students confirmed that what they had written in the survey was correct at the time, albeit some clarification is required.

When students were read what they wrote at the beginning of first semester in response to the two survey questions, more than half commented that they could have written more at the time about their learning approach and, with the benefit of hindsight, said that what they wrote did not adequately reflect their learning approach or their understanding of the subject. Students raised a range of interesting points about how they viewed the survey. For example, they were surprised at how they had responded to the two survey questions and embarrassed by what they had written. They had not really understood the meaning of the questions at the time, and perhaps could have taken the survey questions more seriously. Even though they confirmed the intention and content of what they wrote in the survey, they were eager to clarify and modify what they expressed earlier in the surveys about how they viewed themselves as learners and their understanding of *Business Communication*. That they found the questions to be problematic suggested that they did not understand the conceptual nature of learning and how to describe it, or, in the case of the perception of the subject, they might not have had previous experience with perceiving a subject in its totality. These reflect a developmental stage in acquiring higher approaches to learning (Barrie, 2006).

The more confident students, especially those who were mature age students, tended to rate their approaches to learning more highly than they had at the beginning of the year, and generally displayed a more positive approach to learning and to their learning experience over the first year. If students had previous study in another degree they felt more confident and described themselves as having had a good approach to study even at commencement, and regardless of whether that approach was surface or strategic in nature. Even so, most interviewees (48 of 50) from the C, P and N grades, which comprised 82 of all those

interviewed, were surprised at how unprepared they had been to cope with what was required in the subject, and acknowledged that they had needed to develop new and better ways of approaching their learning. This indicated not only how unprepared these students had been for their university studies, but also the unrealistic conceptions they originally held about university learning. It also suggested that they had developed a greater awareness of themselves as learners than earlier when they completed the survey. They had also developed the ability to assess their strengths and weaknesses as learners.

Even by the end of the year not all students were willing, or able, to reflect on their learning and comment on their initial descriptions of learning, particularly those students with an N grade result. There were still residual pockets of resistance to change or, indeed, to the need for change marked by unawareness that aspects of their learning might need to be improved. When asked to comment on their survey responses, few (8) students of those interviewed indicated that they needed to develop tertiary level study skills, and were generally satisfied with their responses. Nor, after being reminded of what they originally wrote in their survey, did they think that the set of approaches and perceptions they brought to university which were previously acquired at high school or other forms of pre-university study, were in any way inadequate. In fact, while believing their entry approach and perceptions were sufficient for university study, they demonstrated the basic inability of precariate learners to perceive relationships between learning factors and the impact these might have on the successful, or otherwise, result for the subject.

Five students commented that what had been written in the survey was not entirely accurate and did not reflect what they wanted to say about their 'real' learning style. Such comments indicated a lack of understanding and language ability required to adequately conceptualise and describe the nature of learning. Some students had not taken the survey as seriously as they might have, and therefore did not write enough in their answers to each question. This feedback was important because it illustrated how students changed over the year in respect not only to their view of learning and their ability to reflect on their learning, but also to their attitude towards ontological issues such as their role as independent learners.

It was evident from the way students with D, C and to a lesser extent, P results, described their experience of learning and what they said about changes in their learning approach, that their conception of learning had changed over the period, especially when compared with their earlier survey responses. It was clear that these students were engaging in metacognitive processes in regard to the way they could conceptualise learning and their

role in the process and discuss it meaningfully, whereas in the earlier survey it appeared that the concept of learning went largely unexamined. By critiquing their earlier survey responses in a reflective way, students displayed an understanding of various conceptual transformations which had occurred in their approaches to learning over their first year of study.

Finally, for students with personal and employment commitments who had developed strategic approaches to their learning, the experience of learning *Business Communication* centered on the intention and motivation to obtain a basic pass grade. In contrast to the acquisition of higher learning strategies, these students acknowledged that a strategic intention had been evident in their survey responses and remained so. Despite this, most interviewees with P grades and some with N grades generally reported that they felt more confident that they now had a better approach to learning, even if their conception of learning was still unrealistic in terms of the amount of effort they thought was required to pass the subject, and the paucity of higher level learning attributes they were prepared to countenance. However, there had been more of a transformation in their improved attitudes towards study, and their willingness to admit that the transition from high school to university had been more difficult than they had originally perceived, as intimated in their survey responses. Nonetheless, the extent to which students' learning skills improved and their acquisition of major concepts of *Business Communication* developed was reflected in the success of their final results.

For the most part, interviewees believed that what was written in earlier survey responses was a relatively accurate account of their understandings and perceptions of learning and the subject at the time. One student commented: *My initial perceptions were correct even if they expanded a bit as the course went along. There were basically no big surprises*; and another: *I had forgotten what I wrote back then, but it's basically still correct.*

Additional information arising from the interviews served to provide a better insight into how students viewed their original understanding about learning, and clarified circumstances which affected the quality and quantity of what was written.

### **Student Feedback about the Interview Process**

This section discusses aspects of the interview process which students provided about of the interview process. This information drew attention to problems students reported they

had with writing their responses to the survey and was useful in revealing certain factors which might serve to clarify survey responses and their analysis.

Kvale (1983, 1996) speculated that the interview can be a positive experience for the participant, and this appeared to be the case for those interviewees who were very happy to provide feedback if their experience of learning *Business Communication* had been positive. There was a noticeable difference between the willingness of mature age students, all of whom were quite prepared to engage in discussion about their experience, and that of school-leavers who were less enthusiastic in their attitudes towards responding to questions and participating in the interview, with only half of those interviewed showing willingness to participate in the interview. Students with P and N (fail) grades were generally less positive than students in other grades about providing feedback on their learning experience, and they indicated general dissatisfaction with the interview process. In general, interviewees were prepared to discuss their learning when prompted, and there was a marked improvement in the ability to discuss their learning experience when compared with what they wrote in the survey.

The interviewer probed students for a clarification of meaning in survey scripts when what they had written was somewhat ambiguous or incompletely articulated, and she also had to often probe for more complete answers to questions during the interview. DeVault (1990) described the interviewer's role as "inciting respondents' answers and virtually activating narrative production" (p. 123). The researcher often had to work hard to 'incite' and elicit a response to the interview questions in order to build an interactive dialogue with interviewees until they became comfortable with the process, and were willing to freely contribute from their repository of knowledge about the questions being discussed. When each student was interviewed they were read what they wrote in response to the survey questions on the day of their first lecture at university. Students had largely forgotten what they had written earlier, and were surprised to hear how they had described their approach to learning and their perception of the subject. Reading aloud to each student what they had written in response to each survey question acted as a memory prompt and motivator, and gave students a platform upon which to reflect and comment. Although initially not keen to discuss their survey responses, students were generally more positive about the opportunity to discuss their perspectives about the course and their experience of being first year learners. Furthermore, interviews provided an opportunity for students to provide feedback and an evaluation of the course as well as offer suggestions for improvement.

The interviewer observed that students were generally more able to use appropriate language to describe learning than they had been earlier in the year. Their written descriptions in the surveys were markedly less sophisticated, which indicated students' relative inexperience in being asked to reflect upon and describe their learning at the beginning of the year. They were able to speak at length to the interviewer and clarify what they had intended to say in their survey scripts, and to attach a more reliable meaning to what they had earlier written. That such students could identify their 'real' learning style when they were interviewed suggested they had acquired during the year a knowledge of learning approaches and how to describe these, and had made the transition necessary to conceptualise learning and to reflect upon it. Consequently, using what interviewed students said about what they wrote in surveys was useful in confirming or contrasting the researcher's original analysis and categorisation, and also in gathering additional information about their experience of learning *Business Communication*.

The information furnished during interviews demonstrated that students did not always write what they meant to write about their approach to learning because of a number of factors: they were generally unaccustomed to describing their approach to learning; and were not familiar with reflecting on their learning when they entered university. By the end of their first year at university, most students used learning-related language to describe their learning, and quite clearly had engaged in reflection about their learning attributes or deficits, the learning related experiences they had experienced prior to entering university and also the sorts of learning skills they had developed during their first year at university. Of all those interviewed, only eight students (two with P grade and six with N grade) gave comments which were either negative or indicated a general lack of understanding about the nature of learning at university.

Three main threads ran through student interview feedback, which were firstly, that students took some time to come to terms with the nature of *Business Communication* and the requirements of the course. Interviewed students, with few exceptions, could see how its range and applied nature would be of benefit to their future business careers. Secondly, although it took students some time to adjust over the year to the requirements of learning at university, fewer than half of those with an N grade failed to acquire the necessary understandings and skills. Finally, threshold understanding and perceptions of learning and attitudes were transformed in a variety of ways and levels over their first year, as one student remarked: *It delivered genuine knowledge of business practices as I expected, and there were*

*underlying concepts that applied which had to be developed . . . I put more effort into new learning skills like using JCU Learn, library and research skills, revising and doing better unit summaries and reading summaries.*

#### **SECTION 4: Discussion of Findings**

In response to the second research question which asks whether students changed their approach to learning and their perception of the learning context, interviews confirmed that two thirds of those interviewed described ways in which they changed from what they wrote in the entry survey. A variation of eight sub-categories describing the range of different ways that students approached their learning and also six sub-categories describing the range of different ways that students perceived the learning context, were found. These showed a relationship which demonstrated the variety of changes which were evident, and were consistent with the phenomenographic notion that a phenomenon such as learning can be experienced and understood in a limited number of qualitatively different ways (Marton & Booth, 1997).

The categories of description shared a logical relationship because changed approach to learning and changed perception of the learning context were two functionally related aspects of learning. This relationship reflected one of the fundamental tenets of pedagogical relationships, that, according to Bowden (2000), “there is a shared object that students are oriented towards” (p. 192). In the case of change in approach to learning or change in perception of context, that shared object was an improved outcome, which means an improved approach to learning and an improved perception of context leading to an improved grade for the subject, and these aspects represent a fundamental relationship. A total of 39 of the 61 students interviewed (64%) changed both their approach to learning and their perception of the learning context. Shaded areas in Table 10 show that most change occurred with those students with D, C and P grades. With the exception of the two HD grade students, 72% of those students with better final grades (D, C, P) had changed their approach to learning and held improved perceptions of the subject, while fewer than half of those students who failed (N) reported that they had changed. It would seem logical to suggest that as students made changes to either or both approaches and perception their learning skills improved and the acquisition of major concepts of the discipline also developed, they were more likely to have improved outcomes. This assertion is supported by anecdotal accounts from interviewees and a selection of these comments is provided in Appendix D (p. 316).

The congruence between changing approach to learning to enable improved approaches to learning and better results, was unequivocal in this study. For instance, students who entered university with better quality learning approaches, or developed them during the course of their first year at university by making certain changes, were found to obtain better results for the *Business Communication*. The converse also applied to students who entered university with poor quality learning approaches and changed by developing improved learning attributes: they also obtained better results for the subject. The relationship between approach to learning and perception of the learning context, and the extent to which these phenomena changed, largely determined the success of the outcome. This syllogistic proposition was an application of the scholarship of writers such as Ramsden (1992); Biggs (1988); Prosser (1994); Trigwell (2000); Marton (1981); Säljö (2000); Booth (1997) and Bowden and Marton (1998).

Change learning was described in phenomenographic literature by such writers as Bowden (1990); Marton et al. (1993); and van Rossum and Schenk (1984), when describing transformations in perceptions and understanding which occur with learning. Investigating the extent of change in learning related factors was important because, according to Bowden and Marton (1998), learning is accompanied by some evidence of change in various aspects. In fact, Bowden (2000) described learning as change (p. 135), which is at odds with Kember and Gow (1989), who perceived little likelihood of change accruing learning when they suggested that students with a surface predisposition find it hard to use true deep strategies: “It is difficult to see how students can become independent learners unless they normally employ a deep approach for appropriate academic tasks” (p. 263). Nonetheless, in this study, there was evidence of ‘change learning’ in the way that students viewed their changed approaches to learning and their changed learning context over the first year.

There was a noticeable difference in the way that ‘change’ was viewed by students, which reflected different cognitive and conceptual perspectives. For instance, when asked whether they had changed their perspective about their approach to learning, students with higher grades (HD, D, C) reported more often than students with lower grades that rather than changing their approach to learning, they had ‘extended’ their range of learning and study skills, and certainly gained a better perception of the subject as a result. This perspective was attributable to students with higher grades having better initial approaches to learning with which to build, and also that such students could identify aspects of their learning style and were able to understand that better learning approaches could be developed from these. Those

students with P and N grades generally appeared not to grasp the concept of change learning, and the influence that changing their approach and perception might have on their final grade. This perspective was attributable to a range of personal factors such as the inability to understand the connection between different approaches to learning and the quality of outcomes. These students also demonstrated a lack of appreciation and therefore interest in the need to acquire improved approaches to learning. Finally, a small number of task-centric students found in all grades did not change because their focus was on passing assessments in the most efficient and effective manner without the need to extend their repertoire of learning approaches. Their approach to change was pragmatic.

In this study, ‘change’ implied a dialectical relationship between previous ways of experiencing and operating with new ways of experiencing and operating. Change also engendered a measure of transformational learning of the type described by Land (2005) as “reconceptualising what [knowledge] has already been learnt” (p. 7). When students described how they had changed their approach and perceptions of learning, they were describing how they had reconceptualised what they had experienced in their prior learning. In this sense, ‘change learning’ as reported by the students was ontological because it allowed students to better view themselves as learners, with profound implications in regard to transformation as tertiary learners.

This latter notion of change learning prompted two questions: firstly, why students did not change, and secondly, what the likely impact of that decision was on outcomes. In answer to the first question, students provided a number of reasons why they had not changed their approach and perception, which have been discussed. In answer to the second question, the shaded parts of Table 10 show a trend for students with changed approach to learning and changed perception of context to obtain D, C and P grades for the subject, with an indication of a relationship between change and better outcomes.

The hierarchy of categories describing the variation in likely ways students changed their approaches and perceptions, in effect provided a sequence of steps in which change may have occurred in the cohort. To illustrate, the lowest descriptor for Changed Perception of context, sub-category E: *No firm perception of the subject held at entry but perceptions developed slowly during the semester*, represented the first step in changing towards the highest sub-category A: *Deep understanding and appreciation of the subject developed over the period, showing a high level of change and development*. This progression was similar to the position of several researchers who identified steps or levels of engagement in learning

which accrue learning. This group included Bennett et al. (1999) who described a variety of pedagogical approaches and understandings ranging from simple technical skills progressing to complex intellectual abilities. Similarly, Biggs and Tang (2011) proposed that learning can be described as a progression of gradual changes from lower levels of engagement such as “memorising, note taking and explaining, towards high level engagement such as relating, applying and theorising” (p. 6), and while such learning activities were needed to achieve the desired learning outcomes, they also represented new ways of experiencing and operating, and hence represented change.

Most prominent in the literature was Barrie (2007), who proposed a framework of academic development processes comprising knowledge, skills and attributes, which aimed to make sense of the qualitatively different ways that students experienced learning. These appeared as a series of developmental steps which were analogous to the process of change described in this study. Barrie’s framework comprised three stages which allow learning to occur; these were precursory abilities, complementary abilities and translation. A student’s precursory abilities are akin to the prior learning that students bring to university, and provide a minimum base which can be added to in a similar way to constitutionalism. Some knowledge and skills can be complemented by others and thus transformation occurs, which is described by Barrie as “reshaping of existing knowledge and constitution of new knowledge” (p. 223). The third step of translation is where students transform the knowledge through application, or make use of to apply knowledge.

In reference to this study, Barrie’s stages of the academic development framework are pertinent because change occurs and new learning is demonstrated. To begin, students enter university with certain precursory abilities which determine their level of preparedness. These abilities, understandings and perceptions are complemented by the phenomenographic process in which learning is constituted. Finally this set of knowledge, skills, and perceptions is translated or applied as learning occurs and, as a result, change occurs. The outcome of the framework represents a new level of learning, a new reconceptualising of knowledge and skills and change from a previous epistemology.

### **Conclusion**

This chapter presented the interview findings of 61 students at the end of their first year at university, and in response to the second research question, confirmed that two thirds of the students had changed their approach to learning and their perception of *Business*

*Communication* during their first year. The interviews also generally confirmed what was written in the earlier survey transcripts about students' approach to learning and their perception of the learning context.

A phenomenographic analysis of students' responses to a set of interview questions was used to establish a wide variation in how they changed their approach to learning and their perception of the learning context. The hierarchical categories of description demonstrated that threshold understanding and perceptions of learning were transformed in a variety of ways and levels.

Change in respect to learning was at the heart of this chapter. For example, although they took some time to understand and appreciate the nature of *Business Communication* and the requirements of the course, most students eventually considered that its range and applied nature would be of benefit to their future business careers. It also took time for students to adjust to the requirements of learning at university and to acquire the necessary understandings and skills. Chapter five placed emphasis on the prominent role that change played in learning. The following chapter presents phase three of the analysis on the relationships between learning variables, outcomes and retention.

## **CHAPTER SIX: PHASE THREE: RELATIONSHIPS BETWEEN LEARNING VARIABLES, OUTCOMES AND RETENTION**

This chapter presents the findings of Phase three which addressed the third research question: *How are the factors of prior learning experiences, approach to learning and perception of the learning context related to (a) the learning outcomes of a group of first year business students and, (b) retention?*

The question required that certain apposite relationships indicating a likely chain of association between student learning factors and impact academic results and retention, be investigated. The underlying rationale was consistent with the research literature discussed in chapter two, which indicated that a combination of related factors, rather than one sole factor, contributed to both outcomes and non-continuance in first year students.

Phase three examined the relationship between students' prior learning, approaches to learning and perceptions of their learning context and the contribution these made to outcomes and retention. It built on the findings from Phase one which established relationships of the learning variables with outcomes, to further examine likely associations of the learning variables with retention. It used the findings of the last four interview questions from phase two to investigate additional aspects of the student learning experience, which contributed not only to understanding retention, but also to greater understanding of the students as learners. Learner profiles, one of the important outcomes of this phase, were produced which contain a narrative of the students as first year learners.

Chapter two defined the importance of relationships in phenomenography, and this chapter argues the applicability of such relationships in addressing the final research question. As relatively little attention has been paid in the literature to the possible relationship of the learning variables to outcomes and retention, this study contributes to addressing the gap. There are five sections in this chapter, namely:

SECTION 1: Interview Findings relating to the Student Learning Experience

SECTION 2: The Relationship of Learning Variables as Predictors of Retention

SECTION 3: The Profiles of the Students as Learners

SECTION 4: A Comparison of the Interviewed Group with the Study Cohort

SECTION 5: Discussion of Findings

## SECTION 1: Interview Findings relating to the Student Learning Experience

This section presents additional information from students' responses to the last four questions asked in the interview relating to the details of prior learning experience, their opinion about the importance of literacy, numeracy and IT skills and the experience of learning *Business Communication*. It is proposed that prior learning experiences and the way they were related affected students' approach to learning, perception of the learning context, learning outcomes and, ultimately, whether they stayed and completed their first year at university, and were pertinent in addressing the third research question.

Students' experience of learning the subject was influenced by their previous experience of learning and their perceptions of *Business Communication*. The telephone interviews provided students with the opportunity to reflect and describe verbally their experience of learning without the constraints of written language. For the interviewees in this study, their verbal description of their learning experience was much more detailed than what they wrote in the earlier survey. Their understanding of learning generally showed evidence of development over the year. However, it was noted that there was variation in the quality of interviews in regard to students' willingness to discuss their experience of learning *Business Communication*, and in their ability to provide relevant comments with perspicuity.

The interview data were analysed thematically and the findings used in three ways. Firstly, data from the question 5: *Did your performance on this skills test affect your ability in achieving a positive outcome in Business Communication?* were used to gauge (a) students' opinions about the value of the numeracy, literacy and IT skills on the subject outcomes and (b) how importantly they viewed literacy, numeracy and IT skills in learning *Business Communication*. If students had failed any of the skills tests they were asked to comment on the importance of these skills in passing *Business Communication*.

Secondly, students' responses to question 6: *Did you do any previous study or have experience related to Business Communication before university?* (If so, this question was asked: *Did this influence the way you approached learning Business Communication at university?*) were used to assess the impact of their reported learning-related influences prior to entering university on (a) their initial approach to learning and perceptions of learning *Business Communication*, (b) their learning outcomes for the subject and (c) retention.

Thirdly, question 7: *Were there any aspects of learning Business Communication in first year that you found difficult?* was used to gather students' reflections of learning in their

first year at university, including any problems they may have experienced in studying Business Communication or that may have hindered successful outcomes.

Finally, question 8: *What were your reasons for non completion? or: Why do you think you have remained in the course?* was used to determine the reasons for non-completion or, in the case of those who persisted, the reasons for their staying in the course. These findings are discussed below in the order in which the interview questions were asked, that is, five to eight.

### **How students viewed the Value of Numeracy, Literacy and IT Skills (Question 5)**

Interview question five, *Did your performance on this skills test affect your ability in achieving a positive outcome in Business Communication?* aimed to gather information about how students viewed the usefulness of numeracy, literacy and IT skills taught in the subject to the outcomes of the subject. Students were fairly unanimous in their opinion that the skills attributes taught in the subject had little impact upon their results, because many believed the numeracy, literacy and IT skills they developed prior to university were adequate. Some students considered the value of the skills taught to be minimal, for instance:

*I already knew enough computer skills. But really the skills they tested for at the beginning had no affect on the grade I got; and,  
I failed the maths test and still got a good pass for the subject so it didn't have much of an effect.*

While students described various prior learning experiences which may have equipped them with generic skills, they also said the opportunities provided during the study of *Business Communication* developed the skills. To illustrate:

*It was good the way we had to do exercises for tutes [sic] so we could practice things that the lecturer taught in class; and,  
There was a lot of theory but we put that into practice with the assignments which were pretty practical. I think every week we had practical activities to do.*

To gauge the effect of skills performance on the final grade, Table 12 provides a comparison per grade of surveyed and interviewed students who failed one or more of the numeracy, literacy and IT skills tests. This gives an indication of the contribution that failed skills tests made to the results of those interviewed, as well as place students' comments about how they viewed the skills tests in context.

Table 12: *A Comparison per Grade of Surveyed and Interviewed Students who failed one or more of the Numeracy, Literacy and IT Skills tests*

Grade	Total Cohort Surveyed n=272				Interviewed students n=61			
	Total	Numeracy	Literacy	IT	Total	Numeracy	Literacy	IT
HD	2	-	-	-	2	-	-	-
D	32	4(13%)	2(6%)	2(6%)	9	1 (11%)	-	-
C	82	12(15%)	2(2%)	5(6%)	18	2(11%)	1(5.5 %%)	1(5.5%)
P	125	31(25%)	8(6%)	12(10%)	19	5(26%)	2(10.5%)	2(10.5%)
N	31	9(27%)	1(3%)	3(10%)	13	4(30%)	2(15%)	2(15%)
Mean %	272	56(20%)	13(5%)	11(3%)	61	12(20%)	5(8%)	5(8%)

**Note:** Most (95%) students failed one of the skills tests. The most common test failed was numeracy. Only students in either P or N grades failed two of the skills tests, which were most often numeracy and literacy. No student failed all three tests.

The interviewed students showed a similar pattern of results for the numeracy, literacy and IT Skills tests as those of the total cohort, with an average 20% of students failing the numeracy test, as shown in Table 12. A much smaller number of students failed literacy and IT tests than the numeracy test. Although all three are important generic skills, it might reasonably be assumed that numeracy skills were more critical for students studying a business degree or aspiring to enter business-related occupations.

Although a fifth of those interviewed failed the numeracy test and smaller numbers failed the other two skills tests, the interviewed students did not appear to be very concerned, nor were they worried about deficits they may have had. Students generally viewed the skills tests as stand-alone tests of competency which were unrelated to *Business Communication*, or indeed to their future job requirements, nor did they appear to value the role of skills in passing the course. The most straightforward interpretation of this is that they failed to see the connection between skills and performance, learning these skills, and the impact of skills on their future employment in business areas. As a result, they did not take the tests seriously at the time nor value the role of skills competencies. The following comment typifies this sentiment:

*I didn't take the skills test seriously at the beginning of the semester. Although I failed the maths test I thought they were too easy for university.*

Numeracy skills were of greater interest to those students who studied Commerce, Accounting and other subjects requiring considerable numeracy competencies than for students not studying these subjects, although all students needed numeracy skills for certain parts of *Business Communication*. The lecturer and tutors for the subject reported that many students struggled with the statistics component because of weakness in computational and basic mathematical concepts.

Most students who failed any of the skills tests did not appear to have been overly motivated to improve their skills. Students received their skills test results within two weeks of sitting the test, and special supplementary skills classes were organised by the School of Business for students who wished to remediate deficit skills areas expeditiously. Despite this, specialist learning advisors from the University Teaching and Learning Unit, who ran these classes, reported that the few students who attended the supplementary skills classes did so on an *ad hoc* basis. Students chose to come to the classes according to their specific needs such as when they required assistance for particular assignments or tests. These students appeared to be very strategic about the particular skills they were interested in acquiring, especially those needed for the purpose of pass in assessments.

With only few exceptions, interviewed students reported that their skills had improved over the year. Other students either thought their skills were adequate to begin with, or failed to appreciate the importance of skills competencies. According to the learning advisors, mature aged students requiring extra tuition with their skills were more likely to attend the supplementary skills sessions and take their acquisition seriously than were other students in the cohort. These students were reported to be more focused on learning skills progressively, and interacting more with the tutors in the process. Moreover, students in the D grade were most likely to take supplementary classes especially in numeracy, which indicated that they were more serious than other grade groups about addressing their basic skills competencies despite the fact that they were better than average students. If students attended lectures and tutorials, they would also have received some assistance with the development of skills, albeit not on an individual level.

In addition to referring to numeracy, literacy and IT skills, students in the HD grade group described the acquisition of 'mind mapping' skills, which were also taught in the subject, that they considered to be extremely useful for learning. Other students mentioned

acquiring new technology and new library and research skills with which they had little experience. Students who had failed one or more of the skills tests frequently remarked that they had gradually developed the skills over the course of the year, but did not avail themselves of the catch-up classes on offer for a number of reasons. These included that they did not have the time, the classes clashed with lectures, or because of preconceived negative notions they held of the remediation process based on previous poor experience with remediation at high school; while a few persisted in the view that they did not need additional tuition, even though they had failed one or more of the skills tests.

In general, the pattern of skills failures shown in Table 12 demonstrated the convergence of failed skills test results with poorer P and N grades and indicated the consequences of failed skills test results on final grades. This trend was particularly apparent with the results of numeracy tests which were the most prominent skills test failures: 27% of students who failed the subject also failed one or two of the skills tests. Similarly, 25% of students with a P grade failed one or more of the skills tests, most often these were numeracy and literacy. The number of numeracy skills test failures reduced in students with C (15%) and D (13%), with HD students having no failures. This trend demonstrated the negative outcomes of failed skills tests on final results.

In summary, most interviewed students reported that they were not concerned about the level of their skills competencies when they entered university. They felt confident that by the end of the year their skills competencies were substantially improved as a result of the microteaching of specific numeracy skills in tutorials offered in other business subjects. Their attitude towards acquiring skills was strategic: they learnt the skills progressively as they were required and in the context to which they were to be applied. On the other hand, a small number of students (8) appreciated the value of acquiring certain other related skills such as teamwork, presentation and study skills as part of their first year experience. They thought these more generic skills were important and would generally benefit their results for *Business Communication* as well as other business subjects.

### **The Impact of Previous Learning Experiences (Question 6)**

In this study 'prior learning' was taken to be the academic skills in numeracy, literacy and information technology skills which students developed prior to coming to university. In addition to these, there were other previous experiences of learning which were thought to be important in regard to students' outcomes and retention, and it is these experiences which are

discussed here. Previous learning experiences were not intended to include students' demographic details as these had already been surveyed by the School of Business, although some interviewed students did provide such details. Data about previous learning experiences were available from three sources: the School of Business (SoB) exit interviews, the student engagement survey conducted by the SoB and the report by Bode (2006), all of which were mentioned previously in Chapter two.

In answer to the sixth interview question, *Did you do any previous study or have experience related to Business Communication before university?* students provided examples of their previous learning experiences that they believed related to aspects of learning *Business Communication*. Of particular interest was how they described their previous experience of learning, and how this affected their approach to learning taken at university, for instance,

*I already learnt critical analysis skills in Law subjects and I was able to use it [sic] in this subject;*

*It [Bus. Com.] was more about people skills than what I was used to, but it was very useful even the maths and language;*

*I thought I understood what Bus. Com. [sic] was all about but I was surprised how useful it was for adding extra skills in marketing and social skills to those I already had; and,*

*The content was very basic like the TAFE course I did, but it was much more detailed and had a wider scope than just business communication at TAFE. It covered spoken, written and human communication. A lot of it related to learning effective interpersonal skills and practising them in a work context not just about Maths and English and computer skills.*

These quotes described how the subject delivered critical analysis, learning skills, maths, language, marketing and social and interpersonal skills, which built onto students' previous experience of learning.

In addition to these, prior learning and experience with business communication were reported to be highly correlated with the ability to understand the concepts and use the necessary skills in the subject. To illustrate:

*The subject was good because it prepared you for future work in business and built on skills learnt in my previous work;*

*I liked when the teacher provided examples which I understood from my part-time job. That's how I remembered some of the concepts; and,*

*I worked at Telecom and we received on-the-job training in communication which we later used. Although what was taught in this subject was more technical and certainly much broader, there were no real surprises. I could see how the skills and theories could be used.*

Better developed reflective skills enabled students to observe and evaluate how their learning approach had evolved over their first year at university. Some examples of such reflection included:

*I came to university after years of working as manager in an office and I found the transition easy because I already had developed a good work ethic and I'd experienced many of the aspects of Bus. Com. [sic] which were covered. I could really relate to it;*

*It was just like my previous job, especially in relation to team work and group project but I learnt more advanced content as the subject went on; and,*

*I had studied Bus.Com. [sic] at TAFE and knew the basics. I expected the topic to be covered in greater depth because of the difference between uni and TAFE, and I was right.*

Students' ability to reflect on their progress over the year provided a more holistic view for them to compare how learning *Business Communication* differed from, or was similar to the approach taken in their previous experiences of learning, and their various previous experiences of business communication.

In addition, it was clear that some students modified aspects of their previous experience of learning to suit their new learning context, for instance:

*I did a lot of training in the ambulance service . . . I had to put in [with Bus.Com] more hours than I expected but other than that I still prepared for exams the same way and still studied the same way except that I was used to working in groups and the other students weren't, so I had to lower my expectations; and,*

*I was an A student at high school and already had good learning skills developed. All I had to do was to build onto these.*

Interviewees provided a variety of previous learning experiences, and it was evident that they had used aspects of their previous learning as useful aids in the study of *Business Communication*. These were all examples of constitutionalism, the dominant learning epistemology of phenomenography in which "knowledge is developed internally by incremental assimilation and accommodation" (Prosser & Trigwell, 1999, p. 17), and where the learner continually interacts with the outside world. In these examples, students have drawn on, or 'foregrounded' (Marton & Pong, 2005) pertinent learning from their previous experiences in order to apply these to new learning contexts and, in the process, new

knowledge about business communication was ‘constituted’. These examples were also instantiations of the gradual process of change these students experienced in their learning as they developed tertiary approaches to learning and deeper understanding of the concepts of business communication.

### **Aspects of *Business Communication* which Students found Troublesome (Question 7)**

This section reports on the themes arising from students’ reflections of learning in their first year at university and their responses to question 7: *Were there any aspects of learning Business Communication in first year that you found difficult?* Identifying problems was important because students needed to identify troublesome aspects in order to negotiate threshold learning and, in so doing, gain insights into their learning. It also presented an opportunity for students to recognise the necessary changes of perception and understandings about learning which were required in their new learning context.

There were two main aspects of learning the subject that students found troublesome. These related to epistemological aspects of the subject itself, and the other to learning the subject. Both were examples of threshold concepts which were troublesome for beginning students.

Most of the reported problems came from students who were surface learners with poorer grades, which aligned with Meyer and Land’s (2005) proposition that “surface learners particularly will have trouble with understanding because of misunderstanding or because of limited understanding” (p. 377). As there were surface learners in all of the result grades (see Table 7 in Chapter 5), there were obviously varying degrees of problems experienced with learning and varying ways in which these were addressed. The extent to which students were able to deal with these problems was directly related to how successful they were with their results for *Business Communication*.

When interviewed, P and N result students appeared to experience difficulty in discussing issues they might have had learning *Business Communication*, and the researcher had to prompt students for a response. Only a small number of students interviewed, (nine of 61), mentioned that they were unaccustomed to discussing their learning, found it difficult to discuss or they did not have the appropriate language to describe it. For example, when they were read what they originally wrote about their approach to learning and asked to comment, one student said:

*I can't describe it; I'd never been asked to write about learning before and found it a bit difficult, and when I thought about it [sic], I could only use words that described study, and another;*

*I didn't get the question and I'm still not sure what you meant by learning Business Communication. I can tell you what I was taught and what I learnt.*

Comments such as these illustrated the difficulty students still had in discussing and describing their learning, and accordingly, that the concept of learning which they had difficulty describing at the beginning of the year still remained troublesome at the end of the year.

With respect of students' experience with learning the subject, two comments from students with D grades demonstrated that despite initial problems associated with learning, they had been able to respond in a flexible way. In the first example the problem was one of having to adapt to a different approach to learning from the one previously experienced, while the second related to having to adopt attributes of tertiary learning. To illustrate: *To begin with, I found it not as intellectually stimulating as Law, but gradually I found the topics to be quite interesting and I put in a greater effort. It wasn't a difficult topic though; it's just that the way of learning was different from what I had experienced; and, I developed a whole lot of new ways of learning.* Although these 'new ways of learning' were not identified, they acquired during the students' first year at university.

Students with N, and to a lesser degree P grades, described a number of learning-related issues which they found to be troublesome and considered to have affected their lack of successful outcomes. Some of these were discipline related, such as, *There was too much unnecessary work to do and too many assignments,* and some related to learning, for instance, *There was too much covered in each lecture especially with the extra reading and I'm not a reader; and, The way I studied in the army was different. I found the freedom at university difficult to cope with;* while another described having problems keeping up despite achieving a Credit result: *I missed a lot of lectures because I had to work and I couldn't keep up.*

Moreover, when asked about their experience of learning *Business Communication*, common replies from students in the N results group were that they found it *boring* and that *keeping up [with the workload] was a real problem;* and, *It was supposed to be about communicating in the 21<sup>st</sup> century and yet some of the stuff was out of date. I'd learnt it at high school.*

The N group often demonstrated limited understandings or even misconceptions about the nature of university learning, and also held unrealistic expectations, such as:

*There could have been more material about what is needed for the business world. I was disappointed because a lot of it was about theory; and, There wasn't enough handouts for you to learn.*

They sometimes blamed external factors or other people for their poor learning experience in *Business Communication*, for instance, *The lecturer wasn't good at teaching or giving examples. I learnt more in tutes [sic] from what other students said.* Nevertheless, these students provided useful information and insights about their experience of learning and the aspects of learning the subject which they found to be problematic. These were important findings to be considered at a School of Business level because of their contribution to poor outcomes and attrition.

### **The Reasons for Non-completion and Persistence (Question 8)**

This section addresses the eighth and final interview question: *What were your reasons for non-completion?* and, in the case of students who persisted, *Why do you think you have remained in the course?* Of the 13 students interviewed with an N result, nine of these withdrew, so that the reasons for non-completion which are provided here were given by those nine students.

With respect to non-completion, there were two main reasons students gave for their non-completion, which were in addition to failing the subject. The first was associated with personal issues, and the second revolved around problems with learning the subject. In the exit interviews conducted by the School of Business, students mostly gave personal and financial reasons for their withdrawal. That was largely because the focus of that survey was on delivery and other associated matters, and students were not asked to comment about whether they had any issues with learning *Business Communication*. The second set of reasons about aspects of learning were of primary concern to this study and is discussed in detail.

All of the N students gave comments which indicated they had experienced problems with learning the subject or with aspects of the subject itself, and these were discussed in the previous section. However, those N students who withdrew attributed these problems to a variety of reasons, one of which was a mismatch with the course, for instance:

*I didn't like the whole course, not just business communication. I think I was not cut out for business.*

Students also intimated that they had experienced problems with learning at the required tertiary standard, for example:

*University was too stressful, and not what I thought it would be . . . I didn't feel comfortable with university study.*

Another said she had simply been too immature for university studies, which is unsurprising given that almost 40% of the cohort were still 17 years of age at commencement.

Students provided other reasons for poor results and subsequent withdrawal which related to poor choice and difficulty level, such as:

*I made an incorrect decision about the choice of course;*

*The course content was too easy;*

*The course content was too difficult; and,*

*The assessment was harder than I thought, and lots harder than high school.*

These comments indicated that such students entered the course with poor or inaccurate perceptions of what the subject was about, although the last three comments also connoted problems with learning. This finding was consistent with the general level of unpreparedness found in entry students.

When interviewed, five (of 13) N result students reported that their inability to understand the central concepts of the subject had an effect on their failure and subsequent withdrawal from the course. For instance,

*The subject wasn't what I thought because it didn't teach you anything practical for running a business . . . it had too many topics just jammed in to keep you busy.*

Some students had trouble understanding the need for learning the underpinning communication theories, as one student bluntly explained, *I couldn't get all the theory stuff.* Likewise, they failed to appreciate the importance of tertiary level research, and therefore discounted its importance, with comments such as,

*Research skills were a bit more complicated than I thought they would be, but there again I learnt to do research at high school.* Other key concepts which these students found difficult included applying the principles of communication to persuasion and logic, negotiation and conflict resolution, and organisational communication. Students intimated in their discussions

that these topics were considered to be difficult because they were higher order learning concepts which students could not grasp.

Although students did not discuss any overt issues they had with learning or having the required learning skills, it was obvious from their comments that they had problems with the level of learning required, for example:

*The assignment at the end was difficult because we had to collect our own data and analyse it. I had never done that before;*

*The group report was too difficult and I got the hardest job of searching on the web for a case study and try to understand the way the writer wrote it; and,*

*The interpersonal communication model was hard to follow so I couldn't understand it.*

Few of those who were interviewed attributed their failure to understand the central concepts to poor teaching, although they complained about the unavailability of the lecturer for consultation:

*There wasn't enough help when you wanted it. The lecturer was part time and never around; and,*

*The lecturer was always busy at the end so I couldn't get to ask any questions because she'd vanish. In the end I just gave up.*

Students also provided a range of physical reasons which contributed to non-completion, which included shortage of time and ineffective lecture facilities:

*I didn't have time to form study groups or go to the library;*

*I couldn't juggle everything that was going on this year. Too much work and too many assignments on top of my paid job; and,*

*I hated the big lecture theatre. I couldn't hear sometimes because the mic [sic] was faulty and there was a lot of noise.*

Although they provided various reasons, most of those interviewed said they knew why they had failed, and yet only two understood that they needed to do a study skills course. It was clear from their comments that there were three major factors contributing to student non-completion. Because of their potential to limit a student's ability to learn and attain successful outcomes, these issues were critical to understanding the profile of failed result students in the cohort.

Firstly, initial perceptions of the subject and its aims were often uninformed, inaccurate or unrealistic. This led to problems with understanding the subject; including what the subject was about, its construction, the terminology used and its main concepts. It also led to

unrealistic expectations about the role of the subject in terms of what students thought it would deliver. For example, students who thought the subject would teach them how to run a profitable business, were disillusioned when they found that the subject did not teach those skills. This factor indicated that the students were unprepared for the study of *Business Communication* at university in terms of their perceptions and expectations.

The second factor was the lack of understanding about the central concept of tertiary learning and of the appropriate academic level required for successful first year university study. Related to this was the lack of appropriate learning skills to cope with both the level required and the heavy first year workload. These factors indicated that students were unprepared for university in terms of their knowledge of learning and the standard of their learning skills.

Thirdly, the physical learning environment and the processes involved in learning were both issues of concern for students. This included problems with group work, the pace of using lecture notes and preparing for tutorials and assignments, the volume of assignments, in addition to problems with the large theatre lectures, all of which were confronting and therefore alienating for some students. These issues were compounded by the reported lack of opportunity for adequate contact with the teaching and tutoring staff. This group of factors indicated that the students were unprepared for university in terms of not being able to function properly in the learning environment and the poor level of support available to enable them to function as self-directed tertiary students.

Even if students did not withdraw as a result of any or all of these factors, there was the potential for such troublesome factors to limit and make precarious students' ability to learn and succeed. Therefore they were of interest to the outcomes of this study, and are therefore discussed later in greater detail in the learner profiles section.

To determine how students could be prevented or encouraged from non-continuance, probing the reasons why students persisted proved pertinent. The vast majority of students stayed in the course and completed it successfully. A number of reasons were provided for staying which centred around three main factors: being motivated and focussed, understanding the aims of *Business Communication* and appreciating its value and relevance; and thirdly, understanding the role of a tertiary learner and developing appropriate learning attributes.

In begin, there were a range of ways that students showed they were motivated and focussed, such as:

*I use my time so carefully that I can read and prepare before lectures. I work with a study group and spend as much time as possible on assignments so I can get a good mark; I'm used to working and getting the job done because I've worked with a transport company for years. It was a matter of getting assignments done and passed and balancing the demands of other subjects; and, It was about staying focussed through the subject and learning all you can so you can pass the assessments.*

Students who persisted had gained a greater understanding and appreciation of the value of *Business Communication* and of its practical relevance to the workplace. To illustrate:

*As a mature age student I found that I related better to parts of the subject which were more real-life, especially if I had experience of it in the workplace; and, All the skills of communicating we learnt are used in my workplace, even the barriers to communication were useful. I even learnt better ways of communicating for marketing.*

Successful students understood what it meant to be a tertiary learner, or at least had a better understanding of their role as a student. They also had developed improved learning skills to enable them to obtain better grades, such as:

*I learnt to develop better ways of learning and applying what was taught in class and I took control of my study to meet all the deadlines; and, I had no idea really of what it meant to study at university. Because I was a good student at high school I thought it would be the same, but I learnt so many better ways to be a good student.*

An additional approach deserves mention. Students explained that they had developed networks which helped them to assimilate better into university. This included social networks and also finding places in the university where they could access better learning opportunities, most often technology-based learning resources in the library and wireless learning areas for group study around the faculty building. Students said this gave them a sense of belonging as well as a place to go to study alone or with others. So in effect, these represented a means for students to stay motivated and focussed for learning.

## SECTION 2: The Relationship of Learning variables to Retention

This section examines the relationship of the learning variables to retention which is addressed in three ways. Firstly, Figure 5 presents diagrammatically the relationship that this study proposes to exist between the learning variables, outcomes and retention.

Secondly, the literature about the impact that learning related factors have on students' decisions to remain at university, including the findings of three relevant reports by the School of Business is discussed. Attrition data are included in Table 13 to provide context to this discussion. Thirdly, problematic areas for student learning as likely predictors of attrition are discussed. This discussion includes certain troublesome threshold concepts which were identified by students in interviews as having had a negative impact on their learning.

To begin, the model in Figure 5 depicts the relationship between all the factors which are under investigation in this study, namely Prior Experience, Perception of the Subject, Approach to Learning, Student Learning Outcomes and retention. This model shows prior learning, perception of the learning context and approach to learning as three variables relating to student learning outcomes, and illustrates a constitutionalist model of learning in which "students simultaneously engage in acquiring, knowing and applying" (Prosser & Trigwell, 1999, p. 17). Prior learning experience appears to the left side to indicate its importance in relation to students' developing their perception of the learning context and their approach to learning, although in a phenomenographic framework which employs a non-dualistic ontology, all three variables are simultaneously present. In the dichotomic sense of the term 'simultaneously present', there is a structural differentiation of awareness of the students' prior experience (Marton, & Trigwell, 2000), which in this model is represented by the two boxes for Approach to learning and Perception of the Subject on either side of the Prior Experience box. This means that the relations between elements of awareness are conceived of as being simultaneously consecutive. In a phenomenographic sense, students' experiences, perceptions and understandings of their learning approaches and the subject refer simultaneously to their internal relations to their prior experiences of these objects.

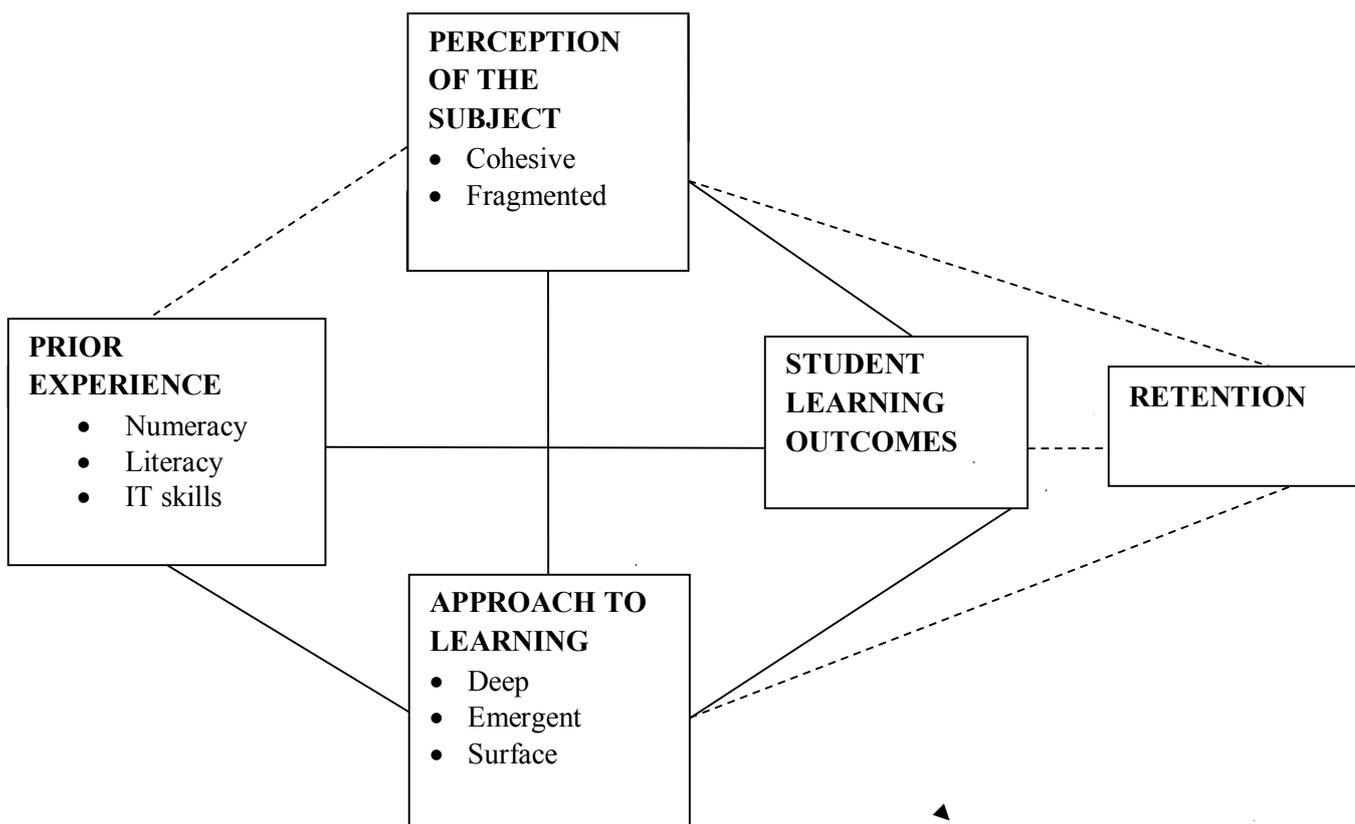
The position of the boxes indicates a logical progression from left to right for ease of presentation although, as stated above, all variables are simultaneously present rather than sequential. The box showing students' Prior Experience comprises the knowledge and skills of numeracy, literacy and IT, while the Approach to Learning box indicates the three possible approaches: deep, emergent and surface. The box showing students' Perception of the Subject provides for fragmented and cohesive perceptions of *Business Communication*. Student

learning outcomes are demonstrated by HD, D, C, P and N grades for the subject. The Retention box to the right indicates the likely association of all of the variables leading to outcomes and a likely impact on retention. With the exception of dotted lines between Prior Experience and Perception of the Subject and those leading to Retention, the solid lines on this model premise relationships between:

- (1) Skills test results and Grade achieved,
- (2) Approach to learning and Grade achieved,
- (3) Perception of context and Grade achieved,
- (4) Skills test results and Approach to learning and,
- (5) Approaches to learning and Perception of context.

Bivariate analysis of the relationship of these learning variables to outcomes found a positive correlation between the following variables and outcomes: prior learning (skills test results) and learning outcomes (grade achieved); approach to learning and grade achieved; and perception of the learning context and grade achieved. There was no demonstrated statistical relationship between the last set of paired variables, Skills test results and Perception of *Business Communication* as shown by the dotted line. The statistical relationship of all the variables to retention was not able to be measured, and hence no definitive relationship was established, as indicated by the dotted lines.

Figure 5: *Model of the Relationships between Prior learning, Approach to learning and Perception of the Learning Context*



The statistical analysis demonstrated that students' approach to learning, perceptions of the context and skills test were related to the learning outcomes of the cohort. This positive correlation was also apparent in the metrics shown in Table 6 (Chapter 4) which indicate the relationship between the variables and outcomes for the cohort, and also in Figure 1 (Chapter 4) which presents this information graphically. As both the table and the graph illustrate, when students achieve good results in the desirable skills competencies or hold a deep approach to learning and a cohesive perception of the subject, their grades were likely to be in the HD, D, C and P range, and they are unlikely to fail. When students did not have the desirable skills, their approach to learning was less expedient, or fragmented perceptions of the subject were held, and there was a greater likelihood of poorer grades such as P or N.

The relationship of these variables to retention, shown diagrammatically as a series of dotted lines to linked boxes in the model, is demonstrated by reference to the literature and the interview findings which indicated that all of these factors were associated with retention, although the study does not propose a causal link between the variables and retention. This proposition finds resonance with Prosser et al. (1994, 1997, 1999), who employed a phenomenographic stance to posit that although variables such as those examined in this study, are simultaneously present in any act of learning, their relationship cannot always be ascertained. In drawing on data from interviews and the categories of description, this study proposes that the variables shown in the model in Figure 5 can be considered as likely predictors of retention for the cohort under investigation.

### **Retention Literature in Relation to the Findings**

Chapter two provided a useful background for understanding retention, including research about how various factors which were investigated in this study were related to retention. This section discusses how that literature relates to the findings of this study and addressing the third research question.

While a substantial amount of literature demonstrated that the praxis of relevant literature supports the proposition that prior learning is fundamentally important to students' approach to learning, perception of the learning context and outcomes, a relatively smaller number of researchers have shown empirically that there is a relationship between learning-variables and students' ability to achieve successful outcomes, which ultimately influences their decision to persist or to withdraw (Elliott, 2002; McInnis & James, 1995; McLean, 2001; Sharma & Burgess, 1994). Such literature, which clearly indicates a link in learning-

related factors to success, failure or withdrawal, was useful in establishing the relationship between learning variables, non-completion and retention. This relationship is best summed up by Kift and Nelson (2005) who described it in terms of:

. . . . a logical sequence, beginning with the proposition that if students engage with these factors learning will occur, which increases self-confidence and motivation which, in turn, means that students have a successful university experience and are less likely to withdraw (p. 7).

Given that there is more than one way of viewing retention and no single determinant of retention, understanding retention from the viewpoint of the relationships between a cluster of such variables as are considered in this study, is both relevant and significant.

In addressing the causes of high attrition rates, the School of Business could do little to change institutional policies and practices which were framed and formed by the broader socio-political priorities of a regional university. It could change neither the demographic, economic and personal profile of its traditional student cohort nor the way these students engaged with the university but, in such an environment, it could give serious consideration to accommodating the learning-related issues of students which were associated with attrition. The approach taken with this study would be to propose that the SoB considers the influence on retention of within-the-student learning factors, in addition to exploring related avenues of dealing with non-completion.

Table 13: *A Comparison of Attrition figures for the Interviewed group, the Total Cohort surveyed, and for all first year B. Business Students*

<b>Cohort</b>	<b>Attrition %</b>	<b>No.</b>	<b>Details</b>
Interviewed group (n=61) enrolled in <i>Bus. Com.</i>	14%	9	Of 13 students who received a fail grade (N), representing 21% of those interviewed; four sat the supplementary exam and were successful. No other students with HD, D, C or P grades either deferred, transferred, or withdrew.
Study cohort (n=272) comprising those enrolled in <i>Bus Com.</i> who were surveyed and did the skills tests.	12%	31	After appeals and other finalisations of results, 31 students received a fail grade (N) for <i>Bus. Com.</i> This included students who did not officially withdraw by the first census date, and those who may have left the course during semester. All of the students who are recorded as non-completions came from the N group.
Total students-enrolled in B. Bus. course for the next year at the first census date. (n=292) *Source: *The SoB faculty office records	28%*	90*	This figure is the total number of students who did not re-enrol into the second year of their Bachelor of Business course, and was calculated at the first census date of the following year. The figure did not include students who repeated any of their first year Business subjects or deferred - these are classified as 'continuing' rather than failed or withdrawn.

At this point it is appropriate to purview relevant retention metrics for *Business Communication* in order to place the findings of these reports in context. Table 13 compares the retention figures for the interviewed group of *Business Communication* students, for the total cohort surveyed and for all first year B. Business students. It also includes an annotation on the basis for the figures.

The attrition rate for *Business Communication* was considerably less than that of the first year of the B. Business course, which might be explained by the high difficulty level of other Business subjects requiring greater numeracy skills, such as Economics, Statistics and Accounting, which were not studied until semester two in the first year. A comparison of the *Bus.Com.* cohort

and the smaller interviewed group in Table 13 shows a similar pattern of skills failures for both groups. In each case it was those students who had failed two or more skills tests who were more likely to fail, and it was in the N group that all non-completions occurred.

There were other contributing factors such as more than half were young Year 12 leavers who found the transition from high school too difficult, or were reported as being insufficiently motivated to adapt to the challenge that university presented. It was obvious that, in addition to the factors which students gave for non-continuance, a combination of learning-related factors contributing to student preparedness discussed in chapter four also played a role in student failure and withdrawal. By extrapolating the experience of the interviewed group to the larger cohort, and by a synthesis of comparative metrics shown in Tables 12 and 13, a case can be made that the relationship between various learning factors contributed to students' outcomes and also most likely to retention.

### **Predictors of Attrition**

The interviews raised several issues which demonstrated that students experienced problems with learning *Business Communication*. While students from all results groups provided comments about areas of concern, it was the comments from students in the lower groups that were of greater interest because of the contribution these issues made to outcomes and attrition, and also their applicability as predictors of attrition.

Students with N, and to a lesser degree P grades, described a number of learning-related issues which they found to be troublesome and considered to have affected their lack of successful outcomes. Some of these issues were discipline-related and some related to learning, and although students did not explicitly attribute these issues to their decision to withdraw, it was clear that they were contributing factors which could be used to predict unsatisfactory outcomes. There was a clear link between students experiencing trouble with aspects of learning and a university experience marked by failure, as evidenced by poor results. Consequently, these students would be more likely to withdraw than those who did not experience problems with their learning.

A cogent theme arising from the student interviews was that N students, in particular, entered the subject being ill-prepared in terms of knowledge about its content and aims, and also having inadequate learning attributes to cope at the required level. Unpreparedness served as a predictor of poor performance and also non-completion. Students who were unprepared failed to appreciate the need to acquire a higher set of cognitive learning skills in

order to be able to cope with university study, although some intimated that they *needed to do a study skills course*. Only one N student, for example, commented that *the content was not a problem, only the level*. Generally, students were unaware of the extent of their unpreparedness, or of any serious learning problems they may have had - even by the end of their first year. Moreover, they seemed reluctant or were incapable of evaluating their own performance in terms of being able to learn and, consequently, of recognising the relationship between the ability to learn, successful outcomes and retention. It was a perspective in which learning went unexamined because the emphasis was on acquiring content and knowledge for the purpose of passing assessments.

The literature proposed that threshold concepts can become troublesome for learners and have consequences for their academic outcomes (Meyer & Land, 2005). The notion that certain concepts or critical features can cause problems for student learning and affect subsequent outcomes is important in that it can be used as a predictor for attrition, as can the proposal that learning is a threshold concept, particularly when students experience problems with their threshold understanding of learning and their approach to learning.

Various threshold concepts were identified in the previous chapter as being troublesome for students with D (Distinction), C (Credit), P (Pass) and N (Fail) results grades, but more particularly for those with both surface approaches to learning and fragmented perceptions of the context. In reference to the former, interview data provided insights into troublesome aspects of learning and their impact on performance. Although there were students with a surface learning approach in all of the grades, demonstrating that they could obtain a successful outcome with a surface approach, it was for those students described as precariate in this study that surface learning was more predictive of failure and subsequent attrition. Precariate learners are described in a separate section following. With respect to perceptions of context, there were two major areas that students with fragmented perceptions of context found troublesome with the subject. These were the theoretical underpinnings of *Business Communication* and the need to understand these, and also the applicability of communication skills to practice. Both of these critical aspects were related and indicated likely problems with outcomes.

Students often misunderstood critical aspects of the subject, due in part to misperceptions or lack of understanding about the nature and aim of the subject at commencement. Misunderstandings of this nature also arose from an inability to grasp the basic conceptual understanding that communication skills are essential to all aspects of

business, and are therefore transferrable. According to the subject description, *Business Communication* sets out to provide students with the basic theoretical underpinnings for business communication in personal, interpersonal and teamwork situations and to understand how business communication skills support a company's business operations. It is also structured to provide opportunities for the practice and application of the skills of communication. This dichotomous nature of *Business Communication* proved confusing for those students who held an unrealistic or uninformed understanding of the subject, most notably those with fragmented perceptions of the learning context. Given the established correlation between perception of the context and outcomes, there is a sound case for asserting that misperception of the context can be used to predict that students will have problems with learning the subject and subsequently achieve poor outcomes.

It can be argued that all of the Categories of description for fragmented perceptions of the learning context had the potential to be troublesome for students' understanding of the subject because they described perceptions which were inimical to a more inclusive, complex and complete awareness of all the phenomena and variations of phenomena relating to the context. Student comments from the Categories of description demonstrated that those with fragmented perceptions of the subject were more likely to exhibit problems with understanding the context of *Business Communication* than those with cohesive perceptions, and this view was confirmed with interviews. Furthermore, as there were students with fragmented perceptions in all of the result grades, there were obviously varying degrees of difficulty associated with understanding the subject, and varying ways in which these were addressed. The extent to which students were able to deal with these problems was directly related to the success of their results. Moreover, while most interviewed students reported that they had gradually developed an appropriate understanding of the subject, there were still students at the end of the year with residual fragmented perceptions. Thus, willingness to address problems in perception and the extent to which students were successful in doing so, were indicative of their relative success with outcomes and retention.

In addition to the role of learning-related factors in predicting attrition already discussed, it was significant that students' ability to change their approach to learning and their perception of the subject also indicated an impact on outcomes and retention. This echoes Bowden's (2000) maxim that change implies learning; *ergo*, learning which results in successful outcomes will occur if students change their approaches and perceptions to align with university level requirements. Change was demonstrated to be instrumental in successful

outcomes by those students with HD, D, C and P results, whose prior learning experiences were good and who reported that they had added to their repertoire of understandings and perceptions. On the other hand, students with N grades were most likely to have not changed in their approach and perceptions, and it is from this group that all of the attritions came. This indicated that the ability to make desirable changes represents a predictor of successful outcomes and also contributes to retention.

This section has shown that various factors, either singly or in combination, were useful in predicting whether students would have successful outcomes and persist, or whether they would fail and subsequently withdraw. These factors included the general level of academic preparedness, a range of reported learning-related and discipline-related threshold problems, and the ability to make changes to their approaches and perceptions of learning. Also, having an awareness and appreciation of certain ontological aspects, such as how prepared they were as tertiary learners and how aware they were of any problems they may have had with understanding and perception, was considered instrumental in moderating the impact of these predictors.

### **SECTION 3: The Profiles of Students as Learners**

Seven 'profiles' were constructed to highlight the range of learning styles and characteristics of the student cohort in the study. They provide insights into the nature of first year student learning as distinct from learning in subsequent years at university. The use of 'learning profiles' as narratives in this study is different from other more normative profiles that abound in the research literature. Their design followed the advice of Pryce (2000), who suggested that profiles can be developed incorporating several categories and include specific as well as salient themes and characteristics. The learning profiles had an applied intention: namely, they provide a model to help teachers of first year business students identify the best learning and teaching approaches based on what the profiles reveal, most particularly for those 'high risk' precariate students who were most likely to fail or withdraw.

Profiles are intended to present a synthesis of all the research findings and data from this study, including pertinent survey and interview data, the results of skills tests and final grades, as well as trends and demonstrated relationships between factors. The profiles include issues covered in the three research questions associated with student preparedness, the level of change which students embraced in aspects of their learning and how these factors were predictive of retention. Considered as a group, the profiles present a picture of the range of qualitatively different learners in the cohort, reinforcing the notion that, as learners, they were

not a homogeneous group and therefore, to optimise outcomes and retention, their individual learning needs should be met. Because of the constraints of brevity in this study, the profiles were not designed to be all embracing, but could be developed further by practitioners to include other relevant variables.

The profiles are presented per result grade, HD, D, C, P and N, and because students in the N group were of keen interest to the aims of this study, there is more discussion of these students as learners than the other grade groups. There is also a separate profile on precariate learners because these presented in P as well as N result groups, and more especially because of their importance to outcomes and retention.

### **High Distinction Result Group**

There were only two students with a HD result in the total cohort, and both were interviewed, therefore the profile of this group was not representative of a more usual HD group because of the small number. The two students were mature age; one had taken time off post Year 12 before coming to university and the other had studied the first year of another degree. One student was studying a double degree while the other was studying five undergraduate subjects in first semester, so they were obviously serious about their university study.

These students said they were motivated and focused and so had expected to participate fully in their learning at university. Both thought they entered university with good study skills; one had been an exchange student and the other a boarder at a private school. Time demands impacted their performance, and although they kept working consistently all semester, they said they needed to be more organised and to study consistently. These students participated fully in Orientation Week, obtained learning assistance from the university learning advisors, and continued to avail themselves of such assistance in making the transition to tertiary learning, as this was required. Their profile as learners displayed all the desirable attributes of higher level learners.

At the beginning of the year when they were surveyed, one student had a deep approach to learning with a fragmented perception of the subject, while the other held a surface approach with a cohesive perception of the subject. When interviewed, the latter student said she had not really written in the survey what she meant to say about her approach to learning, but she was very focused on task completion and strategic in her approach to learning. The student with the deep approach to learning and a fragmented perception of the subject also said she had understood more about the subject than she had indicated in the survey.

According to these students, a major problem in answering the survey items was that their answers had not accurately reflected their approach or perception. Both students were motivated, had prior study and work-related experience with business communication and had been good students at high school. By the end of the year they described using attributes of deep learning and held cohesive and accurate perceptions of the subject.

The two students reported no problems with aspects of learning other than having to juggle the demands of the many competing assessments with such a high workload. They also said they had not changed their approach to learning or their perception of the context because they thought these were satisfactory to begin with, although they described adding to their prior knowledge and perception. Given these students' previous experience with learning, this latter factor points to the importance of prior learning experience to achieving better outcomes.

### **Distinction Result Group**

There were nine students interviewed with D grade results and 32 in the cohort. Of this number, the majority 68% (22) had a surface approach, with eight having an emergent approach. There were three deep learners in the group. Just over half (18) had a cohesive perception of the context and 14 had a fragmented perception. This group had a learning profile with many desirable attributes of deep learning and accurate perceptions of the learning context. It had the largest proportion of deep and emergent learners, despite a third being surface learners.

Of those interviewed, three were studying part-time and six were employed part time for an average of 20 hours per week. Five were mature age students, or had taken 12 months or more off study post-year 12. One had completed a TAFE adult preparatory course for university and three had previously studied Business and Technology in Year 12. Interviews confirmed that, at the end of the year, six of the nine students were still employed for an average of 20 hours per week, in addition to their full time Business studies. In essence, this group had substantial prior experience of business communication, and by extrapolation to the wider group, a considerable number were engaged in employment while studying. Students indicated that their knowledge of business communication was enhanced by formal learning experiences or from work experience. That they obtained a Distinction result demonstrates that they were not only efficient and focused students, but also that they had benefitted from their prior experience of business communication,

All five (5) surface learners in the interviewed 'D' group changed their perception of the subject to a more accurate understanding, while four of those interviewed in this group had not changed their perception of the subject by the end of the year. These students felt that they understood *Business Communication* because of their prior experience with the skills, tenets and concepts of business communication and, therefore, chose to persist with these perceptions.

The situation was not the same with their approach to learning. Most of the students interviewed, (eight of the nine), reported changing aspects of their learning approach, which impacted positively on the learning outcomes and resulted in a better than average final grade for the subject. According to Barrie (2006), this process is a normal developmental stage in acquiring higher approaches to learning, and most applicable to those eight emergent learners in the larger cohort who were developing deeper attributes of learning.

Despite such a large proportion of students changing their approach to learning, more than half of the students interviewed in this group still thought they had entered university with good study skills or, because they had been 'academic' at high school they were equipped with the necessary academic skills to be successful at university, and some would argue that their D grade vindicated that view. One mature age student felt *excited and knowledgeable* about what she learnt and the transition to university, and felt *comfortable* with the way she studied at university because it was what she was accustomed to.

None of these students thought they needed to learn additional learning attributes other than those acquired prior to university, yet they described adding to particular study skills as the year progressed. These included a range of skills such as group work, the use of web resources, preparing assignments at a tertiary level, participating in tutorials, interacting more with others during class, making better use of time when studying, revising and taking notes, adding summary notes to lesson notes and Power Point slides and working through text book examples. As with the two HD result students, D students viewed 'change' as extending, and they described ways of extending their existing approaches. It also appeared possible that students failed to recognise that the examples of learning skill attributes they provided were all manifestations of an approach to learning, which demonstrated that they remained unclear about the precise meaning of the concept 'approach to learning'.

However, although students thought they had not changed their understanding and approach to learning, when compared with the earlier survey responses, student interviews confirmed how their approach to learning had changed and developed over the year. They

were better able to conceptualise learning and engage in reflection about their learning progress.

The extent and significance of the problem students had with understanding pedagogical nomenclature and using correct language to describe their learning, was encapsulated in an observation from one of the interviewed students. This student had not written the correct information in the original survey because she was confused between the terms 'study' and 'learning approach'. Although this student was able to describe the process she employed when studying, which included examples of learning activities such as examining, responding, applying and reviewing, she mistakenly thought she did not understand the terms and their concepts. She had also been unsure about the extent of detail required in the answers, a problem which was apparent in student responses across all grades.

There were also problems with students accurately describing in writing their perceptions of *Business Communication*. When interviewed, three students said they had not accurately described their understanding of the subject in the survey, although they had understood its major components. A number of students with D results said they had not taken the time to describe accurately in writing their approach to learning (four of nine) and perception of context (five of nine), but although it is likely that some may have lacked the appropriate understanding and language to do so. When interviewed, D students clearly demonstrated their ability to describe and discuss their perceptions and approaches, and to convey their understanding of these concepts.

By the end of the year students had developed an appropriate understanding and appreciation of the subject. They were beginning to perceive how its precepts could be applied to the business environment and to other business subjects, and also how the skills taught could be valuable in their later business career. As a group, they did not report any important problems relating to learning or the discipline. This may have been because, according to the interviewer, they were more willing than other groups interviewed to seek advice and avail themselves of any learning assistance offered.

### **Credit Result Group**

The group of students with C results had a large proportion of surface learners, 83% (or 68 of 82). It had a sizeable group of emergent learners (13 of 82), and one deep learner. Emergent students were on the continuum of emerging from surface attributes of learning towards deeper approaches and understanding, and signified a certain openness to change.

In respect of the interviewed group, 16 of 18 changed their approach to learning and 14 of 18 changed their perception of the context, thus they were more amenable to change than those in other grades, and the extent of this change most likely contributed to the credit result. As demonstrated, students with a C result had a learning profile characterized by a willingness to change.

Interviews found that 10 students had entered directly from Year 12, three were enrolled in other non-business undergraduate courses, two had studied at TAFE, two had studied previously but not completed a different degree; one was a graduate of another degree and three had studied Business Communication at high school, while two were currently studying double degrees, and one had recently begun a traineeship. Half of the group held employment averaging 20 hours or more per week. The group with C results can be described as having an extensive prior learning experience and, as a result of the large number of hours of employment worked by over half of the group, had extensive experience with communicating in business contexts. Despite this, it was puzzling that more than half (54 of 82) held initial fragmented perceptions of the subject.

Very often these were unrealistic expectations or even misperceptions caused by the students failing to perceive the importance of having a clear understanding of the subject and its aims. Although students progressively built an accurate and more realistic conception of the subject, there were still students at the end of the year who held misperceptions. Students reported that they began to develop a deeper understanding of the subject when doing assignments, especially when these required the application of skills and theories learnt in the subject. Additionally, many reported in interviews that although they did not bother to find out much about the subject before it began, they read the subject outline and the textbook in an endeavour to *find out how much work* (that is, hours) they would require to devote to it in order to pass, which indicated a strategic approach to learning characterized by a focus on passing assessment. This is not surprising given the hours of employment that many of this group worked.

It is likely that a combination of factors had a positive effect upon students' ability to achieve a Credit result, even though they held primarily surface learning approaches and fragmented perceptions of the subject at entry. These included the various prior learning experiences reported, the experiences of learning during semester, including assessment, and also their changed approaches and perceptions.

In common with students with D results, students with C results also said they had problems with accurately describing their approach to learning and perception of the context. Three students said that what they wrote in the survey at the beginning of the year bore little resemblance to their actual learning skills, and four said they failed to describe their approach to learning properly, one saying she was *not used to writing about study habits*. These students thought that what they wrote in their surveys when they entered university had not conveyed an accurate picture of either their approach to learning or their perception of the learning context. Yet, despite this, it was obvious from interviews that students had developed an understanding of the concepts, content and outcomes and more especially, a more insightful conception of learning itself.

As a group, students with C grades were more likely not to attend lectures, but more likely to attend tutorials because they learned most in the tutorial or workshop situation which they considered to be more interesting and less confronting than formal lectures in the tiered theatre. If their outside work schedule allowed, they tried to work collaboratively and even though they did not like working in groups, could understand the purpose of teamwork and working in groups. They were also inclined to seek the assistance of academic staff when needed.

### **Pass Result Group**

This was the group containing the largest number of students in the cohort (123). When they began the subject, most (86% or 105) students had surface approaches to learning, 15 had an emergent approach and there were two deep learners. A similarly large number (84% or 103) of students held a fragmented perception of the subject. Of those interviewed students with a P result, 16 (of 19) were surface learners, and half of this number (10) said they had changed their approach to learning over the year. An even greater proportion (15 of 19) reported that they had changed their perception of the subject. If these results were extrapolated to the wider cohort, this would mean that approximately half of those who were classified as having surface approaches at entry changed their approach over the semester, and almost three-quarters changed their perception of the subject over the same period. This would account for these students obtaining a pass grade despite having such high proportions of both surface approaches and fragmented perceptions at commencement.

Of those interviewed, twelve students entered directly from Year 12 and seven were mature age students. Students were of the opinion that if they studied Business Communication at high school or had experience with business communication in the

workplace, they were likely to pass *Business Communication* at university because of their familiarity with the topic and its concepts. This view gave them a certain complaisance, and so they underestimated the additional amount of work required to study business communication at a tertiary level. Students reported failing a number of other subjects during the year, with 11 of the 19 students interviewed failing one or more subjects, with 12 failing one skills test and one failing two skills tests. One person was studying a double degree; another was awarded the Dean's Bursary at the end of the year. Despite four mature age students experiencing serious personal circumstances which affected their performance, they still managed to pass the subject. In general terms, the group was heterogeneous in respect of their prior experience, academic ability and motivation.

This group was the most over-committed of all result groups. Almost all (15) were employed in full or part-time work, and those who had failed other subjects attributed the failure to their heavy work commitments. Students cited an average of 30 or more hours per week of paid employment, high study workload with other subjects, family factors and a host of other personal commitments as contributing to their average pass grade. Interviewees provided numerous anecdotes of having to juggle their work commitments with study. Even though they had substantial extra commitments, seven students held rather unrealistic expectations that they had been capable of achieving a better result than a pass. Another mature age student who worked full time while carrying concurrently a full-time study load, said he managed to pass all eight subjects for the year by setting goals and being very focused and strategic about his study. He had aimed only for pass grades for his subjects and, like most P students, concentrated on passing assessments. The researcher observed that when students with strategic and surface approaches were motivated, worked hard and were prepared to accept the minimum pass grade, they were able to pass their subjects - even when they had large employment commitments.

Despite their prior experience, students had problems with certain threshold understandings of the concepts inherent in *Business Communication*. They also had a very limited perspective of how the component parts of the subject were related, so there was mostly no larger perspective. Without such a wider perspective, it was difficult for them to appreciate the linkages and themes between different systems and subjects and courses. Accordingly, they tended to find the theories also difficult to grasp and even more difficult to apply.

Students commonly expressed low expectations about the result they hoped for the subject, with more than half of all students (10) saying they only aspired to obtain a pass grade. These students brought with them the expectation from their prior learning experience that a P grade was either all they were capable of achieving, or all they were able to obtain because of other commitments. Because of their short-term strategic goals, they often gave no consequence to the longer term goal of finishing the degree and doing so with better results.

As a consequence of their high work commitments and low expectations, students frequently choose strategic ways of organising their university studies in order to obtain a basic pass, although they probably could be capable of obtaining better results. For example, one student in this group who had a cohesive perception of the subject, said it delivered exactly what she thought it would. She valued the ability to work collaboratively in a team, and did so in the group work and project work. Her positive outlook and accurate perception had a positive effect on her approach to learning, and although she aspired only to a P grade, she also passed nine subjects in the year, which was her intention when entering university. This example illustrated that students in this group who were interviewed were very focused on passing the subject, and also selective in the approaches they took to achieve this end.

A large number of students in this group initially held fragmented perceptions of the subject, and survey transcripts showed there were misconceptions and inappropriate expectations about the subject in regard to what it would deliver, and the level of difficulty. They also seriously underestimated the amount of time and effort required to *keep up*, as students said, with lectures and tutorials as well as assignments. When interviewed, most students with this grade (15 of 19) indicated that they had corrected the misconceptions they held about the subject as it progressed, yet one of these misconceptions which remained concerned their understanding of the role of numeracy, literacy and IT skills in the course. As reported above, there was a high failure rate of one or more of the basic skills tests with this group, and yet they did not appear to be concerned because of a lack of understanding about the importance these skills to the study of business subjects.

Another unresolved issue which lingered with at least half of those students interviewed was the importance of the quality of study skills to their learning experience at university. Although about half of those students interviewed had changed their approach to learning, there was a concomitant reluctance to embrace deeper learning approaches. Interviewees said they thought their 'study skills' were quite good, but when asked during interviews to describe these, students were unable to convey the impression that they understood the sorts

of activities which comprise better quality learning approaches and accrue higher learning outcomes. The word 'study' was generally taken to be synonymous with learning, and therefore students opined that taking notes, revising lecture notes, reading the textbook and online lecture notes were examples of 'quite good' study skills which exemplified quality approaches to learning. However, while such activities are important in the learning process, they are not exclusive as students thought, and do not account for the higher learning attributes desirable in a university course. Students in the P result group generally demonstrated a very limited repertoire of desirable learning approaches and also a much undeveloped conception of learning.

The profile of students with a P result was characterised by over-commitment to employment and other external factors, and therefore strategic learning approaches, low expectations and unrealistic perceptions, and an underdeveloped understanding of learning. However, they were inclined to change their approach to learning and their perception of the subject which meant that learning occurred during semester and, consequently, resulted in their passing the subject.

### **Fail Result Group**

There were 33 students in the total cohort who failed (N) the subject, most (97%) of whom were surface learners and most (94%) had fragmented perceptions of the subject. The most obvious conclusion was that the relationship between these factors had a high impact upon the students' learning outcomes and therefore their final grade. There was one emergent learner and, not surprisingly, no deep learners in the cohort. An additional factor which contributed to the fail grade was that more than half of those interviewed did not change either their approach to learning or their perception of the subject, both of which were required for a successful transition to university study. If this finding were extrapolated to the wider cohort, it would be likely that fewer than half of those would have made any substantial changes to their approaches and perceptions.

The N students who were interviewed comprised a variety of prior learning backgrounds. At entry to university, one student was an English as a Foreign Language (EFL) student, three were studying double degrees, and three students were studying the subject as an elective including one Law student, one Social Work and one Language student. Another student had just completed a TAFE course. Four students had unsuccessfully attempted another course or at another tertiary or TAFE institution prior to beginning *Business Communication* at university. Of the group of 13, six students were mature age students.

Seven students entered directly from Year 12, and two of this number had studied Business Communication at high school. Students who entered directly after Year 12 said that they had not developed adequate 'study skills' in high school to enable them to 'cope' at university. In four of the 13 cases, *Business Communication* was the only subject they failed.

Three of these categories require comment. Firstly, it was obvious from their responses that the three students who had taken the subject as an elective lacked real motivation and interest in the subject because they considered electives to be easy, non-essential additional subjects which were unrelated to their mainstream discipline. Secondly, the three students who were studying concurrent double degrees were over-committed with their study, leaving little time to concentrate on *Business Communication*. Thirdly, students believing they had not developed sufficient study skills at high school to allow them to cope at university suggests that they failed to understand that a higher set of learning attributes were required for university and, moreover, they had little comprehension of the nature of that learning.

Amongst the N group there was a high failure rate of numeracy, literacy and IT skills tests. Twelve students failed one of the skills tests and one student failed two of the skills test, which was the highest number of failed skills tests of any results group. Given that the statistical analysis established a positive relationship between failed skills tests and outcomes, subject failure for these students was almost inevitable unless they availed themselves of the extra tutorial support to remediate skills proficiency. Attendance records for skills tutorials showed that these students did not make any serious attempt to do so.

By the end of the year, three students reported passing the supplementary exam for the subject, three had deferred, four had transferred in second semester to alternative study by distance education or had enrolled at TAFE, another transferred to Brisbane and one was working in New Zealand at the time of interview. One student had been hospitalised and had to withdraw, while another student withdrew because of the high costs of travelling to lectures from out of town. In addition to those who deferred or withdrew, three students did not finish the subject. Most students (seven) said they had been employed for 20 hours or more per week during the year. The latter examples are indicia of the personal circumstances of students who failed, revealing how these circumstances contributed to their poor results, and are additional to those factors found to be predictors of failure which were addressed in a previous section.

When students in the Fail group were interviewed about how they felt about studying *Business Communication* when they entered university, their comments indicated that they

generally lacked motivation or any real interest in the subject. Few espoused any clear understanding of the subject or appreciation of the value of studying it - even at the end of the year. In many cases there was little or no intention of completing the Business degree. Very few students had any clear prospects of working in business-related employment, which may have accounted for the 'poor choice of subject' being cited several times as the reason for their non-completion.

Interviewed N group Students demonstrated a minimum understanding of the concept of learning which they found to be ambiguous, ill-defined and unclear, and also conveyed little understanding of the need to acquire higher order learning attributes. For instance, they were dismissive of collaborative work, preferred rote memorization for exam preparation, and emphasised submitting assessment but without any regard for its quality. Moreover, they frequently failed to attend lectures or tutorials not only because they had paid employment at those times, but also because they had little appreciation of their value as avenues for learning. These students also lacked the interest and motivation to change or to acquire improved and higher order approaches to learning. Given the very high proportion of students in this group with a surface learning approach as well as a fragmented perception, and fewer than half of this number changing their approach and perception, it is unsurprising that the subject outcome was an N grade.

Their profile as learners was characterized by an unrelated and inappropriate understanding of university learning and of the subject. Moreover, their attitudes towards learning and misperceptions of their role as tertiary learners created barriers to change that prevented the full development of necessary higher order learning attributes.

### **The Group of Students who Withdrew**

The nine students who withdrew were a subset of the 13 interviewed students who failed and received an N grade, some of whom had appealed, requested remarks or were awaiting supplementary exam offers. After they were interviewed, four sat supplementary exams and were successful, so only nine of those who failed eventually withdrew. They were not interviewed as a separate group of students, but as the group who had failed and were exiting the course at that time, and their comments were used when establishing the likely causes for attrition. As shown in Table 13, there were 31 in the total cohort who withdrew, but as less than a third of these were interviewed, the findings need to be extrapolated to the wider cohort in order to obtain a clear picture of their profile.

The first point to make is that all of the comments in the preceding profile of N group students applied to students who withdrew, and are therefore relevant in this discussion because they indicated why students failed, and, by extension, why they withdrew. When N students were asked a direct question about why they failed to complete, the reasons they offered were often the same as those they gave for their poor performance.

The second point is that, according to the faculty records, most subject withdrawals after the census date came from those students with a failed grade. In addition to those 51 students who officially withdrew before the first census date, attrition in this subject occurred primarily amongst the group of students who failed the subject. After appeals and other finalisations of results, 31 students received a fail grade (N) for *Bus. Com.* This included students who did not officially withdraw by the first census date, or those who may have left the course during semester. All of the students who are recorded as non-completions came from the N group.

According to the students, a variety of personal circumstances attributed largely to their fail result and subsequent withdrawal including the demands of juggling work, family and sporting club commitments, although a distinguishing feature was that students showed a propensity to apportioning blame on others and other factors for their personal failure rather than taking responsibility for their own progress. Some did admit that they could not cope with the extent of the work required as well as its level. It was quite apparent during interviews that most students were not operating conceptually or cognitively at the level demanded. Very often, their expression was poor and they failed to communicate coherently and grammatically and, when prompted, admitted having trouble with understanding the lectures.

In some cases, it had taken students some time to come to the conclusion that the subject was not as they had imagined, and they liked neither its content nor delivery or they thought it a poor choice, even though it was a core subject. Two of the students intimated that they had used the course to gain entry into university and from there they hoped to transfer to another degree program.

In discussing the reasons for their failure and attrition, the role of learning and their approach to learning went unexamined. In effect, it appeared that students had not reflected on their progress as learners, even though they had admitted that they had 'poor study skills' and needed to improve their approach to study to order to achieve a successful outcome.

Despite being apprised by teaching staff of their role as tertiary students, the advice went unheeded because students were not interested in changing or becoming better students.

Students found university study more difficult than they had expected and, subsequently, their transition from high school, post-school study or work was also difficult. They found the relationship with the lecturer to be impersonal and very alienating, and also felt intimidated by the large number of students and the large lecture theatre, as it was quite removed from their recent previous experience at high school. To a large extent, this situation was due to their unpreparedness, as well as poor perceptions, misperceptions and unrealistic expectations of university. Moreover, it might be conjectured that had students adapted to the new learning context and were prepared to make adjustments to the way they viewed being a student in this context, they might have engaged in the learning process more meaningfully.

Students said they could not adjust to the university environment, which was another factor contributing to withdrawal and consistent with the view of Pascarella (1991), who suggested that the attributes that a student brings to university may only exert an indirect effect on their learning and development. He thought that the amount of student effort and their interactions with the learning environment exerted a greater effect on their results and retention. While it is difficult to know the amount of effort that failed students put into their learning, that they experienced difficulties in interacting with the learning environment is undeniable from the comments made. However, the influence of unpreparedness was amply demonstrated in this study as having a direct impact on outcomes and subsequent retention, especially in respect of the congruence between better prepared students having better results and less prepared students having less successful results.

These N students were not self-directed, active learners, able to see a holistic perspective, perceive the relatedness of concepts or pursue enquiry, and take responsibility for the conduct of their learning agenda. Rather, they described a passive approach in which the lecturer and tutor were expected to provide all the resources needed for assignments and exams. One complaint was that because the academic staff did not deliver on these expectations, a fail grade resulted. This contrasted with students with better results who reported that academic staff in most first year Business subjects advised and encouraged them repeatedly during the year to adopt improved approaches to learning, and yet it seemed that the non-continuing students failed to heed that message. By the end of the year their poorly developed approaches to learning, gleaned from previous learning experiences, were still

evident, and they continued to adhere to nascent and unrealistic understandings of their role as university students.

Students' poor results were related to their low level of preparedness for university learning which disadvantaged their chances of making a successful transition to university life and persisting. Furthermore, even at the end of their first year there was no evidence of transformations in students' approach to learning, or in their understanding of the concept of learning itself. Likewise, their threshold perceptions of the subject which had proven to be troublesome, also remained largely unchanged. In essence, it was most likely that a combination of students' unpreparedness and decisions not to change their approach to learning and perception of the subject, in combination with various personal and other factors including intransigence and disinclination, contributed to both the final grade and their decision to withdraw.

### **Precariate learners**

This thesis proposes that students with certain 'at risk' learning characteristics associated with aspects of their learning will find their first year academically precarious. Therefore such students would be more likely to have problems with achieving satisfactory outcomes and, as a segue, more likely not to persist with their university studies. Such students are termed 'precariate' in this study. Precariate behaviour was defined as students holding unrelated and inappropriate understandings of university learning, and lacking the ability to understand and acknowledge the connection between different approaches to learning and the quality of outcomes even at the end of the first year. They also lack appropriate learning skills. Many students with N and to a lesser extent, P grades demonstrated precariate traits.

The definition of precariate learners differs somewhat from the use of 'at-risk students', which is usually applied at university to students who are likely to fail because of their poor performance on assessment tasks, poor attendance or other motivational and personal issues. Moreover, it is uncommon for the label 'at-risk student' to refer to aspects of the student's learning characteristics or skills.

This section follows on from the descriptions in the previous two sections of students who failed and withdrew, because it was from these groups that most precariate students were located. In order to purview the landscape of precariate learners, this section examines certain indicators that predict failure which were derived from the synthesis of findings and discussed earlier. In summary, these factors included the general level of academic

preparedness, the ability to make changes to their approaches and perceptions, and a range of reported learning-related and discipline-related threshold problems.

Unpreparedness led to a chain of events not conducive to either understanding learning or to becoming an effective learner. For instance, precariate students had very little previous experience with thinking about and reflecting on their learning, describing it or discussing it, and therefore had no frame of reference with which to relate the concept of learning. An alternative perspective by Phan (2008) posited that both epistemological beliefs and learning approaches predicted reflective thinking and, as a consequence, academic performance. Nevertheless, regardless of the sequence, the role that reflective ability plays with outcomes is highlighted. As a result of unawareness of learning and of their own learning, students were likely to have difficulty in describing their understanding and perceptions of learning when entering university. On the other hand, having an awareness and appreciation of how prepared they were as tertiary learners and any problems they may have had with understanding and perception, were considered to be instrumental in moderating the impact of these predictors.

Preparedness was a cogent factor in precariate traits. As reported in Chapter four, students were generally unprepared for their first year at university in respect of their prior learning, approach to learning and their perceptions of the learning context. All of those students who withdrew had surface approaches to learning, and the categories of description for surface approaches, shown in Table 4 in Chapter four, show this range. The following descriptors (O-V) for surface learning posed potential problems for learning because of their focus on task requirement, process activities, non-specific and generic aspects with little intention to understand the whole, and treating the task as an external imposition:

- O Aims to gather information which is sufficient to pass assessment requirements;
- P Focuses on task requirements and hence process activities;
- Q Fails to see the complete picture or distinguish principles from examples;
- R Does not reflect on the connection between learning the theory, conceptual understanding and everyday experience;
- S Focuses on non-specific and generic aspects with little intention to understand the whole;
- T Uses rote memorization for learning and assessment;
- U Intends only to reproduce subject content and,
- V Treats learning as an imposed task.

The learning experience of students with these characteristics was likely to be precarious in terms of outcomes because, while these approaches may result in the passing of assessments, they would not accrue the set of attributes which allow deep learning and successful outcomes to occur, and furthermore, were not attributes that are appropriate at degree level. Similarly, all of those students who withdrew had fragmented perceptions of the context, and the categories of description for fragmented perceptions show this range.

The following descriptors (G-J) shown in table five (chapter four) also posed problems for students' progress because they presented an incomplete, limited or even incorrect perception of the subject, and detached or unconnected aspects which had no relation to the whole:

- G. Views the subject from one perspective or entity only;
- H. Understands the subject as a generic entity;
- I. Fails to see any connection between business communication and practical applications and,
- J. Holds incorrect perceptions and misunderstands the subject.

The learning experience of students with these characteristics was also likely to be precarious in respect of outcomes, because if students did not hold an accurate understanding of the subject, including its concepts, content and aims, they were less likely to achieve a successful outcome.

Examining the prior experience of high risk students was essential in establishing whether their experience in first year was likely to be precarious because it indicated if students were academically prepared. In this respect, the major findings from the statistical analysis was that those students who were unprepared in terms of having less developed approaches to learning, poor perceptions of the learning context and having failed one or more of their skills tests, as this group of students had, were more likely to obtain poorer results for the subject. Therefore, students with this profile would be described as precariate in terms of the level of their academic preparedness.

Another indicator of the likelihood of a student being precariate was the inability to make changes to their approach and perception needed for successful outcomes. The group of students with N results were the most resistant of any result group to making these changes, and therefore exhibited precarious behaviour in respect of creating barriers to transformational learning of the type which accrues successful outcomes and promotes retention.

There were a number of learning and discipline-related threshold problems which served as predictors of a precariate focus, and although they were threshold, they also persisted with students most likely to be precariate. Specific areas which students found troublesome about learning included recognising personal learning styles and the need to modify and develop these to suit particular learning situations, understanding that application and practice of learned knowledge contributes to further learning and, most importantly, understanding the process which results in learning and their role in this process as self-directed learners. In respect of problems associated with the discipline, these included recognising and understanding key ideas, understanding the value of theory to the discipline, and relating what was learnt to other areas, particularly in applied situations.

These are instantiations of learning which students believed impacted their success in first year. All had the potential to limit students' ability to learn at the desired level, especially if students had not transformed these into a shift in behaviour, attitude, or knowledge about what they were required to learn. By implication, these troublesome aspects of student learning had the potential to eventually impact decisions to stay or withdraw from university, especially for precariate students.

The final predictor was the level of students' awareness of their personal learning style and problems they experienced with learning. This was associated with their ability to reflect on these issues and their progress, for example how they approached learning and the impact this might have on their results. Precariate students often failed to perceive the connection between results and the acquisition of tertiary learning skills and associated understandings.

The characteristics of precariate students which have been outlined here are important to this study because they constituted the group of students most likely to withdraw. Defining these characteristics therefore presents both researcher and practitioner with valuable information with which to effect change in their prospects for improved outcomes and retention.

#### **SECTION 4: A Comparison of the Interviewed Group with the Study Cohort**

Before discussing the findings of phase three in detail, it is appropriate to compare the interviewed group with the total cohort to establish similarity between the two groups so that the interview findings can be generalized. By comparing the total cohort and the sub-group who were interviewed in regard to the similarity in their approach to learning and perception

of the learning context per grade achieved, complementarity was able to be established, which allowed some generalisability of interview findings to be proposed.

It was shown by comparing Tables 14 and 15 that the group of interviewed students was similar to the total cohort regarding the range of the spread of HD, D, C, P and N results grades, proportions of surface, emergent and deep learners and fragmented and cohesive perceptions of the learning context. Because of the similarity of both groups, it is proposed that the results of the interview can be extrapolated for the whole cohort and some generalisation of findings is possible. The composition of this group in terms of numbers of students in each final result grade for *Business Communication* and their approach to learning and perception of the learning context, as categorised from the survey, is summarised below:

Table 14: *A Comparison of Approach to learning, Perception of the learning context per Grade achieved for the Interviewed Group*

Grade	No. of students	Approach to Learning			Perception of the Learning Context	
		Surface	Emergent	Deep	Fragmented	Cohesive
HD	2	1(50%)	-	1(50%)	1(50%)	1(50%)
D	9	5(56%)	2(22%)	2(22%)	5(55%)	4(45%)
C	18	13(72.5%)	4(22%)	1(5.5%)	10(55.5%)	8(44.5%)
P	19	16(84.5%)	1(5%)	2(10.5%)	14(74%)	5(26%)
N	13	12(92.4%)	1(7.6%)	-	12(92.4%)	1(7.6%)
Total	61	47(77%)	8(13%)	6(9.8%)	42(68%)	19(32%)

Interviewees were grouped according to their outcome/result grades: HD, D, C, P and N. for the purposes of comparison and analysis As the table shows, this group comprised a range of students with surface, emergent and deep approaches to learning and fragmented and cohesive perceptions of the learning context, as well as a spread of HD, D, C, P and N results for *Business Communication*. The shaded cells are noteworthy and are discussed below. The table above reveals that those students interviewed were primarily surface learners with a fragmented perception of *Business Communication*.

The cross tabulation of students who were interviewed shown in Table 14 can be compared below with those below in Table 15, which shows all first year business students who completed the survey. The group of 61 interviewed students, which represents 22.4% of the total cohort of 272 surveyed students, comprises similar percentages of students in each category of the total cohort and therefore is a representative sample, as shown below:

Table 15: *Groupings for the Total Cohort surveyed per Grade Achieved, Approach to Learning and Perception of the Learning Context*

Grade	No of Students	Approach to Learning			Perception of the Learning Context	
		Surface	Emergent	Deep	Fragmented	Cohesive
HD	2	1(50%)	-	1(50%)	1(50%)	1(50%)
D	32	22(68%)	7(22%)	3(10%)	14(44%)	18(56%)
C	82	68(83%)	13(16%)	1(1%)	53(65%)	29(35%)
P	125	107(86%)	16(12.3%)	2(1.5%)	106(85%)	19(15 %)
N	31	30(98%)	1(3%)	-	29(94%)	2(6%)
Total	272	228(83%)	37(14.5%)	7(2.5%)	203(74.6%)	69(25.4%)

The total cohort was primarily surface learners with a fragmented perception of *Business Communication*, which is the same profile as those students interviewed. An example of this can be seen in the shaded cells which highlight the comparative similarity between both groups in the high percentages of each variable. The similarity between the interviewed group and the study cohort is discussed below with reference to each grade group for the total cohort as shown in Tables 14 and 15.

### **High Distinction (HD) Result Group**

There were two students in this category, one with a surface approach to learning and a cohesive perception of context and the other with a deep approach to learning and a fragmented perception of context. The same two students were interviewed; therefore the HD profile was the same for both the total cohort and the interviewed group, although the relative

percentage was different because of the larger number in the total cohort (n=272) compared with the number in interview cohort (n=61).

### **Distinction (D) Result Group**

Most students in the total cohort (68%) with a D result were surface learners but it also had the greatest number of emergent learners (22%) together with the C result grade. Only 10% were deep learners at the beginning of their first semester studies. Over half (56%) of this group had a cohesive perception of *Business Communication*, which meant that although a third of the group had surface learning approaches, the majority understood what the subject was about, its main ideas and concepts, how it related to skills and knowledge required in the workplace, as well as what its likely learning outcomes would be.

Of those students interviewed who had a D grade, 56% were surface learners, 22% were emergent learners and 22% were deep learners; 45% held cohesive perceptions of context. Although there was a slightly smaller percentage of surface learners and those holding cohesive perceptions of the subject in those students interviewed, both groups had the same percentage of emergent learners and, in general, shared a similar profile.

### **Credit (C) Result Group**

This was the second most populated group in the total cohort with a large number of surface learners (83%). It also had a substantial number (16%) of emergent learners in comparison with other groups, and only 1% were deep learners. Of the comparable interview group, 72.5% were surface learners, 22% were emergent learners and 5.5% were deep learners.

While 44% of interviewed students held cohesive perceptions of context, only just over a third (35%) of students in the larger group held a cohesive view of the subject. A sizeable number with a C result were also strategic learners.

These percentages show a similar profile, and although there were a smaller percentage of surface learners in the interviewed group, there were proportionately more emergent and deep learners. Both groups had approximately the same percentage of students who held a cohesive perception of the subject, which meant that, like the total cohort, they understood enough of what the subject was about, or acquired this knowledge during the course of the semester, to be able to obtain a Credit result.

### **Pass (P) Result Group**

This was the largest group of those surveyed, with 125 students of the total 272 obtaining a P result. The majority (86%) was surface learners, 12.3% were emergent learners and only 1.5% were deep learners. A similarly large number of students held fragmented perceptions of context (85%). Of those students interviewed who had a P grade, 84% were surface learners, 5% were emergent learners and 10.5% were deep learners. 75% held fragmented perceptions of context.

The main difference between both groups was that there were fewer emergent learners and more deep learners in the group of interviewed students, although the general profile was the same in regard to surface learners holding a fragmented perception of the subject.

### **Fail (N) Result Group**

This group had the highest number of surface learners (98%) and the highest number of students with fragmented perceptions of the learning context (94%) for the total cohort, while the interviewed group had similar proportions (92% and 92% respectively).

Unsurprisingly, there were no deep learners in this group but there were 9.8% in those interviewed, which produced the only variation, albeit slight, between both groups. Thus both groups shared a very similar profile in regard approach to learning and perception of context.

In terms of total figures, there were proportionately more surface learners and fragmented perceptions in the total cohort, approximately the same proportion of emergent learners, but more deep learners amongst the group interviewed. Overall, the two groups were comparable across the variables.

Given the comparability of the interviewed group with the total cohort that has been demonstrated above, it is argued that the experience of the group of students interviewed can be extrapolated to the total cohort. As a consequence, there is much to suggest that the experience of the interviewed group in respect of their prior learning, how they viewed the importance of literacy, numeracy and IT skills, as well as their experience of learning *Business Communication* could be expected to be similar for students in the total cohort.

## **SECTION 5: Discussion of Findings**

This chapter began by posing the question of how the learning factors related to the learning outcomes and retention. By examining and comparing the cross tabulations in Tables 14 and 15 of students' approach to learning and perception of context and skill test results, a clear relationship was established between these factors and the grade results outcomes, a

relationship which Shih (2002) also found to be significant when explaining student achievement as measured by class grade. Although Dille and Mezack (1991) argued a weak link between learning related variables and persistence, the relationship of learning variables with retention is generally less well established in the literature. Definitive conclusions were difficult to draw in this study because of the dependence upon interviews with a small number of students who withdrew. In this respect, students' responses to the last four of the interview questions were critical in gathering information about their experience of learning *Business Communication* as well as substantiating the relationship between the learning variables outcomes and retention.

Examining the experience of student learning was central to this enquiry and, according to Ramsden (2005) encompasses students' intentions, approaches and reflections, including the notion that "experiencing denotes an internal relationship between the subject and the world" (p. 70). Reid et al. (2006) likewise advocated that the student experience is essential in pedagogical research because it brings together all aspects of student learning, allowing an integrated perspective. To the phenomenographer, variations in the student experience arise from their prior experience, are interrelated and simultaneously present in their awareness (Bowden, 2000). It is this variation that was of value in interview responses because it presented a wider perspective of the learning experience and, for precariate students in particular, identified likely predictors of attrition.

Moreover, it was clear that interviewed students with higher quality outcomes (such as HD, D and C grades) had a more acute level of awareness of their learning and, as described by Prosser and Trigwell (1999), "were able to bring more aspects of relevance to the foreground of their awareness" (p. 135). Similarly, Jackling (2005) found that Accounting students with consistently deep and achieving approaches to learning had more sophisticated levels of understanding of the concepts related to learning. Precariate students, in contrast, were not only less able to describe their experiences of learning in any reflective or meaningful way, but also seemingly unable to perceive the relationship between their prior experiences and their present experiences, although there was a substantial coherence between their perceptions and approaches.

This latter inability was exemplified by the reasons students gave for non-continuance, being primarily around personal, employment and financial factors rather than any reference to the ability to cope academically. Because there was little such awareness, neither was there recognition that the quality of their learning approaches and perceptions may have contributed

to their poor learning outcomes. Having an awareness and appreciation of certain ontological aspects, such as how prepared they were as tertiary learners and how aware they were of any problems they may have had with understanding and perception, was considered to be instrumental in moderating the impact of these predictors.

In addition to approach to learning and perception of context which may be considered as 'gross' indicators of retention, various other factors were useful in predicting whether students would have successful outcomes and persist, or whether they would fail and subsequently withdraw. The research literature discussed in chapter two indicated that a combination of related factors, rather than one sole factor, contributes to both outcomes and non-continuance in first year students. This chapter found likewise, that, in addition to personal factors, a combination of factors such as the general level of academic preparedness, a range of reported learning and discipline-related threshold problems, and the ability to make changes to their approaches and perceptions, all posed likely risks for attrition, and for this reason are considered to be predictors of attrition.

Students in the total cohort may have had many reasons for leaving or for failing academically, but it was only possible to gauge a sample of these from information derived from responses to the interview questions and the limited number of those interviewed. The questions provided an indication of the value students attributed to numeracy, literacy and IT skills in obtaining a successful grade, and how their previous experience with business communication influenced the way they approached learning the subject. They also described problems experienced with learning and the reasons for non-completion. Not only did these details address the third research question but also provided likely indicators of attrition. Interviews with non-completers from the N group added credence to the predictive ability of these factors.

Students had a mixed view about the value of skills. If they had better subject grades or they perceived the application of skills to practice, then the contribution of skills was viewed positively. The literature was generally supportive of the role that skills, particularly academic skills, play in outcomes and retention. Polansky et al. (1993) found that study skills learning had a considerable impact on retention and on significantly greater academic success, while Ginsburg and Dar-El (2000) highlighted the convergence of learning skills with retention. However, Robbins et al. (2004) found, in addition to other factors, only a moderate relationship between retention and academic-related skills.

The main problems reported with learning *Business Communication* were those associated with prior learning experience, namely inaccurate or inadequate perceptions of the subject and the lack of understanding about the nature of learning - which was the most troublesome problem students experienced. These findings were consistent with those of Ronco and Cahill (2004) who suggested that academic outcomes and retention can be predicted from students' pre-educational experience variables, while Kerka (2006) emphasised the effect of learning factors in addition to cognitive and social learning variables. The problems reported by students were similar to those attributed to non-completion mentioned earlier.

One of the most important outcomes of this chapter was the identification of variables which could be used to predict retention. In the first instance, these predictors were associated with the empirical relationship established between the various learning factors. Figure 5, in this chapter, depicts this relationship, where Prior learning, Approach to learning, Perception of the learning context and outcomes are shown, with a less substantiated relationship with retention. While the pattern of relationships, shown in Figure 5, primarily illustrates a constitutionalist model of learning, it can also be considered as a paradigm of 'gross' factors which can prove troublesome for the learner. The important assumption embedded in this relationship is that all of these factors can also pose risks for the learner. The risks are that their outcomes are unsatisfactory or that they do not complete the course and withdraw, and are therefore predictors of retention.

The literature revealed a divergent view on the issue of predictors for retention. To begin, Wang and Grimes (2000) identified three major components of retention research which are: critical points, predictors and validity outcomes assessment. Since there were no critical points evident in the reasons students gave for non-completion in this study, and the issue of validity outcomes assessment was not pertinent, the remaining factor of relevance to this enquiry concerned establishing a suitable set of predictors of retention for the cohort.

The most commonly held indicator of retention in universities was pre-university academic achievement, as measured by various matriculation entry scores from year 12. In addition to being used for university entrance purposes, matriculation scores was described by Polansky et al. (1993) as being the most significant variable for predicting attrition. Likewise, Murtaugh et al. (1999) listed certain pre-university factors commonly used as indicators of attrition and considered to be hazards for withdrawal. These comprised age, ethnicity/race, residency, degree and GPA for high school. While demographic factors such

as these are commonly used in universities to predict those most likely to withdraw, Frydenberg (2007) examined attrition patterns as reasons for attrition. He found the range of reasons that were given could be classified into ‘no reason’, ‘other reasons’, ‘transfer to other courses’, ‘schedule conflict’, ‘not satisfied’, ‘course cancelled’, ‘personal’ and ‘financial’. In addition to these, Kemp (2002) found that, as in the present study, external commitments were a significant predictor of attrition. This was confirmed by Wolniak et al.’s (2012) study which determined that non-completion students gave rationales based on external causes such as employment, family, lack of learning resources and the internet.

One internal cause that is salient in this discussion is ‘locus of control’, which was considered by Dille and Mezack (1991) to impact outcomes and retention and can be used as an indicator in this study. One of the traits of deep learners is that they can self direct their learning efforts, and therefore have an internal locus of control which is defined by these researchers as, “holding the belief that the outcome is contingent on his or her own behaviour and appear to have higher rates of completion and persistence” (p. 24). The reverse applies to precariate students who do not assume the personal responsibility for their own educational success, and therefore exhibit an external locus of control. Precariate students have been shown in this study to have a lower rate of completion and persistence, which is consistent with Dille and Mezack’s use of locus of control as a predictor for outcomes and retention.

This section not only discussed how the learning factors under investigation related to the subject outcomes and retention, it used the interview findings of precariate students to propose certain factors that serve as predictors of retention. The approach taken in this study to identifying predictors of retention departed from those outlined above because, rather than employing external measures, it has used empirical findings and what students said in interviews about their reasons for non-completion and the problems that they experienced relating to learning, and asked those students who were more likely not to persist, that is precariate students. Relationships were featured in this discussion because of the greater relative importance of associated factors, rather than isolated factors, contributing to outcomes and retention.

### **Conclusion**

This chapter presented phase three of the research in which the third research question was addressed, and relationships between learning variables, outcomes and retention were examined. Its findings confirmed the relationship between learning variables, outcomes and

retention. These relationships were important because they helped clarify the complex nature of learning experienced by the cohort by indicating a chain of student learning factors influencing academic results. They also served as predictors of retention. While certain relationships were able to be demonstrated empirically, others were ascribed in an *a priori* manner, in which possible cause and effect were reasoned deductively and logically, but with reference to the student experience and the literature.

Qualitative and quantitative data were presented to demonstrate the relationship between prior learning, approach to learning, perception of the context and outcomes and retention. Bivariate statistical analysis found relationships between all of the factors and outcomes, with the exception of skills and perceptions of context. In order to corroborate the findings of this analysis, survey and interview data and final grades were used, all of which indicated a convergent pattern in which relationships between the salient factors were established.

A synthesis of data collected from all phases of the study was used to develop student learning profiles for each result grade, giving academic staff valuable information about the range of learners in the cohort and their qualitatively different understanding of learning. Learning profiles were intended to identify characteristics and trends of the major aspects associated with learning that were investigated. These ranged from the categorisation of students' learning approaches and perceptions of *Business Communication* at commencement and whether these changed over the period, to aspects of their previous learning experience denoting preparedness, as well as problems associated with retention. Profiles were presented in a transparent way, offering information on cogent factors inherent in learning, and providing insights into first year students as learners that have implications for practice and policy.

Interviews demonstrated that for precariate students in particular, learning can be troublesome, and students provided many examples of the problems they experienced with learning. These were very similar to the reasons given for withdrawal. There were two major discourses in student responses regarding the reasons for their non-completion. One concerned personal and external reasons and the other was associated with aspects of learning including the context. These findings corroborated a fundamental tenet of this study, that learning is a concept which can prove to be troublesome for students if limited or under-developed, and in association with poor perceptions of the context. Investigating troublesome concepts in this chapter provided insights into student performance and persistence.

The identification of various predictors for retention was a useful outcome of this chapter. The indicators used in this study to predict the likelihood of poor results and attrition departed from those more usually used in universities as they focussed on learning-related factors, in addition to other personal and external indicators which students provided.

Phase three findings reinforced the notion that there is a relationship between the quality of students' prior knowledge, skills, attitudes and understandings on entry, as well as their understanding of their subject and the approaches to study they adopt within the subject and, ultimately, the quality of their learning outcomes and whether they persist. These factors were related and demonstrated a connection with retention, most particularly for those students described as precariate.

## CHAPTER SEVEN: CONCLUSION

The focus of this study has been to provide a framework for understanding how first year business students learn and how this might influence outcomes. In general, the findings indicated the impact of widely varying prior experience and perceptions on the way that commencing students learn. This signals the need for practitioners to respond to this variation by supporting the early development of improved learning attributes.

There is little doubt that the range of approaches to learning and the perceptions of the subject held by the student cohort at commencement made preparedness an issue and likely to influence outcomes. Thus, the study has broadened the way researchers and practitioners might consider academic preparedness as a cogent factor in first year success and retention, and suggests that academic preparedness be better catered for in the design of learning and teaching approaches and supporting policies.

After considering the research literature on factors relating to retention in first year it became clear that very little consideration had been accorded to the role that learning factors might have on retention. At the same time, the overwhelming image to emerge from the literature was the primacy of the relationship between the various learning factors, although the relationship of these factors to retention was not as clearly established. The study has highlighted that having a deeper understanding of the way in which various learning factors are related to student outcomes and can also predict retention, will enable practitioners to capitalise on the tenets of transformational learning. Such knowledge and understanding is central to promoting better outcomes as well as the likelihood of improving first year student retention.

This chapter reviews how the research objectives and the related research questions were addressed and provides insight into the underlying issues, which further expands the significance of the study. A summary of the main findings is used to highlight the broad themes arising from the study and the contribution these make to scholarship, practice, policy and research. The most significant contribution was made to understanding the learning characteristics and academic preparedness of students entering a university Business course, which is central to understanding how these relate to learning outcomes and retention. Finally, implications are drawn from the findings and suggestions raised for practitioners to improve student learning and outcomes. These indicate directions for further research as well as improved practice.

### How the Research Questions were Addressed

The significance of the three research questions are discussed in relation to the findings. Question 1: *How academically prepared are students to begin their first year of university studies in regard to three factors: prior learning experiences, approach to learning and perception of the learning context?* Broadly speaking, with respect to prior experiences, approach to learning and perception of the context, commencing students were generally unprepared for their university studies. Findings suggested that most students commonly held poor, underdeveloped or inappropriate understanding of the concept of learning and what was required for academic success at university. Furthermore, students often entered university with poor perceptions of *Business Communication*. As a result, their first year at university was likely to be precarious in terms of their learning experience and academic outcomes. Students in this situation were described using the term ‘precariate’ because of the likelihood of their university study being troublesome, leading to poor academic outcomes and attrition. In addressing this research question, the study demonstrated the importance of academic preparedness, especially regarding prior learning experience and approach to learning, as well as commencing students having a clear understanding of the context of their learning.

Question 2: *Do students change the way they view their approach to learning and their learning context over the first year?* was premised on a tenet of phenomenographic pedagogy, namely that change results in learning. Hence, in addressing this question it was relevant to refer to the categories of description to determine whether change occurred for both approach to learning and perception of the learning context, how that change occurred, the extent of the change, and the role that change played in achieving successful outcomes.

As anticipated, students generally changed their approach to learning and their perception of the subject in a variety of qualitatively different ways over the first year, which meant that learning occurred according to the extent of that change. The categories of description provided evidence of variation in the change and therefore, in answer to Question 2, ‘change learning’ was conclusively demonstrated, albeit some clarification of this broad finding is required. While most students showed evidence of change in their approach to learning, ‘outlier’ students - those with either very good results or very poor results - did not tend to change their approach to learning or their perception of the learning context. Moreover, there was greater evidence of ‘change learning’ occurring in regard to perception of the learning context than in students’ approach to learning. This finding was consistent with that of Dahlgren (1997) who emphasised that learning occurs with “a change in

conception” (p. 34). It was anticipated that students’ perception of the context would change over the period as they became more informed about the subject, which was mostly found to be the case. On a deeper level, the evidence of ‘change learning’ was significant in regard to the relationship it established to outcomes and to a lesser extent, to retention. This relationship was evidenced by the finding that students with a fail grade did not tend to experience a change in their approach to learning or a change in their perception and understanding of the subject. The findings relating to change learning addressed in this question have practical implications for practitioners wishing to improve the quality of student learning and their first year university outcomes.

Question 3: *How are the factors of prior learning experience, approach to learning and perception of the learning context related to (a) the learning outcomes of a group of first year business students and, (b) retention?* sought relationships between the learning factors, outcomes and retention. The study demonstrated that there was a relationship between prior learning, approaches to learning and perceptions of learning context and the learning outcomes, which reflected those established in the literature. Such relationships represented the confluence in which prior experience affected the way students approached their learning and perceived their learning context which, in turn, affected their outcomes and, by extension, whether or not students completed the subject.

Although the relationship of these factors to retention was not conclusively shown in this study because only a small number of non-completing students were available for interview, trends evident in the data linked student performance with outcomes and retention. The cross-tabulations in chapter six indicated that students with poor prior learning experience, surface approaches to learning and fragmented perceptions of the subject were more likely to have poor academic outcomes. As a sequitur, such students might reasonably be expected to fail to complete the subject and consequently exit the course and university. Moreover, there was a strong indication from those non-completing students who were interviewed that a combination of factors including personal, external, as well as discipline and learning related, also contributed to their decision to leave the course.

Although less substantiated than those of part (a), the findings for part (b) of this question about the relationship between learning factors and retention, were nonetheless potentially relevant and significant for first year practitioners and scholars alike. The findings were important because they provide an additional focus of investigation for both first year learning and retention discourses.

The findings of Question 3 constituted a significant outcome of this study and provided a major pedagogical insight. This was that three related factors (prior learning experiences, approach to learning and perception of a core Business subject) contributed to an understanding of why and how entry students developed their learning approaches and perceptions, and consequently affected their success at their first year studies and their willingness to stay on at university.

Overall, the three research questions provided a framework for addressing the title of this study: Investigating learning-related factors as antecedents of first year university students' non-completion: A phenomenographic study. The findings corresponding to the research questions provide valuable insights into the complex nature of how first year students learn, and can inform better approaches to learning and to improving perceptions of the learning context, with the overall aim of improved outcomes and better retention.

### **Summary of Findings and Implications**

Significant themes which emerged from the findings contributed to the scholarship and literature of three broad fields, which were learning, phenomenography and retention. Implications arising from the research informed practice and policy, and also furnished avenues for further research.

Consistent with the exploratory nature of the study, some findings were anticipated, such as the relationship between learning factors and outcomes, but there were also a number of unexpected findings. These are noted and their significance outlined in Table 16, which presents a synthesis of the scope of 15 major findings in regard to their contribution to the wider field of enquiry, policy and practice.

Table 16: *Summary of Findings and Implications*

<b>Findings</b>	<b>Implications for the wider field of enquiry and research, policy or practice</b>
<p><b>1. Relationships were established empirically between prior learning, approach to learning, perception of the learning context, outcomes and to a lesser degree, retention.</b></p> <p>The findings do not necessarily suggest that the relationships are causal, especially in regard to retention.</p> <p>Emphasis is placed on the role that these factors, whether individually or in combination, might play in outcomes and retention.</p>	<p>This finding has implications for current phenomenographic and other related pedagogic literature on the connection between approach to learning, perception of context and outcomes.</p> <p>Professional development is needed to enhance practitioners' knowledge of how learning occurs and how it can be enhanced.</p>
<p><b>2. Students entered the business course with varying levels of preparedness</b> because of their prior experience of learning and experience with business communication, which evoked different responses to the development of their learning and to their learning outcomes.</p>	<p>This finding has direct implications for both practice and policy in regard to the way students can be better prepared for their tertiary study.</p> <p>It also contributes to the first year learning literature in respect of the impact of preparedness on outcomes.</p>
<p><b>3. There were variations in the ways entry students approached their learning,</b> as demonstrated by 22 Categories of description.</p>	<p>This finding contributes to knowledge about the variations in learning approach experienced by first year students.</p> <p>By extension, it has implications for pedagogic practice by providing an argument against the 'one size fits all' approach to teaching first year students.</p>

Findings	Implications for the wider field of enquiry and research, policy or practice
<p><b>4. There were variations in the ways entry students perceived of their learning context,</b> as demonstrated by 10 Categories of description.</p> <p>A major finding was that first year Business students were likely to be misinformed, and less likely to be informed about what to expect in their subject or motivated to discover the subject aims and expectations. This particularly applied to those students who entered university with surface learning attributes and whose learning outcomes were poor.</p> <p>There was a strong indication that most students entered their university studies with little or no appreciation of the need to understand what their subject was about, its intended outcomes, content and relatedness to other learning. This finding differed from <i>The First Year Experience in Australian Universities: Findings from 1994 to 2009</i>, (James et al., 2010), which found that on a national basis, first year students were increasingly better informed than previously about what to expect at university.</p>	<p>This finding has implications for policy in regard to the widespread provision of pre-course information.</p> <p>It also indicates a need for ongoing research about whether first year Business students at this university are becoming better informed about their course and what to expect of their learning context.</p>
<p><b>5. In addition to surface and deep learners, a medial group was identified of emergent learners,</b> described as those displaying traits of both approaches, but primarily developing attributes of deeper learning.</p>	<p><i>Emergent</i> learners represent a variation of surface and deep learning approaches and adds to the knowledge of first year learning and the learning discourse.</p> <p>This finding has implications for teaching practice and student performance.</p>

Findings	Implications for the wider field of enquiry and research, policy or practice
<p><b>6. There was evidence of transformational learning in students' first year.</b> Categories of description showed that students changed their approach to learning in eight different ways.</p>	<p>Evidence of transformational learning can be capitalised upon by teaching staff to promote more appropriate learning approaches, leading to better learning outcomes.</p>
<p><b>7. There was evidence that students changed their perception of the learning context over their first year.</b> Categories of description showed that students changed their perception of <i>Business Communication</i> in six different ways.</p>	<p>This finding has implications for the faculty to design and implement better ways of informing students about the subject early in semester. Student will benefit by an earlier understanding of the subject and its context.</p>
<p><b>8. There was evidence that some students who did not change their approach to learning and/or their perception of the learning context were more likely to have less successful outcomes and not complete.</b></p>	<p>An imperative is provided for staff to assist students in making the change to better and more appropriate learning approaches, and also to better informed perceptions of the learning context.</p> <p>Action to provide clear goals and subject information can be incorporated into policy.</p>
<p><b>9. Learning is a threshold concept for first year university students, a process which must be understood and acquired.</b> Successful crossing of the threshold of learning requires negotiation by students, adapting previously learned skills and acquiring new learning skills.</p>	<p>The notion that learning is a concept which must be acquired and mastered by students entering university is a new application of the notion of a 'Threshold Concept' (Meyer &amp; Land, 2003).</p> <p>The finding has implications for pedagogic practice, the wider field of pedagogic research, and adds to the scholarship and literature of tertiary learning.</p>

Findings	Implications for the wider field of enquiry and research, policy or practice
<p><b>10. Commencing students who had difficulties with aspects of their tertiary learning were described as having experienced learning as a ‘troublesome threshold concept’.</b></p> <p>Students who were able to identify such troublesome aspects were more likely to successfully negotiate their learning at university. They also recognised the necessary transformations of perception, understanding and skills required in their new learning context as part of negotiating that threshold.</p>	<p>The use of learning as a likely ‘troublesome threshold concept’ represents a new application of ‘Threshold Concept’. This outcome contributes to the learning discourse.</p> <p>The identification of learning as a troublesome threshold concept has relevance as a diagnostic tool and for practice and policy. These can prompt institutions to address ways to effectively assist students in the mastery of such threshold concepts through supportive learning environments.</p>
<p><b>11. The ubiquitous presence of surface learning and fragmented perceptions of the learning context in the cohort meant that learning was both troublesome and precarious for those students identified as ‘precariate’ in the study.</b></p> <p>Because of their often poor prior learning experience, including perceptions and approaches, satisfactory academic outcomes for these students were likely to be precarious, with a strong possibility of failure and attrition.</p>	<p>This adds to a tenet of phenomenographic pedagogy which proposes that as students acquire knowledge and contextualise it, they make the transition to deeper learning. The reverse also applies in this study. Students who did not develop the critical threshold functions required for transitional learning to occur experienced learning described as ‘troublesome’ - with the likelihood of precarious outcomes.</p> <p>This finding contributes to pedagogic and phenomenographic literature, with implications for practice and policy.</p>
<p><b>12. Students’ responses generally indicated a lack of suitable skills to reflect upon their learning.</b></p>	<p>This finding establishes the primal importance of reflexivity in studies which enquire into student learning and perception and contributes to the scholarship of first year learning.</p>

Findings	Implications for the wider field of enquiry and research, policy or practice
<p><b>13. Not only were commencing students often uncertain about the process which results in learning and their role in this process, but they also had difficulty in finding appropriate language to describe their learning.</b></p> <p>These two factors represented threshold concepts which students needed to negotiate. Students drew on their prior experience to describe their approach to learning and perception of the subject. This process was influenced by their ability to reflect, recall, recognize and describe these experiences using suitable language.</p>	<p>Assumptions about students' ability to understand and use the language of learning, and to be able to reflect upon their learning might lead practitioners to overlook the need to teach students about tertiary learning and develop their ability to reflect. Therefore this finding has implications for practice. It indicates the need for a pedagogy which integrates academic literacy and discipline literacy. This finding and the previous finding (12) are relevant in regard to first year research design and enquiry, where it is assumed that students have the necessary skills and understanding to competently address survey questions about learning.</p>
<p><b>14. A profile of the cohort of first year business students as learners was developed</b> comprising the learning characteristics of students in each of the result grades.</p> <p>The profile of students with surface approaches to learning and fragmented perceptions of context is of particular interest as these students were shown to be more likely to have lower grades, fail or not complete.</p>	<p>The development of learning profiles contributes to first year learning literature, pedagogy and practice. Grades used to categorise profiles were indicative of learning approaches, perceptions and the degree to which students made the transformation to tertiary learning. This is significant in regard to establishing predictors for poor academic outcomes and attrition.</p> <p>Staff can use learning profiles to adapt their teaching approach so that the different learning styles, which characterize each profile, can be accommodated.</p>

<b>Findings</b>	<b>Implications for the wider field of enquiry and research, policy or practice</b>
<p><b>15. A combination of learning related factors, rather than one single factor contributed to retention.</b> These were most often in addition to other non-academic and personal factors.</p> <p>Although other non-learning factors were identified by exiting students as contributing to their attrition, these were not investigated as such factors were outside the parameters of this study.</p>	<p>Significant and wide-ranging factors, including learning-related factors, were found to be inimical to student success in first year university. These affected the student learning experience and subsequently retention.</p> <p>This chain of connected factors impacting retention has implications for practice and policy. It also contributes to retention literature.</p>

The contributions that the 15 distilled findings presented in Table 16 make to the scholarship of learning, phenomenography and retention are discussed below.

### **Contributions to the Scholarship of Learning**

The study makes several significant contributions to the scholarship of learning, and in particular to first year learning. Despite the abundance of research on the nature of learning, there was an absence on specific first year learning traits, little on the impact of learning approaches on outcomes, and even less on how learning-related factors might influence retention. The study responds particularly appropriately to this paucity in the literature. Moreover, in establishing the presence of particular learning characteristics of the group of first year students, the study marked a departure from the substantial body of learning literature that takes a more global view of learning and learning characteristics.

A contribution was made to the neglected area of how prepared students are to engage as tertiary learners in their first year at university. Identifying the prior learning variables that constituted academic preparedness and their impact extends the relevant literature in several important ways, including knowledge about how well entry students understand learning and their approaches to learning in a tertiary context. Related to this is the proposition that the set of learning-related variables with which students enter university not only indicate the level of their preparedness but are also connected to their progress and outcomes, and contributes

to decision to withdraw or remain. This proposition constitutes one of the major contributions that this thesis offers to the scholarship of first year student learning. Furthermore, this finding is particularly pertinent to those first year learners whose prior experience and preparedness are generally poor, hold surface approaches and fragmented perceptions, and are described as precariate because of the likelihood of poor outcomes and attrition. This finding represents a significantly new aspect for both learning and retention literature.

The research built on previous seminal learning models and literature to provide additional insights into understanding the nature of first year learners. The existing theoretical frameworks of three pivotal learning models by Biggs' (1978), Ramsden (1988) and Prosser et al. (1995), were extended to investigate the potential of learning factors to impact outcomes and, to a lesser extent, retention. These learning models were synthesised and extended to develop the theoretical framework for this study, which therefore makes a contribution to theoretical learning frameworks.

The study also built on certain learning-related literature. For example, Säljö's (1975) deep and surface approaches to learning were expanded to include an intermediate emergent learning approach, which offers a link for understanding how students change and develop their approaches to learning while progressing from surface to deep learning approaches.

With respect to the transformational learning literature, the study demonstrated that change learning was largely contingent upon aspects of preparedness, specifically approach to learning and prior learning experience – in addition to students' receptiveness to making the desired changes. The transformative and developmental nature of learning concepts and skills required for first year business students was also demonstrated. Thus this study adds to the knowledge and scholarship of how students' conceptions of learning and their learning skills change and develop over their first year at university. In this respect, the study contributed to research about transformational learning, although it must be noted that this notion is distinctly different from the transformational stages of adult learning popularised by Mezirow (1991).

As mentioned previously, Meyer and Land's (2003) Threshold Concept model was adapted by proposing that learning represents a threshold concept. As a segue, Meyer and Land's Troublesome Threshold Concepts model was also used to identify those first year students who experienced troublesome aspects of learning *Business Communication*. Because the literature about troublesome threshold concepts precludes the likelihood of learning being

a troublesome threshold concept, as is proposed here, these findings represent new contributions to the scholarship of learning.

Another associated proposition this study makes is that the ability to reflect also represents a threshold concept. Not only do students need to be able to reflect in order to answer the questions posed about their learning but, according to the praxis of current pedagogical practice and literature, reflection is a desirable trait because it offers a means for students to understand and make sense of their learning experiences. Accordingly, if students lack the desired skills and experience in reflection, as certain students did in the study; this becomes a troublesome threshold concept which acts as a barrier for students in developing necessary attributes of tertiary learning.

This finding adds to the more general spectrum of literature about reflection but, more importantly, the study redresses the dearth of research identifying the problem that entry students might have in reflecting upon, describing and discussing learning. It contributes to the reflexive discourse in its finding that the ability to reflect, and also the ability to write coherently and logically about that reflection, affected the quality of students' written responses about their learning. These three findings which extend the notion of threshold concepts represent a significant contribution to the scholarship of learning.

### **Contributions of the Study to Understanding Retention**

The relationship between learning-related factors of commencing students and retention is a relatively new approach in the retention discourse. The literature evinced two different discourses on retention. The predominant discourse centers on what institutions do to fit students into their cultures via engagement. The other, to which this study belongs, is still emerging and centers on the institution accommodating the characteristics of commencing students. This study has as one of its goals, understanding the traits of commencing students and the greater relative importance of investigating their learning attributes and perceptions. This concern for knowing and understanding the students' learning characteristics led to the development of profiles comprising learning-related factors that can be used not only as a tool for improvement in teaching and learning, but also to predict attrition. This is an innovative approach to examining and probing factors related to retention, and therefore makes a practical contribution to its scholarship.

The view that models that explain retention should embrace the role played by aspects of student learning and their relationship, dissents from the popular perspective of retention

prevalent in the literature of the past two or so decades, and also current in academic practice and policy. In illuminating the issue of retention from a different theoretical and substantive perspective, this study argues that learning and its various related factors might appropriately be the focal point through which academics and practitioners might investigate why first year students either succeed or fail to persist.

Retention research has generally tended to ignore first year learning, more especially approach to learning, perception of the learning context and prior learning, as essential elements which may contribute to retention. The study has attempted to redress that omission by responding to the less substantiated but potentially interesting connection to such learning factors on retention, and in the process, provide new theoretical insights into the complex and multi-faceted nature of student retention. Hence, a contribution is made to the literature and diverse scholarship of retention.

In addition, identifying and understanding the factors associated with academic success and failure is particularly important in the current political agenda which is characterised by the drive for increasing participation in higher education (Bradley Report, 2008). The Bradley Report (2008) was concerned not only with encouraging students to commence university study, but more importantly to persist and complete it satisfactorily. It is clear that the more information educators have regarding the factors which are associated with academic success or failure at university, the better they can support student learning outcomes and promote the goal of increased participation and completion. This is a perspective which has implications for both policy and practice.

Understanding first year students as learners is beneficial in designing strategies to improve retention. For example, the categories of description which contributed to the profile of the cohort as learners demonstrated a pronounced variation between completing and non-completing students in their approach to learning, their perception of the subject and how these aspects changed over their first year at university. Such knowledge can be used profitably to enable scholarly dialogue amongst academic staff about ways to enhance the varying ability of commencing students to learn at the appropriate tertiary standard, and also contribute to policies concerning student learning and progression. Accordingly, enabling intervention strategies can be developed for successful completion rates and to stem attrition.

In proposing that certain learning attributes of commencing students affect retention, this study presents an additional element in the retention discourse. Most importantly, it highlights the need for a new narrative about retention which has its focus on learning-related

factors of entry students as antecedents for success and retention and, consequently, raises the need to extend the existing theoretical framework for examining student persistence models. Clearly, this study makes a contribution not only to the discourse and body of research about retention, but also to understanding the factors relating to retention in first year business students and to the development of practice and policy which such knowledge informs.

### **Contributions of the Study to Phenomenography**

There are several ways in which this study contributes to the scholarship of phenomenography. Firstly, the work of seminal figures in the development of phenomenographic learning theory and literature was adapted contextually. Unlike classical phenomenographic research, this study employed a combination of phenomenographic methodology and other methods. This approach therefore contributes to the development of phenomenographic methodology and research with respect to investigating first year university business students.

The second contribution involves the way in which phenomenography was used in this study, which departs from established practice in educational studies employing phenomenography to investigate how various aspects of learning impact outcomes. Although phenomenographic research usually investigates relationships between various learning factors, no studies were located which attempted to trace the relationship between learning variables and retention. While this study used phenomenography to establish how the mix of learning-related variables related to final grades for the subject, it extended the investigation to demonstrate how these variables might also influence student retention. In so doing, the study broadened the way that phenomenography can be applied to learning-related research to better understand the role that learning factors contributes to retention.

Thirdly, in addition to analysing the key differences and similarities in commencing students' understandings about their learning which is a common to phenomenography, new theoretical insights were provided about how these understandings changed over the period of students' first year at university. As change learning is one of the basic tenets of phenomenographic pedagogy (Bowden & Marton, 2004), this study makes a contribution to the limited range of phenomenographic studies which have investigated change learning.

A fourth contribution to phenomenographic studies was made with the application of threshold concepts. The study posits the view that when students were asked in the survey to describe their approach to learning and perception of the learning context, they were actually

describing their threshold concepts of learning and the learning context. The study proposes that the categories of description which identified the range of learning-related concepts held by commencing students might more accurately be considered to be the students' threshold concepts of learning.

### **Further Implications for Practice and Policy**

There were several lessons of value raised by the findings that emerged in this research, and the principal question is how these findings might be used. A key aspect of the study lies in its prescriptive intent for practice outlined below.

The results of this research should lead to an improvement in the way academics view learning, and especially how they view first year Business students' approach to learning. A better understanding of how the learning factors affected first year learning, outcomes and retention would allow academics the opportunity to address aspects of the first year student learning experience. Furthermore, using these findings and other relevant learning-based research to improve the first year student learning experience would encourage a greater focus on enhancing the quality of first year student outputs, including retention.

There are several ways in which interventions might be spear-headed by using the results of this study. Such strategies should be privileged by decision-making by the faculty and its dedicated teaching and learning facilitators and advisory staff, producing apposite policies designed to buttress support for proactive and ongoing interventions. Of prime importance would be establishing scholarly dialogue amongst academic staff about ways to engage with first year student learning in a meaningful way, and enhance the ability of commencing students to learn at the appropriate tertiary standard, succeed and persist. This would need to be buttressed by a strategy to make staff more knowledgeable and aware of basic pedagogic tenets and how their students learn, as well as the factors which constitute academic preparedness in first year students. The development and use of learning profiles would also be opportune in this process. Such a proposal assumes that knowledge about learning attributes would have a direct influence on improving professional practice by promoting more appropriate teaching approaches and providing greater learning support.

The phenomenographic categories of description generated by this study provide an ideal vehicle for practitioners to interrogate the results and consider the variation in ways in which students experienced their learning and perceptions their learning context. Recognising personal learning styles in this manner is an appropriate starting point to frame a discussion

on better ways for academics to develop their subject delivery and engage students as learners. It reinforces the need to modify and develop teaching styles to suit particular learning situations and improve the student learning experience. Such information could also be used to inform course refresh and redevelopment.

Another pertinent use of the categories of description is to make explicit the limiting nature of some understandings and learning approaches held by students, limitations that indicate unpreparedness. Enquiring into areas of weakness by investigating misperceptions students hold about their learning and their learning context as well as any accompanying troublesome concepts, would provide practitioners with additional insights into the likely impact these factors have on success and retention. Furthermore, mediating the deleterious effect of poor prior learning experience by intervention would enhance the early student learning experience. Apropos of this, if potential precariate learners were to receive the necessary early intervention to improve deficit areas of their learning, the likelihood of their attrition would be lessened. In this context, it is worthwhile to invest time and resources in developing a holistic approach to enhancing students' preparedness for their university studies.

This section began by posing the question of how the findings might be used to advantage. The foregoing discussion amply demonstrates the substantial contribution of these findings to practice, and how they might be applied for quality improvement purposes at a practice level in a school of business.

### **Some Implications for Further Research**

In many ways, this research has generated more questions than it has answered. Several areas have been noted as worthy of further exploration, most prominently the role that learning factors, some which are additional to those examined in this study, have on first year success and retention. Some of the more interesting areas worthy of further study are provided below:

- a) The focus in this study on using learning characteristics to investigate retention departed from the more usual approach employed by researchers who used factors such as academic, demographic, motivation, level of engagement or other personal factors. A wider range of such factors might be employed in future research into the variation in ways in which students entering business courses perceive their learning and the

learning skills they develop prior to entering, including the role of prior educational attainment.

- b) The study drew attention to the need for a larger number of non-completing first year students to be interviewed than was possible in the current study, and their learning characteristics to be investigated. This would mean the development of more comprehensive learning profiles which would offer staff greater insight into the relationship between learning factors and non-completion.
- c) Research would be relevant into the factors that prompt pedagogic change for business students over the three years of their course, including the extent and type of change and the implications these have for teaching. This would be a longitudinal study that would extend the present first year study.
- d) Longitudinal studies would be useful to further develop our understanding of the nature of precariate learners, and to explore whether, if provided with the benefit of early identification, intervention and support, such students develop higher level learning attributes and improved outcomes.
- e) The study interviewed approximately one third of the total first year cohort. A larger number of students are required to be surveyed or interviewed in order to identify in greater detail aspects of their learning which first year business students found to be troublesome.
- f) The empirical findings of this study suggested that further research is warranted to determine more conclusively how the learning-related factors impact retention.
- g) Finally, because the generalisability of the results regarding retention was limited by the small number of non-continuing students interviewed, it would be useful to conduct exit interviews of all students who leave the business course during their first year to establish stronger correlations between the factors they report and retention.

The pursuit of such avenues of research would provide clarity and focus for the further exploration of understudied phenomena relating to first year learning.

### **A Final Note**

This study produced new and significant findings revealing multidimensional factors explaining the variation in student learning experiences and outcomes, and reasons for non-continuance. These multidimensional factors gave a sense of the complex and sometimes troublesome nature of first year learning, and enhanced understanding of first year learning.

The most overwhelming image to emerge from the study was the general lack of preparedness of students entering the first year of a business course to cope with the requirements of tertiary learning. On the other hand, there was strong evidence that the majority of students experienced change learning which mitigated the otherwise deleterious effect of poor prior learning experience and hence, unpreparedness. This was one of the more interesting findings of this enquiry.

There is also no doubt that the relationships which were demonstrated between the various learning factors were linked to outcomes, and to a less-demonstrated effect, retention. Considered as a whole, the relationships discovered about the connection between approach to learning, perception of context and outcomes were extremely robust. The confluence of these factors provided cogent and plausible reference points for understanding, from an educational perspective, how the early student learning experience can be enhanced to improve levels of student achievement and, by extension, retention.

The major prevailing discourse in the learning and retention literature places the student first year experience as central to whether they stay or leave. This study suggests that learning-related factors which comprise academic preparedness are also worthy of consideration in the first year retention discourse. Using learning factors as a basis for understanding retention should be seen as complementing the current retention discourse. This finding could lead to a real improvement in the first year student learning experience and, as a corollary, in retention. The exploratory study, draws attention to the need for a new discourse on the causes of attrition which has as its nucleus, learning.

In important respects, this study provides a new conceptual framework for understanding the first year business learner, and makes a substantial contribution to broadening the knowledge and understanding of how first year university students learn, or fail to learn, and the nature of that learning. Collectively, these findings establish a rich conceptual understanding of first year learning which practitioners would find useful in improving their professional practice. The findings are seen not only as multiple perspectives of first year learning, but also as critical success factors in first year learning. The key question remaining is how to effect change in the way practitioners view first year students as learners, and to refocus the current singular emphasis on generic university learning to one which has as its focus specific first year learning.

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## APPENDIX A

### DEFINITIONS OF TERMS USED IN THE STUDY

This study employs a number of widely-used terms which can be interpreted in different ways. With this in mind, a brief explanation of relevant terms is provided to assist in aligning the reader's perspectives to those of this research.

Term	Definition
Academic literacy	Comprises the set of skills that students must master in order to perform successfully as a university scholar (Henderson & Hirst, 2007). Although these vary, they might, for example, include numeracy, literacy, note-taking, study skills, essay writing skills, problem solving and library skills.
Academics	<i>Academics, lecturers, practitioners</i> and <i>university teachers</i> are used synonymously in this study to describe academic teachers at university.

Term	Definition
Approach to learning	<p>The collective noun <i>approach</i> is generally used in this study as it is in the phenomenographic literature, where <i>approach</i> comprises an intentional and a strategic aspect. It denotes both the way a student acts and the way of experiencing the learning situation; and is related to the learner's particular predisposition or orientation to learning and their views or conceptions of learning (Ramsden, 2002). <i>Approach</i> is also used in the literature as <i>style</i> or <i>orientation</i>, although there are slight differences in meaning between the terms.</p> <p><i>Approach to learning</i> describes a composite of characteristics comprising learning such as affective, psychological and cognitive. These characteristics serve to describe how a learner perceives, interacts with and responds to the learning environment.</p> <p><i>Approach to learning</i> is defined as comprising the learners' experience of what they are trying to do (an intentional aspect) and what they are doing (a strategic or structural aspect), which Ramsden (2002) described as "a student's immediate engagement with a particular learning task" (p. 51).</p> <p>According to Svensson (1977), <i>Approach to learning</i> is also about how students organise the information being presented; whether they distort or segment the framework of the task, and whether they integrate the whole and the parts of the task.</p>
Awareness, discernment	<p><i>Awareness, discernment, meaning and critical features, or aspects</i>, are all important concepts in relation to the Variation Theory of phenomenography. These aspects represent dimensions of variation constituted by the new learning situation and the previous ones which it resembles in critical aspects (Bowden et al., 2000).</p>

Term	Definition
Business Communication	At the time of research this subject aimed to teach students to communicate in verbal, written and electronic form as well as in interpersonal situations. It required elementary numerical skills deemed essential for students to be able to read (communicate) a financial documents and to interpret basic business statistics; IT skills essential for accessing and manipulating and reporting business data; and Literacy skills essential in a business context.
Categories of description	These describe the structural relationships between ways of experiencing a phenomenon in terms of the increasing complexity or breadth of awareness across categories. The categories consist of groupings of logically related dimensions of variation of a phenomenon, based on differences and similarities in ways that students describe particular phenomenon at a particular point in time (Prosser, 1994).
Cohesive perception	A student with a <i>Cohesive</i> perception of the learning situation will have a more inclusive, complex and complete awareness of all the phenomena and variations of phenomena which relate to the context, and these will be simultaneously present. In the case of <i>Business Communication</i> , for example, a student might perceive of the subject in terms of a past experience with a similar subject studied at high school, in addition to successful outcomes (passing the subject) or being proficient in communication in general or in the workplace, and perhaps of recognising that learning communication skills in the past has been unproblematic. A variety of phenomena is evoked in the process of perceiving a new context, and the student with a cohesive perception is able to see the relationship between all the various elements. Ramsden (2002) described the cohesive perception as 'holistic', in which the student preserves the structure, focuses on the whole in relation to the parts (p.44).

Term	Definition
Commencing students	In this study commencing students are those who have enrolled into the first semester of the first year of the Bachelor of Business. This is different from the usual university definition that commencing students are those students who are still enrolled after the first DEEWR census date.
Completion	This term is used synonymously with <i>retention</i> and <i>persistence</i> to mean those students who complete their first year at university and re-enrol by the first census date of the following academic year.
Constitutionalism	<p>This is a term which refers to the way meaning develops in a relation between the person and the phenomenon, and is the total of all human experience of that phenomenon. It is this relational or constitutionalist view which underpins phenomenography.</p> <p>Meaning about learning is constituted by the continual interaction between person and object, by incremental accommodation and assimilation. A constitutionalist approach to enquiry seeks to build a picture of learning by discovering and examining the various phenomena which contribute to learning (Prosser &amp; Trigwell, 1999).</p>
Critical features, aspects or dimensions	<p><i>Critical features</i> is a term used in phenomenography to describe dimensions of variation constituted by the new situation and the previous ones which it resembles in critical (important) aspects. According to Bowden (2005), it also involves how students make sense of new learning situations. In phenomenography critical features in meanings correspond to dimensions of variation that are constituent parts of the knowledge of specific disciplines.</p> <p>In this study the term <i>critical</i> is also used to denote important features, aspects or dimensions of the phenomenon being experienced or perceived by students.</p>

Term	Definition
Critical functioning	This refers to the ways of thinking and practicing in a subject which constitutes the <i>critical threshold function</i> , which aims to effect some transformation in understanding and learning (Meyer & Land, et al 2005).
Deep learning	Learners with deep learning characteristics focus on understanding the object of learning, and attempt to grasp all aspects of the problem. There is an intention to understand and learn the facts in relation to the larger concepts and coherent whole, and to relate and distinguish evidence and argument.
Difference, similarity, contrast	These terms are used interchangeably within the phenomenographical concept of 'Variation'.
Emergent learning	Students with an emergent learning approach are defined by a mixture of surface learning approaches and developing deeper learning traits. This approach supports higher levels of learning while also exhibiting certain surface learning characteristics, and therefore represents a variation of surface and deep learning approaches. <i>Emergent learning</i> is similar to Biggs' (1987) term <i>achieving</i> . <i>Emergent</i> defines a position on the learning continuum between surface and deep learning approaches, but is not necessarily short-term or tactical. Because it is assumed that students will exhibit examples of strategic learning whether they are surface or deep learners because they are focused on the achievement of specific outcomes, students with <i>emergent learning</i> attributes may also exhibit strategic learning traits.
Experience	<i>Experience</i> comprises the mental representations making up how the phenomenon is represented in the learner's mind, and encompasses students' intentions, approaches and reflections including the notion that experiencing denotes an internal relationship between the subject (the student) and the world (Ramsden, 2005). In phenomenography this includes conception, perception, understanding and apprehension .

Term	Definition
Fragmented perceptions of context	Fragmented perceptions are characterized by limited awareness of a phenomenon. Although varying and sometimes numerous components of the phenomenon may be discerned by students, these are not integrated into a coherent whole. Ramsden (2003,) describes this as atomistic, in which “the student distorts the structure, focuses on the parts, and segments the whole” (p. 44). Therefore a student with a fragmented perception of the context perceives only part of the relationships between the various parts of the phenomenon.
Learning Context	In this study <i>learning context</i> refers to the subject <i>Business Communication</i> which students are about to study, and their understandings and perceptions of its goals and major concepts. Prosser (1999) described <i>learning context</i> as “the situation when a student enters the learning world . . . the particular learning environment or situation” (p. 44). This can be taken to mean various aspects of the context including good teaching, clear goals, student conceptions of the course /subject matter or a particular teaching package. Prosser used various subjects as learning contexts in his research including biology, physics, mathematics and chemistry.
Learning	This study uses the phenomenographic definition of learning which is that learning occurs with a change in conception/perception. It is what we experience and understand of our social reality - which is inseparable from how we experience and understand it (Dahlgren, 1997). The most fundamental form of learning enables the learner to perceive phenomena or situations in new ways.

Term	Definition
Learning Profiles	<p><i>Learning profiles</i> present the schematic description of students' learning characteristics, indicating variation between result groups within the cohort in this study. They comprise the range of learner identities which indicate how learners perceive their learning role and their approaches to learning.</p> <p>In this study <i>learning profiles</i> are intended to present a synthesis of all the research findings and data from this study, including pertinent survey and interview data, the results of skills tests and final grades, as well as trends and demonstrated relationships between factors.</p>
Mature age students	<p>Mature age students were classified as not having entering university immediately after high school with at least a 12 month gap. This included those who had been in paid employment during this period, had taken a 'gap' year, or had studied in another university or in a TAFE course for at least twelve months post high school.</p>
Millennium, X and Y 'gen' students	<p>The majority of current first year university students belong to one of these groupings which have special characteristics defining their skills and attitudes towards learning. Millennium and Y generation students refer to those born between 1977 and 1999, while X generation refers to those born between 1965 to 1976, although there is no consensus on exact dates.</p> <p>Millennium and X generation students are characterized as being born in the technology age, accustomed to change and committed to lifelong learning- particularly discovery and collaborative learning. They view teachers as facilitators and mentors; and dislike conventional lectures where knowledge is transmitted because they view learning as their own responsibility and challenge (White et al., 2011).</p>

Term	Definition
Non-dualistic ontology	This refers to the way that differences in how phenomenon are experienced, which reflects differences in what critical aspects are discerned and focussed on simultaneously. With a non-dualistic ontology the individual and the world are not constituted separately of each other, and the experiences cannot exist without their constituent parts. (Bowden et al., 2000).
Orientation to learning	Orientation to learning reflects all the prior learning experiences including preferences and various beliefs, such as one's ability to improve and learn, that effort leads to success. There is a preference for challenging tasks, personal satisfaction from success at difficult tasks, and the use of problem solving and self-instructions when engaged in the learning task (Watkins et al. 2002, p. 2). These characteristics comprise an innate preference or orientation towards certain traits in learning. Approach to learning and learning orientation are often used synonymously but are different. Approach to learning denotes a decision to choose a particular strategy to suit a particular context.
Object of experience	In phenomenography, the understanding of a phenomenon is described as being the <i>object of experience</i> .
Outcome space	This is the logically structured complex of the different ways of experiencing an object, and represents the range of qualitatively different understandings identified in the pooled data set. In phenomenography the term is synonymous with <i>phenomenon</i> .

Term	Definition
Perception/ Conception	<p><i>Perception</i> refers to the intuitive recognition of action by which the mind reflects its sensations to the external object as its cause. The word <i>conception</i> is the unit of description usually used in phenomenography, although in this study conception is used interchangeably with <i>perception</i>, <i>understanding</i> and <i>experiences</i>.</p> <p>A <i>conception</i> is an idea of a class of objects, a general notion, intention, understanding or apprehension. (Prosser &amp; Trigwell, 1999). It can have two dialectically intertwined aspects: a meaning (the referential aspect) and a structure (the structural aspect). Capturing the meaning of the concept is a matter of interpreting what the person is saying or writing, the structural aspect can be identified by linguistic markers (e.g. singular plural distinction). (Marton &amp; Pong, 2005, p. 335). As an aspect of subject matter, a conception can be thought of as “a type of relation between a person and a phenomenon” (Ramsden, 2003, p. 40).</p>
Persistence	<p><i>Persistence</i> refers to student retention and those students who complete their first year at university. It is defined as the potential for first year students to persist at the subject requirements, including learning and assessment activities, allowing for a successful outcome for the subject. As a result, students subsequently remain (persist) at university.</p>
Phenomenography	<p>“<i>Phenomenography</i> is an empirical research paradigm which is concerned with the qualitatively different ways in which a person or group of people experience, conceptualise, understand, perceive or apprehend various phenomena in and aspects of the world around them” (Prosser &amp; Trigwell, 1999, p. 57).</p>

Term	Definition
Preparedness	<i>Preparedness</i> refers to the extent that students are ready for their university studies. <i>Preparedness</i> includes factors such as previous high school academic performance, standardised entrance scores on entrance tests, first semester GPA results, completion of an academic upgrading course, level of academic literacy and prior relevant experience of learning - all of which influence first year students' capacity to optimise their educational opportunities at university.
Prior learning	In this study <i>prior learning</i> is narrowly defined as the set of numeracy, literacy and information technology skills which are held by the student at entry.
Precariate	<i>Precariate</i> behaviour is defined as students holding unrelated and inappropriate understandings of university learning, and lacking the ability to understand and acknowledge the connection between different approaches to learning and the quality of outcomes even at the end of the first year. <i>Precariate</i> is similar to 'at risk' - which is commonly used to describe first year students. 'At risk' students display certain characteristics and behaviours that presage the likelihood of having poor academic outcomes and, as a result, withdrawing from university. <i>Precariate</i> students are more likely to be at-risk of attrition because of their poor knowledge and understanding and skills in learning, rather than other behaviours usually associated with 'at risk' students.
Previous learning experience	This term comprises the accrued experiences of learning business communication at high school, TAFE, and in various work-related, sporting or recreational contexts. This allows some transference of knowledge, understanding or skills related to the discipline; its content and main ideas, and what the student understands to be a successful approach to learning the subject. Such accrued experiences of learning are able to be built on in the context of the university subject being studied.

Term	Definition
Reality	<i>Reality</i> in phenomenography is constituted from an interpretation made as a consequence of interactions within the world.
Results	These were final academic grades for <i>Business Communication</i> , reported as High Distinction (HD), Distinction (D), Credit (C), Pass (P) and Fail (N) in the end of semester results.
Retention	The definition of <i>retention</i> adopted in this study was based on the DEEWR definition, that is, that if a student has enrolled one calendar year from their enrolment in first year, they are considered as being retained at university. The term is used synonymously with ‘persistence’ in this study.
Space of variation	In phenomenographic terms, students discern critical aspects of their learning as different dimensions or <i>spaces of variation</i> .
Students	This refers to university students in the first year of their undergraduate Business degree. They are also referred to as <i>transition students</i> , which describes their entry into university from previous study.
Study/learn	In an academic context, ‘to learn’ and ‘to study’ are considered to be partner activities, although not exactly synonymous. It is possible to learn without studying, and learning is not always a conscious or deliberate process. It is equally possible to study without successfully learning (Brown, 2000, p. 275).
Subject	<i>Subject</i> is a term synonymous with ‘unit’ and is used here to refer to <i>Business Communication</i> , a core semester-long undergraduate subject in the B. Business course.
Surface learning	<i>Surface learning</i> has its focus on surface characteristics of the subject, with the intention of completing task requirements. It is characterised by a lack of understanding of the principles and broader concepts, and a focus on unrelated parts of the task.

Term	Definition
Threshold concept	<p>A <i>Threshold concept</i> is defined as akin to a gateway or portal in certain disciplines that leads to a previously inaccessible, or perhaps troublesome, ways of thinking about something. A threshold concept comprises parallel ways of thinking and practising in a subject (Meyer and Land, 2003).</p> <p>In this study, the term is taken to mean the approach to learning or perceptions of the subject held by students at entry, such as threshold concepts relating to the learning context. These include the knowledge, understandings and ways of perceiving key ideas about the subject which students express in written transcripts.</p>
Troublesome threshold concepts	<p>Troublesome threshold concepts are concepts about learning or the subject which may be problematic for students, preventing them from making transitional learning in their first year at university. In this context, the term also includes understanding what is required for successful university learning.</p>
Withdrawal	<p>This term normally refers to the act of leaving university before graduating. In this study <i>withdrawal</i> applies to students who do not complete their first year, including those who may not have formally withdrawn from the course. The term is used interchangeably as it is in the literature with non-completion, non-continuance, non-persistence and departure.</p>

## **APPENDIX B**

### **CATEGORIES OF DESCRIPTION FOR APPROACH TO LEARNING**

This appendix lists the sub-categories of description for deep, emergent and surface approaches to learning. A definition and some discussion are provided of each sub-category and some representative student comments are included. Categories of description for Approach to Learning are discussed in Chapter 4.

It is important to note that the description of the sub-category of description in the second column below reflects a range of meanings within that categorization. Students need only exhibit one aspect of the definition. These definitions represent the key aspects of the collective experience of students' responses in that sub-category (Akerlind, Bowden & Green, 2000). A single sub-category does not equate with the Approach to learning of one individual, rather it encapsulates the similarities of a particular group of individuals. The Sub-categories were used to classify a commonality of meaning rather than the multiplicity of detail in students' responses. The selected quotations provided in the third column are for the purposes of illustration of some aspects of the particular Sub-category of students' Approaches to learning.

<b>DEEP Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>A. Displays elements which contribute to overall success and motivation.</b>	<p>Students in this sub-category are aware of how they need to approach their learning to be successful They view their learning in a wider perspective, allowing them to see where their learning in this subject will take them.</p> <p>Students employ metacognitive skills to know, perceive or conceive what they have to do to understand what is taught. They approach learning in a well organised and structured manner with the intention of understanding what is being taught.</p> <p>These are learners who are highly motivated to succeed and achieve a good grade. They display self-directed learning traits and have well-developed learning habits.</p>	<p><i>Bus. Com. [sic] will help me in my career path. I need to understand the concepts and importance of the subject;</i></p> <p><i>As well as the logical elements such as attending lectures and studying, an interest in business, especially communication would be important;</i></p> <p><i>Average level of skills in numeracy and literacy would be a minimum and an enterprising spirit is essential;</i></p> <p><i>Make sure of informed opinions relating to the subject, discuss points of interest and relevance in appropriate groups;</i></p> <p><i>I'm very focussed and I'll use my time efficiently. I'll also use all the resources which are available to help me understand the meaning of the content;</i></p> <p><i>Make sure that I attend all lectures and tutes [sic] because I don't want to miss out on the important material.</i></p>
<b>B. Shows a clear intention to integrate what is learnt.</b>	<p>Students understand that in order to learn what is being taught they need to integrate it with their previous knowledge. This is a 'Constitutionist' approach to learning in which knowledge is built upon from prior learning.</p>	<p><i>Find ways to integrate my [learnt] knowledge into my work;</i></p> <p><i>Use the knowledge taught during lectures and the information discussed during tutes. [sic];</i></p> <p><i>Using the skills of communication in the business world, but also being able to communicate better in all my subjects at uni. [sic].</i></p>

<b>DEEP Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>C. Organizes and structures content into a coherent whole and views the larger concepts rather than the smaller, discrete issues and tasks.</b>	Students are well organized and search for structure and cohesiveness in how they approach learning the subject. Students see the big picture concepts and organise these into a coherent whole in order to learn, but they establish connections between larger and smaller concepts to derive meaning when necessary. They have a clear understanding of the skills and knowledge needed to learn the subject in its totality.	<i>See the bigger picture and where all the lectures are leading to; [I] Try to link each lecture with the next or at least link the material in tutorials with lectures so I get to understand the total picture of what Bus.Com is about.</i>
<b>D. Shows well developed learning strategies.</b>	One of the main attributes of deep learners is that they: use well-developed learning strategies such as pre-reading, summarising, revising, locating examples to illustrate points, researching, finding links, and seeking assistance. They appreciate the need for different learning strategies.	<i>Download lecture notes and read these before the lectures; Revise the previous week's notes and if there's any areas which are not clear, make sure to ask the lecturer to explain these in class; I find it easy to find real examples to illustrate new concepts.</i>
<b>E. Relates theoretical ideas to everyday experiences, investigates and solves authentic real life problems.</b>	Students acknowledge the importance of theoretical concepts to learning the subject, and how it is related to practice. Students understand underlying subject theories and how these can be applied. They not only want to apply what has been taught, but also search for opportunities to do it.	<i>I need to develop skills to identify which communication theories are appropriate in different business situations; Decide which information and which theories are important, then take it in and find ways to use it; Look for opportunities to apply the theories to real business problems.</i>

<b>DEEP Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>F. Relates knowledge from different sources and new ideas to previous knowledge as an aid to more efficient learning</b>	<p>Students appreciate that prior learning contributes to current understandings and more efficient learning. They reflect in a thoughtful way on what aspects of prior experience contribute to learning the subject.</p> <p>Students understand the importance of sourcing knowledge from a wider scope than textbooks, lectures and LearnJCU.</p>	<p><i>Stay current with information by reading newspapers and searching for new places for information, especially in areas that are challenging;</i></p> <p><i>Explore other resources for relevant information;</i></p> <p><i>Using knowledge that I've gained before with the subject content will help me to progress quicker and learn easier;</i></p> <p><i>To understand material, read texts thoroughly, research additional material using JCU resources, internet [sic].</i></p>
<b>G. Intends to understand and focus on concepts applicable to solving the problem</b>	<p>Students understand that knowledge of theoretical concepts is linked to solutions of business communication problems. They intend to focus on these concepts by further investigating and perceiving trends, and applying concepts in order to solve problems.</p>	<p><i>Keep an eye on current and political economic matters to apply concepts and to help understand [ing];</i></p> <p><i>Investigate how businesses and management effectively communicate in the workforce.</i></p>

<b>EMERGENT Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>H. Shows some intention to understand the nature of learning</b>	<p>Students are interested in acquiring higher level learning attributes such as using research to expand personal knowledge and subject understanding.</p> <p>They are open to obtaining help to clarify difficult issues as they arise.</p> <p>They are motivated to learn new technologies that will make learning easier and improve their understanding of the subject.</p>	<p><i>Analyse text chapters and lectures to see how the information can be used;</i></p> <p><i>[Seek] clarification with difficulties;</i></p> <p><i>Research information on Bus Com[sic] to help broaden my understanding;</i></p> <p><i>Put my knowledge into practice and prove to my lecturer that I have understood and consolidated my learning.</i> This comment illustrates that although the student is developing some higher level learning approaches, there are also residual surface level approaches evident in the need for recognition from the lecturer.</p>
<b>I. Is developing strategies for effective learning.</b>	<p>Students demonstrate that they are interested in developing more higher learning attributes. These include working in study groups, actively participating in groups, reading wider, revising lecture notes and practising skills learnt. At the same time they may still be using some surface learning approaches.</p> <p>They see the need to employ tertiary learning traits in order to make learning easier and improve understanding of the subject.</p>	<p><i>Form a study group to run ideas through [sic] each other;</i></p> <p><i>Be an active participant in group activities and present information in a clear way;</i></p> <p><i>Become better at studying by reading all the material for each week's lecture and making sense of it.</i></p> <p><i>Get my priorities right and manage time properly.</i></p>

<b>EMERGENT Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>J. Attempts to relate theoretical ideas to everyday experience.</b>	Students appreciate the need for theory and also the relationship between theoretical ideas and practice. Rather than confining learning to the classroom they perceive its transferability to other situations and prior learning. They apply and practice knowledge learnt in lectures and tutorials to the workplace.	<i>The course will have some big ideas which I will have to get my head around and understand how they can be used in the real world; Understand the course content and all the models that are in the textbook. They must be there for us to be able to understand and use. Maybe in assignments or workshops or tutes? [sic]; Even the hard stuff in lectures and tutes [sic] will provide the knowledge I need for the job. Theories of business communication will help me understand the content better.</i>
<b>K. Espouses some motivation and positive attitudes towards learning.</b>	Although students show that they have appropriate motivation and attitudes towards their study, they might still use surface and strategic learning approaches owing to paid work commitments and other activities which distract from the central role of learning.	<i>Be enthusiastic, energetic and attentive; I am confident that it will be interesting, useful and insightful; Balance study timetable, time management and good organization. This student also commented if my outside work schedule permits, which illustrates residual surface learning traits present.</i>
<b>L. Is developing awareness of the need to take responsibility for own learning outcomes.</b>	Students are more serious about their study and outcomes, and show greater responsibility towards their learning than students with surface approaches might be. Taking personal responsibility for learning is a hallmark of deep learning. They eschew commitment to learning and demonstrate goal-centered behaviour.	<i>[I] Need to be more disciplined. There's no teacher to make you do it; It's my responsibility to work and for getting the job done; Be prepared to put in the extra mile.</i>

<b>EMERGENT Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>M. Demonstrates awareness of the skills and knowledge needed to be developed.</b>	<p>Students have a variety of notions about the skills and knowledge they need to develop to achieve the desired learning outcomes. This is an obvious area of difference between emergent and surface learning. Students' comments show an ability to reflect upon and evaluate their own learning, or their own learning deficiencies.</p>	<p><i>I know I'll have to sharpen some of my study skills and step up to the mark; Read the textbooks and ask questions to grasp a better understanding of the material; Contribute to all discussions (although I'm not confident at this); Some hands-on experience would help me to relate to the subject more.</i></p>
<b>N. Identifies skills needed to solve a problem.</b>	<p>Students have acquired the skills of analysis needed to recognise and diagnose the causes of a problem, such as communication breakdown in the workplace, and to also address the issue. Students identify the skills needed to solve problems in several communication contexts. However, blaming others for their own lack of progress, which is a surface learning trait, still occasionally occurs.</p>	<p><i>Some work problems will be interpersonal and we should learn how to learn these; I have to learn to give and take in how to listen to others including communicating in the business situation; Communication problems happen when staff don't know how to relate to the customers.</i></p>

<b>SURFACE Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>O. Aims to gather information which is sufficient to pass assessment requirements.</b>	Surface learners typically aim to cover the minimum amount of work in the shortest time to enable them to obtain a pass grade. They may not have time to delve deeper into learning the subject, or be sufficiently interested to appreciate the benefits of developing its skills and knowledge.	<i>Pass the exams and hand in the assignments; [I] Use lecture notes from my friends; Preparing for tutorials and doing the assignments means showing the lecturer some paperwork; It's compulsory and I need to pass it.</i>
<b>P. Focuses on task requirements and hence process activities.</b>	Students employ a strategic surface approach to their learning from the viewpoint of completing baseline learning requirements and assessment tasks. Students show very little evidence that they intend to extend their enquiry, or engage in higher learning activities such as relating what they learn to practice or to other learning.	<i>Revise notes, look at exam papers; Turn up at all lectures, tutorials, workshops and exams. Ten hours of study; Download lecture notes prior to lectures; I only have time to do the very basics for tutorials and assignments.</i>
<b>Q. Fails to see the complete picture or distinguish principles from examples.</b>	Students fail to discern the major underlying concepts and principles of business communication from the examples provided in lectures or in the textbook; They seize upon certain aspects of the example that they consider to be the most important, and neglect the underlying principles that the example is illustrating.	<i>The textbook has a whole section on writing reports. At high school we had to deliver a report to the class. If I can write and present there I should be able to do it at university; The subject has a lot of different topics like speaking and writing. People communicate all the time and it works. Its [sic] common sense really; Stick to the facts and try to remember the details when they give examples.</i>

<b>SURFACE Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>R. Does not reflect on the connection between learning the theory, conceptual understanding and everyday experience.</b>	<p>Students hold a view of learning consisting of talking, writing, using technology and acquiring skills and facts.</p> <p>This approach does not include understanding the concepts and generic principles of the discipline and the way these are connected. It also does not embrace any appreciation of the integration of what is learnt with their everyday experiences and the experience of work.</p> <p>The approach is generally unreflective in respect of making the necessary connections between knowledge, concepts and theory, and their everyday experience and ‘real’ work.</p>	<p><i>Learning the right skills and being tested on them;</i></p> <p><i>It means learning the skills and the facts about communication. I can already do the skills and why do you need theory to communicate?;</i></p> <p>These comments are representative of students who view learning largely in terms of the acquisition of skills and success in passing examinations of ‘facts’ and skills, and who fail to appreciate the ‘carry-over’ potential of such learning to other situations.</p> <p><i>I already know some of the topics from business communication at high school. It will be a matter of adding more topics to those.</i></p>
<b>S. Focuses on non-specific and generic aspects with little intention to understand the whole.</b>	<p>Students are concerned with general aspects of acquiring knowledge and learning the subject, and are not interested in drilling down to specific details to achieve deeper learning. Their elementary understanding of learning does not allow them to perceive how the various parts of the subject fit together and is integrated into a whole.</p>	<p><i>Learn basic principles and factors [sic] in communicating with business;</i></p> <p><i>How to use different forms of communication effectively;</i></p> <p><i>Be interested in what is taught;</i></p> <p><i>Just talk, write and use the computer.</i></p> <p>These comments demonstrate that students perceived learning in a vacuum because they fail to comprehend multiple perspectives of the subject as a whole.</p>

<b>SURFACE Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>T. Uses rote memorization for learning and assessment.</b>	These students employ rote memorisation as one of their common approaches to learning and preparing for assessment - rather than interrogating and interpreting knowledge as a means of understanding. Memorisation is quite common amongst surface learners who view memorisation as an essential element in learning.	<p><i>Get any past papers and memorise the main parts;</i></p> <p><i>Don't try to learn the whole course because that's too much to remember; Just choose the parts you need for the exam or for the assignment.</i></p> <p>These examples demonstrate a very narrow approach to learning captured so aptly with the injunction to 'stick to the facts'. These students use memorisation because they fail to understand the interconnected patterns of knowledge which requires it to be assimilated and applied to other situations.</p>
<b>U. Intends only to reproduce the subject content.</b>	The intention is to reproduce what is delivered in lectures, in the textbook, in lecture notes, on the internet, or what is borrowed from peers. Reproduction is a typical surface learning trait which students view as a 'safe' option, and one which, in their past, has resulted in successful learning outcomes. Their level of confidence as learners, and their prior experience of learning, might not allow them at present to develop deeper learning approaches which question and challenge what is presented.	<p><i>Study hard for exams the night before and concentrate on parts of the content that the teacher tells you;</i></p> <p><i>It'll be easier to listen to what the teacher says in lectures and pick up the things that he points out are important.</i></p> <p><i>You can't learn everything so just go with what the teacher emphasises;</i></p> <p><i>Do what the teacher tells you and don't argue or ask difficult questions. Other students don't like that.</i></p> <p>These comments shows students have little intention to understand at a deeper level, or engage in higher level learning which fosters investigation and the extension of knowledge and conceptual understandings.</p>

<b>SURFACE Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>V. Treats learning as an imposed task.</b>	<p>In this typically surface approach to learning, the students view all their learning and learning tasks as something they are compelled to do. As a result, their approach is one of compliance rather than extension.</p> <p>This approach is made worse when students underestimate the learning requirements or overestimate their own ability to understand what is being taught.</p>	<p><i>This subject leads onto the next part of the business degree and it's compulsory; It won't be hard, just something that I have to pass;</i></p> <p><i>Turn up and complete all assignments, sit the exam, participate in group assignments. Just do what has to be done;</i></p> <p><i>If the subject wasn't core and compulsory I wouldn't be doing it. I'd rather choose other subjects that I'm interested in;</i></p> <p><i>It looks like a big course and I think it might be too much work, but it has to be passed.</i></p>

## APPENDIX C

### CATEGORIES OF DESCRIPTION FOR PERCEPTION OF THE LEARNING CONTEXT

This appendix lists the sub-categories of description for Cohesive and Fragmented perceptions of the learning context. A definition and some discussion is provided of each sub-category and some representative student comments are included. Categories of description for Perception of the Learning Context are discussed in Chapter 4.

It is important to note that the description of the sub-category of description in the second column reflects a range of meanings within that categorization. Students need only exhibit one aspect of the definition. These definitions represent the key aspects of the collective experience of students' responses in that sub-category (Akerlind, Bowden & Green, 2000). A single sub-category does not equate with the perception of the subject of one individual, rather it encapsulates the similarities of a particular group of individuals. The sub-categories are used to classify a commonality of meaning rather than the multiplicity of detail in students' responses. The selected quotations provided in the third column are for the purposes of illustration of some aspects of the particular sub-category of students' perception of *Business Communication*.

<b>COHESIVE Perception of the Context</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>A. Views the subject accurately from a variety of perspectives, foci and/or processes.</b>	<p>Students in this category have a cohesive and holistic view of the subject. They view it from a multiple of perspectives, including identifying and understanding the major intrinsic concepts of the subject. Abstract meaning is understood.</p> <p>Students seek understanding and principles underlying the subject, and offer an explanation which is largely based on their previous experience of business communication.</p> <p>They also actively seek a wider meaning in what is taught, and will independently research items of interest, the totality of the subject and where its learning outcomes are directed.</p>	<p><i>It focuses on relationships between employee/employer, organization, public and customers;</i></p> <p><i>Effective and efficient procedures used for sharing information in a variety of business situations;</i></p> <p><i>Covering cultural, natural and technological approaches to communication;</i></p> <p><i>I'm interested in finding out how the skills and knowledge we learn in this subject can be incorporated into technology because that's the direction that business is going;</i></p>
<b>B. Relates the subject to evaluating the processes of business communication.</b>	<p>Students perceive the subject as providing an opportunity to analyse and evaluate not only their own communication skills, but also those needed in business.</p> <p>Their perception is cohesive because it is more inclusive and complex, allowing for a complete awareness of the breadth of the subject.</p>	<p><i>Its [sic] about how effectively or ineffectively we communicate personally and in a business environment;</i></p> <p><i>Acquiring skills to analyse business communication, patterns, content, motives and goals;</i></p> <p><i>It involves analysing techniques in communication within the business environment to see whether they are working.</i></p>

<b>COHESIVE Perception of the Context</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>C. Views the subject as learning to apply theory to practice.</b>	<p>Theories are seen as logical constructs which can be applied to practice. Students' understand and value the practical nature of the subject, its content and work applications, and the way it teaches the application of theory to practice.</p> <p>They appreciate the way business communication skills can be used for intervention processes in a business. They seek to analyse, evaluate and apply what is learnt to problems in the workplace, and use knowledge and skills to make informed decisions.</p>	<p><i>Learning how to make informed decisions with the extracted information;</i></p> <p><i>Being able to identify problem areas in communication and come up with a possible solution;</i></p> <p><i>This subject will teach me how to use its content in a practical way for my future employment;</i></p> <p><i>How to get the most out of what we want to say and how to revise the information given to us and process it into something we can understand and use.</i></p>
<b>D. Involves a desirable outcome or outcomes.</b>	<p>Students understand and appreciate the positive outcomes of the subject.</p> <p>The subject is seen as accruing benefits, both long and short term, for their future career.</p> <p>The impact of knowledge and skills acquired during the course is considered to have a positive impact not only on the final results, but also benefit their study of other first year subjects.</p>	<p><i>Its[sic] useful because its about understanding how various things in business are communicated: e.g., in accounting it is applied to decision making in business organisations, the different processes involved, the different financial reports needed to present financial information and how to record business transactions to facilitate the flow of information;</i></p> <p><i>The subject will be interesting because I'll end up with a lot of useful new knowledge;</i></p> <p><i>Understanding the concepts, methods, ideas and relationships at various levels in the business world and learning how to apply these.</i></p>

<b>COHESIVE Perception of the Context</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>E. Understands how various elements of the subject relate.</b>	<p>Students appreciate the importance of understanding the meaning of the subject, and take the trouble to find out its aims and content.</p> <p>Students are aware of the subject's logical structure and range of topics covered, and the way in which such content is related.</p> <p>They understand the cohesive nature of the subject and the need to embed a variety of topics in order to learn the subject in adequate breadth.</p>	<p><i>All parts of the content should help me to communication better in the workplace. It covers all the areas. I will need to be a better communicator [sic] spoken, written and interpersonal;</i></p> <p><i>The subject looks pretty interesting. I like the way its [sic] designed to build on various topics. There looks to be a good mix of theoretical rules and the practical;</i></p> <p><i>Communication barriers and the theory about channels of communications will be linked somehow to using skills to solve communication problems.</i></p>
<b>F. Views the subject in relation to learning to use a variety of methods or skills in a real life situation.</b>	<p>These students anticipate the subject consisting of a variety of content, knowledge and skills which present pertinent issues, new ideas and concepts.</p> <p>They expect that such content would provide them with the skills and opportunities to address likely communication problems in their personal and business careers.</p> <p>Students embrace the practical nature of the subject in learning and applying a range of communication skills to business and other contexts.</p>	<p><i>Learning different forms of communication e.g. [sic] oral, written, where each form is most appropriate, effective and acceptable;</i></p> <p><i>Strategies to effectively and efficiently communicate in business, be it our peers, colleagues or clients;</i></p> <p><i>It's about learning to communicate in the business environment using many different tools.</i></p>

<b>FRAGMENTED Perception of the Context</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>G. Views the subject from one perspective or entity only.</b>	<p>There are gaps in students' understanding of basic concepts about the subject because some understandings of key ideas are ill-formed or disparate. As a result, they don't see the subject in its totality.</p> <p>Students focus on one part of the total concept of <i>Business Communication</i>, for example: practising one communication skill such as negotiation; or using one process such as interpersonal communication.</p>	<p><i>The effects, advantages or disadvantages technology has played in current communication systems;</i></p> <p><i>Using tools such as OHTs, handouts and power points to enhance a presentation;</i></p> <p><i>Using Excel spreadsheets to communicate financial information;</i></p> <p><i>Developing interpersonal skills such as listening, speaking and teamwork.</i></p>
<b>H. Understands the subject as a generic entity.</b>	<p>Students hold an incomplete and vague notion about the subject, based on a narrow semantic meaning rather than a broader conceptual meaning of <i>Business Communication</i>.</p> <p>Their perception was fragmented and abstract because it did not relate to the central themes of <i>Business Communication</i>.</p> <p>Students hold a nascent understanding and have only a general notion of what <i>Business Communication</i> comprises. This is largely based on their previous poor experiences of business communication or its study.</p>	<p><i>Business Communication will teach us a lot of knowledge which will be easy to understand;</i></p> <p><i>Communication: how and when can they be used?;</i></p> <p><i>Using the various modes of communication;</i></p> <p><i>There'll be a list of topics to be covered which will tell me what I need to know;</i></p> <p><i>It's about the theory of business communication.</i></p>

<b>FRAGMENTED Perception of the Context</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of student comments or part responses</b>
<b>I. Fails to see any connection between business communication and practical applications.</b>	A common theme is that students do not understand that <i>Business Communication</i> has practical applications, and that skills learnt can be transferred to a business environment. Because students did not link the acquisition of knowledge and skills learned in the subject to reality, narrowness of perception resulted. This prevents students from seeing the utility value of the subject.	<i>It's more important to know how to run a business, keep the right records and make a profit;</i> <i>It'll supply information about communicating in business which you'll need to pass the subject but other than that its [sic] not really a useful subject;</i> <i>I already know how to use a computer to communicate, write, talk to friends, email, and use the internet. What extra can Bus.Com. [sic] offer me?</i>
<b>J. Holds incorrect perceptions and misunderstands the subject.</b>	Students hold uninformed and quite erroneous views of the subject. Some perceive only fragments of its correct nature, or hold no ideas at all. These views reflect students' indeterminate study goals, as well as their confused and often ambiguous ideas about the aims of the subject. Despite its title, a commonly held misperception is that the subject is about how to operate a business, based on the overarching term 'business'. Perceiving the subject to be about communications was also evident.	<i>New changes in the business world;</i> <i>I really have no idea;</i> <i>Basic business operations and procedures;</i> <i>Its [sic] about remembering as much as you can about the content in the subject;</i> <i>Is it about communications?;</i> <i>Being a professional business person and running your own business properly with skills and managerial skills.</i>

## **APPENDIX D**

### **CATEGORIES OF DESCRIPTION FOR CHANGED APPROACH TO LEARNING**

### **CATEGORIES OF DESCRIPTION FOR CHANGED PERCEPTION OF THE LEARNING CONTEXT**

This appendix presents the Categories of description for Changed Approach to Learning and also the Changed Perception of the Learning Context arising from the interviews. Students' responses to the first four interview questions about change learning were analysed into Categories of description for Changed Approach to Learning and Categories of description for Changed Perception of the Learning Context. The findings for Questions 1-4 were discussed in Chapter five. The findings for Questions 5-8, which were not analysed into categories or description, were discussed in Chapter six. A definition and some discussion are provided of each sub-category and some representative student comments are included.

It is important to note that the description of the sub-category of description in the second column reflects a range of meanings within that categorization. Students need only exhibit one aspect of the definition. These definitions represent the key aspects of the collective experience of students' responses in that sub-category (Akerlind, Bowden & Green, 2000). A single sub-category does not equate with the changed Approach to learning or the changed Perception of the subject of one individual, rather it encapsulates the similarities of a particular group of individuals. The sub-categories are used to classify a commonality of meaning rather than the multiplicity of detail in students' responses. The selected quotations provided in the third column are for the purposes of illustration of some aspects of change in the particular sub-category.

Categories of description for Changed Approach to Learning and Changed Perception of the Learning Context are found on the following pages:

Categories for Changed Approach to Learning.....	317
Categories for Changed Perception of the Learning Context.....	325

**CATEGORIES OF DESCRIPTION FOR CHANGED APPROACH TO LEARNING**

<b>CHANGED Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of comments or part responses</b>
<b>A. Major transition occurred in understanding and approach to learning.</b>	<p>Students' acquired a new focus on learning which discerned both the concept and practice of learning in different ways from previously.</p> <p>Students had an improved understanding of learning, and made substantial changes in their approach to learning.</p> <p>Students negotiated new and more appropriate ways of approaching their learning. These were more comprehensive than their previous approaches.</p> <p>They attributed the change to particular factors, evident in the comment:  <i>. . . a completely different way of learning . . . it required more input with technology, and with groups and in tutorials.</i></p> <p>Students reported feeling much more confident about tertiary learning by the end of their first year.</p>	<p><i>To begin with, I found it not as intellectually stimulating as Law, but gradually I found the topics to be quite interesting and I put in a greater effort. It wasn't a difficult topic though; it's just that the way I approached learning was different from what I'd experienced;</i></p> <p><i>I developed a whole lot of new ways of learning;</i></p> <p><i>I didn't know what to expect and felt alienated, but once I caught on and learnt how to study properly, I was confident;</i></p> <p><i>I learnt to put more effort into the parts which were practical; . . . a great difference between high school and university. Different dynamics of interaction. It took me a while to work this out;</i></p> <p><i>I had to change my study approach and learn new skills. By the end of the year I felt confident.</i></p>

<b>CHANGED Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of comments or part responses</b>
<b>B. New approaches to learning developed incrementally.</b>	<p>Students' new approaches to learning developed gradually, and in response to structured learning activities and the acquisition of new strategies and skills.</p> <p>Students understood the benefits of using a variety of available learning resources and skills in different learning contexts to improve their learning approaches.</p>	<p><i>New learning skills included asking and using questions, revising all the time and using JCU Learn every week;</i></p> <p><i>It took me quite a while to pick up new study habits. I got help from the learning advisors and sometimes the teacher talked about the approaches we should be taking to learning the subject;</i></p> <p><i>Using the library and developing library and research skills. At high school I never used the library;</i></p> <p><i>I got into the habit of downloading the notes and reading them and quickly checking what was in the textbook for that lecture;</i></p> <p><i>Tutes were interactive and I learnt they were a good way to clarify issues and revise;</i></p> <p><i>I was an A student at high school and already had good learning skills developed. All I had to do was to build onto these during the semester;</i></p> <p><i>Most of the time I did some of the readings. They were helpful in preparing for the tutes [sic] and the tutor encouraged us by having a group discussion of the reading.</i></p>

<b>CHANGED Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of comments or part responses</b>
<p><b>C. Heightened awareness and understanding of learning, increased ability of students to reflect on learning and their progress as learners occurred.</b></p>	<p>Students developed an interest in their learning, were more aware of their learning progress and interested in monitoring that progress.</p> <p>Their ability to reflect and understand learning also developed over the period.</p> <p>Students' thought their approach to learning improved when they learnt to integrate and apply communication principles and theories - rather than having a mere surface description or using memorisation as they did previously.</p> <p>Students displayed a greater ability for perceiving and experiencing learning situations in different ways from previously.</p>	<p><i>The big lecture situation was very confronting and alienating, but I learnt a lot in the tutorials because they were smaller and more personal, and we tackled issues in a practical way. The tutor really tried to make the language and the terminology and the concepts easy;</i></p> <p><i>As a mature age student I found that I related better to parts of the subject which were more real-life, especially if I had experienced it at work. I learnt better by trying to find connections to real life;</i></p> <p><i>I liked when the teacher provided examples which I understood from my part-time job. That's how I learnt some of the concepts;</i></p> <p><i>Two items of assessment were very practical and I found them easy to understand and do because I could think of examples. It was also useful to use examples to explain barriers and some of the theories;</i></p> <p><i>I can see how the assessment tested what we learnt in the subject. For example we had to write a report in teams which reflects what you can be asked to do at work;</i></p> <p><i>Although I came to university after years of working as an office manager and I'd experienced many of the aspects of Bus. Com. [sic] which were covered, I found I learnt so much more and also developed new ways of learning which I did not expect.</i></p>

<b>CHANGED Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of comments or part responses</b>
<p><b>D.</b>  <b>Greater responsibility taken by students for their own learning; concomitant development of independent learning attributes.</b></p>	<p>Students reflected on the progress they had made in becoming more self-directed and independent learners. This was especially evident in comparisons with their previous approach to learning prior to university.</p> <p>Students described various independent learning attributes which demonstrated improved levels of motivation and interest in learning <i>Business Communication</i>.</p> <p>Comments evinced students' improved willingness to engage in self-directed learning, and take responsibility for achieving better learning outcomes and grades.</p>	<p><i>I found the move from high school difficult because there the teachers pushed you and at university I had to develop self-directed study skills; It's all about preparation – and I'm self-directed and motivated;</i></p> <p><i>The teacher talked a lot about the need to develop self-directed study skills and how to be a successful student. Some of it stuck;</i></p> <p><i>I prepared for all classes, including notes from the web, textbook and questions for tutes;</i></p> <p><i>I formed a study pair;</i></p> <p><i>I found it much more independent and less spoon-fed than at high school;</i></p> <p><i>Assessment standards were a problem to start with until I learnt to clarify these and make an effort to use the rubrics. These were very useful in knowing the standards required by the lecturer;</i></p> <p><i>Group work went well. I had a good team although I had to lead the group and shouldered most of the workload. It was a good experience.</i></p>

<b>CHANGED Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of comments or part responses</b>
<p><b>E. Improved confidence, motivation and opportunities allowed for increased understanding and knowledge about learning.</b></p>	<p>As a result of teaching and learning activities during the course, students were provided with opportunities to change their understanding and knowledge of learning. They reported gaining new and improved ways of learning by the use of LearnJCU, the internet and library research, talking to peers about learning, relating class material to work situations and obtaining assistance from lecturing staff. Students reported that increased confidence and being better organised for study had a positive impact on adoption of improved learning approaches. They acknowledged the connection between being motivated and better organised with having desirable attitudes to developing improved approaches to learning.</p>	<p><i>. . . talking to my peers about learning, relating class material to work situations, and I formed a study group which made me feel more connected and confident;</i></p> <p><i>I'm focussed and disciplined about my study and take every opportunity the university offers to learn new ways of learning. I've done several courses like the use of the internet, LearnJCU, blogging and how to use the library for research;</i></p> <p><i>I always get help from my lecturer, or the tutor or learning advisors and so I understand what it means to be a successful student at university;</i></p> <p><i>I realised I had to be more motivated and organised in order to learn better and get a better pass;</i></p> <p><i>I already learnt critical analysis skills in Law subjects and I was able to use it in this subject. This made me confident but I also had to take on board the different ways that business [faculty] expects students to learn;</i></p> <p><i>I became better organised when I realised that I had to develop a better approach to my study.</i></p>

<b>CHANGED Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of comments or part responses</b>
<p><b>F. Heightened awareness of individual learning approaches and the need to develop these.</b></p>	<p>Students in this category were more aware of the particular learning attributes they needed to develop in order to achieve a successful outcome.</p> <p>They identified various higher learning traits which they found to be successful in their prior experiences of learning. They thought these could be developed further for the purpose of learning <i>Business Communication</i> more effectively.</p> <p>They also identified other desirable learning skills which they had become aware of since beginning university.</p> <p>Students described learning approaches which were more meaningful, and the need to expand their present approach to include delving deeper into topics to gain a better conceptual understanding.</p>	<p><i>On-line discussion boards were a fun way to learn and to comment on what other students said;</i></p> <p><i>. . . mind-mapping skills were new and useful, particularly for concept mapping;</i></p> <p><i>. . . group work and using web resources;</i></p> <p><i>. . . actively participating in tutorials, interaction with others during tutorials, being more strategic with time when studying, constantly revising and taking notes, adding summary notes to lecture notes and Power Point slides and working through textbook examples;</i></p> <p><i>Presentation skills can only be taught by having to do them, which is exactly what we were assessed on;</i></p> <p><i>. . . preparing assignments at a tertiary level and to specific standards and rubrics.</i></p>

<b>CHANGED Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of comments or part responses</b>
<b>G. Beliefs, perceptions and assumptions of learning challenged.</b>	<p>Students had their initial beliefs, perceptions and assumptions about learning at university challenged by teaching and tutorial staff. Students were charged with thinking about how they could approach learning the subject in a better way.</p> <p>Students evoked their prior experiences of learning to constitute present understanding and approaches to learning. If these proved inappropriate, or inadequate, they were led to re-evaluate the basis of their beliefs and assumptions of learning. Students interrogated any inappropriate understandings and assumptions they held, many of which were formed in high school and previous learning experience. This process led to new and improved ways of understanding and conceptualising.</p>	<p><i>Although I never expected it, I did learn some new skills which were handy especially when tackling assignments. I thought that I'd be able to study at uni [sic] the same way as high school;</i></p> <p><i>I expected little effort and good grades as in high school. The transition was difficult;</i></p> <p><i>The lecturer had been telling us that we needed to work out what the main concepts were and to think through how they could be used, but I hadn't really got it. Suddenly I had to learn on two levels, not just learning the facts but getting the underlying message; I needed a challenge because I learnt Bus. Com. [sic] at high school and I thought it was going to be the same and easy. In the second half of semester I realised there was a lot of new material and my attitude had to change.</i></p>

<b>CHANGED Approach to Learning</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of comments or part responses</b>
<p><b>H. Minimal change with residual resistance to employing deeper learning approaches. Interest levels in learning remained low.</b></p>	<p>Students exhibited only a small degree of motivation to achieve any higher than a basic pass level. They were disinterested in acquiring more desirable learning traits. Learning was viewed as a tool to achieve a pass. Despite this, students' approach to learning changed in certain aspects in order to accommodate the required standard, and also to share the more common approaches of their peers.</p> <p>Students were reluctant to assume self-directed learning traits, and did not necessarily appreciate the need to change and engage with the learning process in a deeper way.</p>	<p><i>Because there was no one to push me I learnt to be more resourceful and find material and use the library;</i></p> <p><i>I learnt to use technology much better because we needed it for assignments;</i></p> <p><i>I was smart enough to do it but I just wasn't motivated;</i></p> <p><i>I wasn't interested in the subject to start, but somehow I got through . . . but overall it didn't teach me much that was new;</i></p> <p><i>We were asked to do too much of our own research. The lecturer should have provided that sort of information if she wanted us to use it. I did learn how to do research;</i></p> <p><i>One thing I did learn was about the importance of concepts. They helped me to understand the content and the theories.</i></p>

## CATEGORIES OF DESCRIPTION FOR CHANGED PERCEPTION OF THE LEARNING CONTEXT

CHANGED Perception of Context		
Sub-category of description	Definition	Representative sample of comments or part responses
<p><b>A. Deep understanding and appreciation of the subject developed over the period, showing a high level of change and development.</b></p>	<p>Students' perception and understanding of the subject showed a high level of change and development over the semester.</p> <p>Most students had generally held a very tenuous understanding of the subject at entry. As their knowledge and awareness of the elements of the subject improved, they were more able to appreciate its benefits. They appreciated its content and the way the subject was more inclusive than they had originally perceived. They also appreciated the breadth of communication principles and practices which students thought were both relevant and applicable.</p>	<p><i>My original understanding of Bus. Com. [sic] was accurate and what I expected, but it included a lot of extra material. It dug deeper than I'd imagined;</i></p> <p><i>I carried out research on the subject before I enrolled so I knew what it was about. There were no surprises but it was much wider in scope than I'd thought and more useful;</i></p> <p><i>Bus. Com. [sic] was related to my work and so I found it much more useful than I thought. I enjoyed every part of it;</i></p> <p><i>. . . it even gave you the theory behind it so you could understand the psychology of human communication better.</i></p>

<b>CHANGED Perception of Context</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of comments or part responses</b>
<p><b>B. Holistic understanding of the subject emerged which included the role of theory</b></p>	<p>Students developed a more cohesive and holistic perception of the subject in which its underlying theories provided structure and utility. In phenomenographic terms, students experienced different levels of awareness of the phenomenon (i.e. the subject) which were simultaneously present. This allowed them to discern how parts of the subject were related to each other as well as to the whole subject. Students experienced meaning and structure of the whole, and made sense of the way in which parts mutually constituted each other. They discerned the relationship of theory in constituting meaning of the subject. Students changed their perception of the way in which practice was related to business communication theory, which further enhanced their understanding of the holistic nature of the subject.</p>	<p><i>The subject was like the chapters of the textbook, several big topics which were divided into parts which taught theory, skills and facts;</i></p> <p><i>It reinforced what I already knew but it also provided a background with the theory and the models. At first I thought the theory was unnecessary, but gradually I began to see its purpose;</i></p> <p><i>The subject was meant to prepare you to work in a business environment but it provided a bit of everything. The new thing for me was IT, although the negotiation and conflict resolution was new Bus. Com. [sic] was made up of all these various parts;</i></p> <p><i>The content was very basic like the TAFE course I did, but it was much more detailed and had a wider scope than just business communication at TAFE. It covered spoken, written and human communication. A lot of it related to learning effective interpersonal skills and practising them in a work context;</i></p> <p><i>The course provided ways to improve people skills, which is what is most required in the business world.</i></p>

<b>CHANGED Perception of Context</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of comments or part responses</b>
<b>C. Understanding developed about how the subject relates to practice.</b>	<p>Students changed their perception of the subject to include a more comprehensive understanding of how the role that skills taught in the subject, and their practice, related to the theory of <i>Business Communication</i>.</p> <p>Students' understanding the applicability of theory was a defining moment in their learning <i>Business Communication</i>.</p>	<p><i>The course was very useful for solving real problems in the business workplace;</i></p> <p><i>I hadn't realised how practical the subject was because communicating in your job is all important;</i></p> <p><i>A lot of the activities in class and tutes [sic] were practising the skills of communication;</i></p> <p><i>Even the barriers to communication were useful. We did case studies where we had to apply the theories of communication barriers;</i></p> <p><i>Actually it also taught me how to communicate better in the other subjects. When I think about it there was a lot of useful stuff taught in the subject that I used in other situations;</i></p> <p><i>Now I can identify good communication and bad communication and I have the skills to communicate better;</i></p> <p><i>I found myself trying to apply the principles it taught and to use better forms of communication;</i></p> <p><i>A lot of it related to learning effective interpersonal skills and practising them in a work context;</i></p> <p><i>It was more practical than I thought, particularly team skills, which is what working in a business is all about.</i></p>

<b>CHANGED Perception of Context</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of comments or part responses</b>
<p><b>D. Initial perception broadened and understandings expanded as the subject progressed</b></p>	<p>Students changed their perception of the subject as it progressed during semester, and as they began to see the breadth of content and how it related to other aspects in the course.</p> <p>Students used their prior experience of business communication to develop greater understanding of the tenets of the subject.</p>	<p><i>It delivered genuine knowledge of business communication practices as I expected, but there were underlying concepts that I hadn't understood that applied;</i></p> <p><i>It was more grounded in various parts of practice than I thought and I started to see how parts were related, even the theory;</i></p> <p><i>I never expected a subject like Business Communication to have so much theory . . . the psychology behind communication was a fascinating topic;</i></p> <p><i>It wasn't until we started to work through some of the examples that I began to see what a big topic communication was, how the topics seemed to overlap in some way;</i></p> <p><i>By the end of the semester I understood that even the theory was necessary. The skills were transferable and provided "stepping stones" to other subjects;</i></p> <p><i>It actually had a lot of material in the subject, much more than I expected and in much more depth and I can see now how relevant it all was.</i></p> <p><i>When the subject started I thought it was about the usual forms of communicating like reading, writing and speaking but actually I found that it was a lot more than that, especially the interpersonal skills part.</i></p>

<b>CHANGED Perception of Context</b>		
<b>Sub-category of description</b>	<b>Definition</b>	<b>Representative sample of comments or part responses</b>
<p><b>F.</b>  <b>No firm perception of the subject held at entry but perception developed slowly during the semester.</b></p>	<p>Students entered the course with no clear understanding of what it was about, or thought that it was not necessary to understand because it was compulsory, and knowing about it would make little difference.</p> <p>Students were surprised by what the subject contained, and particularly by its level of difficulty which some had underestimated.</p> <p>Students gained a more realistic understanding of the subject as the semester progressed. Many regretted that it had taken them so long to gain an accurate understanding of the subject because of the impact this had on their progress and results.</p>	<p><i>Once I knew how hard the subject was I knew how much effort I had to put into it. I wasted so much time thinking it was going to be easy and then I had to catch up;</i></p> <p><i>I had no idea what the subject was about when I enrolled. But I didn't think it would require such a high standard. Not only was there a lot in the subject but there were a lot of assignments which were quite complicated. My view of Bus. Com. [sic] changed and it was a real learning curve for me;</i></p> <p><i>My initial thought was that because the subject was compulsory, it didn't matter whether I understood what it was about or not;</i></p> <p><i>How mistaken I was about Bus. Com. [sic] I soon discovered it was much more than reading, writing and speaking. I was surprised at its difficulty.</i></p>

## APPENDIX E

### BICARIATE ANALYSIS OF FACTORS

This appendix shows the statistical analysis and accompanying contingency tables for the bivariate analysis of the relationship between the three factors which were considered to be indicative of how academically prepared students were, as learners, to begin their university studies. These variables were discussed in Chapter three. There are two parts of this appendix: Part (A), Statistical Bivariate Analysis, and Part (B), The Contingency Tables of the six sets of paired variables.

#### Part (A) STATISTICAL BIVARIATE ANALYSIS

Bivariate analysis indicated joint probability of the dependency between the following pairs of variables:

- (1) Skills test results and Grade achieved
- (2) Approach to learning and Grade achieved
- (3) Perception of context and Grade achieved
- (4) Skills test results and Approach to learning
- (5) Skills test results and Perception of context
- (6) Approaches to learning and Perception of context

The Chi<sup>2</sup> statistic was used to establish significance of the relationship in the pairs of variables, and is shown below:

$$\chi^2 = \sum \frac{(fa-fe)^2}{fe}$$

fe            (Where fa = actual frequencies and fe = expected frequencies)

in all of these tests in the 6 tables, and the conventional 5% level of significance is applied (0.05%).

Reject  $H_0$  if  $\chi^2$  calculated test statistic is  $> \chi^2_{\alpha, v}$  (critical from tables) For example, where  $v =$  the degrees of freedom,  $v = (r-1)(c-1)$  where  $r$  is the number of rows and  $c$  is the number of columns. The null hypothesis states that there is no relationship between the two variables. If  $H_a$  is true, then the two variables are independent of one another. Formally, the test is stated as follows:

$H_0$ : The two variables are independent.

$H_i$ : The two variables are dependent.

Each of the pairs of variables is discussed below.

#### (1) Skills test results and Grade Achieved

The Null Hypothesis ( $H_0$ ) is that the variables Skills test results and Grade achieved are independent.

The Alternative Hypothesis ( $H_a$ ) is that these two variables are not independent.

Decision rule:

Reject  $H_0$  if calculation  $\chi^2$  is greater than critical  $\chi^2$  value at 0.05% level of significance and degree of freedom:

with  $(r-1)(c-1)$  (where  $r =$  row and  $c =$  column)

4-1 3-1

3 X 2

=6 (calculated on the table to be 11.0705)

9.94 is not greater than the  $\chi^2$  critical value of 11.0705.

Therefore do not reject  $H_0$  and conclude that the variables Skills test results and Grade achieved are independent. A relationship does not exist between Skills test results and Grade achieved (they are unrelated).

## (2) Approach to Learning and Grade Achieved

The Null Hypothesis ( $H_0$ ) is that the variables Approach to learning and Grade achieved are independent.

The Alternative Hypothesis ( $H_a$ ) is that these two variables are not independent.

Decision rule:

Reject  $H_0$  if  $\chi^2$  calculation is greater than  $\chi^2$  critical value at 0.05% level of The Null Hypothesis ( $H_0$ ) is that the variables Approach to learning and Grade achieved are independent.

The Alternative Hypothesis ( $H_a$ ) is that these two variables are not independent.

Decision rule:

significance and degree of freedom:

$(r-1) (c-1)$

$(3-1) (2-1)$

2X1

=2 (calculated on the table to be 5.99147)

7.05 is greater than the  $\chi^2$  critical value of 5.99147

Therefore reject  $H_0$  and conclude that the variables Approach to learning and Grade achieved are not independent (they are related).

## (3) Perception of Context and Grade Achieved

The Null Hypothesis (Ho) is that the variables Perception of context and Grade achieved are independent.

The Alternative Hypothesis (Ha) is that these two variables are not independent.

Decision rule:

Reject Ho if  $\chi^2$  calculation is greater than  $\chi^2$  critical value at 0.05% level of significance and degree of freedom:

(r-1) (c-1)

(3-1) (2-1)

2X1

=2 (calculated on the table to be 5.99147)

32.73 is greater than the  $\chi^2$  critical value of 5.99147

Therefore reject Ho and conclude that the variables Perception of context and Grade achieved are not independent (they are related).

## (4) Skills test results and Approach to Learning

The Null Hypothesis (Ho) is that the variables Skills test results and Approach to learning are independent.

The Alternative Hypothesis (Ha) is that these two variables are not independent.

Decision rule:

Reject Ho if  $\chi^2$  calculation is greater than  $\chi^2$  critical value at 0.05% level of significance and degree of freedom:

(r-1) (c-1)

(3-1) (2-1)

2X1

=2 (calculated on the table to be 5.99147)

6.94 is greater than the  $\chi^2$  critical value of 5.99147

Therefore reject Ho and conclude that the variables Skills test results and Approach to learning are not independent (they are related).

#### (5) Skills test results and Perception of Context

The Null Hypothesis (Ho) is that the variables Skills test results and Perception of context are independent.

The Alternative Hypothesis (Ha) is that these two variables are not independent.

Decision rule:

Reject Ho if  $\chi^2$  calculation is greater than  $\chi^2$  critical value at 0.05% level of significance and degree of freedom:

(r-1) (c-1)

(3-1) (2-1)

2X1

=2 (calculated on the table to be 5.99147)

2.82 is not greater than the  $\chi^2$  critical value of 5.99147

Therefore do not reject Ho and conclude that the variables Skills test results and Perception of context are independent (they are not related).

#### (6) Approaches to learning and Perception of Context

The Null Hypothesis (Ho) is that the variables Approaches to learning and Perception of context are independent.

The Alternative Hypothesis (Ha) is that these two variables are not independent.

Decision rule:

Reject  $H_0$  if  $\chi^2$  calculation is greater than  $\chi^2$  critical value at 0.05% level of significance and degree of freedom

(r-1) (c-1)

(2-1) (2-1)

1X1

=1 (calculated on the table to be 3.84146)

11.19 is greater than the  $\chi^2$  critical value of 3.84146

Therefore reject  $H_0$  and conclude that the variables Approach to learning and Perception of context are not independent (they are related).

### **Part (B) CONTINGENCY TABLES**

Contingency tables were employed in bivariate analysis to list the frequency of each combination of the values of two variables in (1) to (6) above, to test the dependency of the variables under analysis.

## CONTINGENCY TABLES SHOWING BIVARIATE ANALYSIS

### Sample Data Tables

#### (1) Skills Test Results and Grade Achieved

	Total Sample Size	Fail			Pass		Pass	
		Numeracy	Literacy	IT	Numeracy	Literacy		
<b>HD</b>	2	0.00	0.00	0.00	1.00	1.00	0.00	<b>2.00</b>
<b>D</b>	32	4.00	2.00	2.00	12.00	6.00	6.00	<b>32.00</b>
<b>C</b>	82	12.00	2.00	5.00	40.00	7.00	16.00	<b>82.00</b>
<b>P</b>	125	31.00	8.00	12.00	44.00	12.00	18.00	<b>125.00</b>
<b>N</b>	31	9.00	1.00	3.00	13.00	1.00	4.00	<b>31.00</b>
	<b>272</b>	<b>56.00</b>	<b>13.00</b>	<b>22.00</b>	<b>110.00</b>	<b>27.00</b>	<b>44.00</b>	<b>272.00</b>

### Consolidate to remove values <5 and create new actual values

6	15	13	<b>34</b>
14	45	23	<b>82</b>
39	56	30	<b>125</b>
10	16	5	<b>31</b>
<b>69</b>	<b>132</b>	<b>71</b>	<b>272</b>

### Derivation of Expected values

8.63	16.50	8.88	<b>34.00</b>
20.80	39.79	21.40	<b>82.00</b>
31.71	60.66	32.63	<b>125.00</b>
7.86	15.04	8.09	<b>31.00</b>
<b>69.00</b>	<b>132.00</b>	<b>71.00</b>	<b>272.00</b>

### Actual Value minus Expected Value

-2.63	-1.50	4.13
-6.80	5.21	1.60
7.29	-4.66	-2.63
2.14	0.96	-3.09

### (Actual Value minus Expected Value)<sup>2</sup>

6.89	2.25	17.02
46.26	27.10	2.55
53.15	21.73	6.91
4.56	0.91	9.56

**[(Actual Value minus Expected Value)<sup>2</sup>]/Expected Value**

0.80	0.14	1.92	
2.22	0.68	0.12	
1.68	0.36	0.21	
0.58	0.06	1.18	
<b>5.28</b>	<b>1.24</b>	<b>3.43</b>	<b>9.94</b>

**Summation of values to calculate the Chi\_squared Test Statistic Value**

**9.94**

**(2) Approach to Learning and Grade Achieved**

Surface	Emergent.	Deep	
1	0	1	<b>2.00</b>
22	7	3	<b>32.00</b>
67	13	2	<b>82.00</b>
107	15	3	<b>125.00</b>
28	2	1	<b>31.00</b>
<b>225.00</b>	<b>37.00</b>	<b>10.00</b>	<b>272.00</b>

23	11	<b>34</b>
67	15	<b>82</b>
135	21	<b>156</b>
<b>225</b>	<b>47</b>	<b>272</b>

28.13	5.88	<b>34.00</b>
67.83	14.17	<b>82.00</b>
129.04	26.96	<b>156.00</b>
<b>225.00</b>	<b>47.00</b>	<b>272.00</b>

-5.13	5.13
-0.83	0.83
5.96	-5.96

26.27	26.27
0.69	0.69
35.47	35.47

0.93	4.47	
0.01	0.05	
0.27	1.32	
<b>1.22</b>	<b>5.84</b>	<b>7.05</b>

7.05

### **(3) Perception of Context and Grade Achieved**

Fragment.

Cohesive.

1	1	<b>2.00</b>
14	18	<b>32.00</b>
53	29	<b>82.00</b>
106	19	<b>125.00</b>
29	2	<b>31.00</b>
<b>203.00</b>	<b>69.00</b>	<b>272.00</b>

15	19	<b>34</b>
53	29	<b>82</b>
135	21	<b>156</b>
<b>203</b>	<b>69</b>	<b>272</b>

25.38	8.63	<b>34.00</b>
61.20	20.80	<b>82.00</b>
116.43	39.57	<b>156.00</b>
<b>203.00</b>	<b>69.00</b>	<b>272.00</b>

-10.38	10.38
-8.20	8.20
18.57	-18.57

107.64	107.64
67.22	67.22
344.98	344.98

4.24	12.48	
1.10	3.23	
2.96	8.72	
<b>8.30</b>	<b>24.43</b>	<b>32.73</b>

32.73

**(4) Skills Test Results and Approach to Learning**

	Fail	Fail	Fail	Pass	Pass	Pass	
	Numeracy	Literacy	IT	Numeracy	Literacy	IT	
<b>Surface</b>	51.00	13.00	20.00	83.00	21.00	37.00	<b>225.00</b>
<b>Emergent</b>	2.00	0.00	1.00	24.00	4.00	6.00	<b>37.00</b>
<b>Deep</b>	3.00	0.00	1.00	3.00	2.00	1.00	<b>10.00</b>
	<b>56.00</b>	<b>13.00</b>	<b>22.00</b>	<b>110.00</b>	<b>27.00</b>	<b>44.00</b>	<b>272.00</b>

64	103	58	<b>225</b>
5	29	13	<b>47</b>
<b>69</b>	<b>132</b>	<b>71</b>	<b>272</b>

57.08	109.19	58.73	<b>225.00</b>
11.92	22.81	12.27	<b>47.00</b>
<b>69.00</b>	<b>132.00</b>	<b>71.00</b>	<b>272.00</b>

6.92	-6.19	-0.73
-6.92	6.19	0.73

47.93	38.33	0.54
47.93	38.33	0.54

0.84	0.35	0.01	
4.02	1.68	0.04	
<b>4.86</b>	<b>2.03</b>	<b>0.05</b>	<b>6.94</b>

6.94

**(5) Skills Test Results and Perception of Context**

	Fail	Fail	Fail	Pass	Pass	Pass	
	Numeracy	Literacy	IT	Numeracy	Literacy	IT	
<b>Fragmented</b>	36.00	11.00	21.00	83.00	20.00	32.00	<b>203.00</b>
<b>Cohesive</b>	20.00	2.00	1.00	27.00	7.00	12.00	<b>69.00</b>
	<b>56.00</b>	<b>13.00</b>	<b>22.00</b>	<b>110.00</b>	<b>27.00</b>	<b>44.00</b>	<b>272.00</b>

47	104	52	<b>203</b>
22	28	19	<b>69</b>
<b>69</b>	<b>132</b>	<b>71</b>	<b>272</b>

51.50	98.51	52.99	<b>203.00</b>
17.50	33.49	18.01	<b>69.00</b>
<b>69.00</b>	<b>132.00</b>	<b>71.00</b>	<b>272.00</b>

-4.50	5.49	-0.99
4.50	-5.49	0.99

20.22	30.09	0.98
20.22	30.09	0.98

0.39	0.31	0.02	
1.16	0.90	0.05	
<b>1.55</b>	<b>1.20</b>	<b>0.07</b>	<b>2.82</b>

2.82

**(6) Approaches to Learning and Perception of Context**

	Surface	Emergent	Deep	
<b>Fragmented</b>	177.00	20.00	6.00	<b>203.00</b>
<b>Cohesive</b>	48.00	17.00	4.00	<b>69.00</b>
	<b>225.00</b>	<b>37.00</b>	<b>10.00</b>	<b>272.00</b>

177	26	<b>203</b>
48	21	<b>69</b>
<b>225</b>	<b>47</b>	<b>272</b>

167.92	35.08	<b>203.00</b>
57.08	11.92	<b>69.00</b>
<b>225.00</b>	<b>47.00</b>	<b>272.00</b>

9.08	-9.08
-9.08	9.08

82.40	82.40
82.40	82.40

0.49	2.35	
1.44	6.91	
<b>1.93</b>	<b>9.26</b>	<b>11.19</b>
		<b>11.19</b>