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Thoughts and feelings of a beginning tertiary group of adult learners in a human resource development course

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ABSTRACT

This is a study of a case of adults entering tertiary study for the first time, and their mental life concerning their own self-performance, constructed across four instances. The purposes of the study were to identify some characteristics of the four participants' covert behaviour during their learning in a course on Human Resource Development (HRD), to gain some insight into the conception of self-performance held by the participants and the attributions of this self-performance, to examine the approaches to learning held by each participant, and to contribute to closing the gap between adult education and educational psychology.

Three consecutive three-hour learning sessions were videotaped for use with follow-up stimulated recall interviews. Four adult learners reported their interactive thoughts and feelings pertaining to self-performance in HRD. Transcripts of each of the participant's reported thoughts and feelings were prepared. Pre-performance interviews were carried out and the Attribution Style Questionnaire, which reports a person's explanatory style, and the Study Process Questionnaire, which reports a person's approach to learning, were administered. Self-report journals and field notes were also utilised.

Data on participant covert behaviour were gathered and categorised according to an adaptation of an established content analysis system. Participant interactive thoughts and feelings were categorised, quantified and described. Other student covert behaviour, including causal explanations of behaviour, was analysed by qualitative means.

Thoughts and feelings about self-performance ranked highly for all participants. While such thoughts and feelings were a mixture of positive and negative, quantifiably, positive thoughts and feelings did dominate. As well, thoughts and feelings about fellow students and learning the content also ranked highly amongst the myriad of thoughts and feelings reported by the participants. Qualitatively, common thoughts and feelings reported by the participants concerned group work, beliefs about learning, self-performance and perceptions of the facilitator. Underlying covert behaviour was found to be quite individualistic with a desire for content relevance to the world of work to be

one common thread. As well, all four participants reported external pressures to be an important underlying influence on performance.

Post hoc, the study proposed a tentative theory that adult learners attending a tertiary course for the first time undergo two phases of cognitive and affective change during their early time in a substantial learning experience. The first phase was termed an apprehension phase wherein there is a myriad of thoughts and feelings about possible personal inadequacy. As the student gains more exposure to the learning experience, and develops a certain amount of competency, a realisation phase emerges in which confidence grows and learning accelerates. This two-phase process was compared with two other pieces of research that deal with a similar phenomenon suggesting an idea for future research.

Implications for facilitators of adult learning as a result of the findings were also presented.

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Date: 13 Dec 2000

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CHAPTER 1

Introduction and Statement of the Problem

Introduction

Research in adult learning appears to be on the threshold of change. While there has been recent concentration upon improving the effectiveness of the adult learner as being a self-directed learner or a transformative learner, and on the role of the facilitator in these learning processes, understanding of the mental life of adult learners appears to be a new focus of research. Currently, adult educators act as coaches and facilitators of learning, but this researcher believes there is little concern for, and knowledge of, what goes on inside adult learners' heads, or indeed concern for the individual differences in adult learners. Many facilitators of adult learning are quite skilled in applying the principles of adult learning and understand what is special about adult learners. For example, adults have a good deal of experience to draw upon, set habits and strongly established tastes, are proud of their independence, have many preoccupations, firmly entrenched attitudes, a specific purpose for learning, and are more strongly motivated by internal pressures rather than external rewards (Malouf, 1994). The skilful facilitator will take these aspects into account when designing learning experiences for the adult learner. These aspects are useful generalisations but they tell us little about what an adult learner might think and feel during an adult learning experience.

During learning, thinking and feeling may well be inseparable from each other and from the social context in which the learning activity takes place (Wlodkowski, 1999). An individual may have their own thoughts and feelings, their personal identity, but these may well be the product of a socially constructed being. This concept of living and learning as a socially constructed being with an individual identity is central to socio-constructivism. Socio-constructivism is a growing theoretical force in understanding ways to improve learning in formal settings (Hickey, 1997). Central to this view is that people learn by interacting with others and objects in their world. In accepting this assertion it is useful to discover what thoughts and feelings are reported by adult learners during learning. Perhaps an understanding of these thoughts and feelings may guide better practice for facilitators who are charged with supporting adult learning.

Adult Motivation

Fitting with the socio-constructivist view, one way of understanding a fundamental aspect of the mental life of the adult learner is motivation – why do learners behave as they do? Given Wlodkowski's (1999) warning that as a discipline motivation is a "teeming ocean" (p.67), adult motivation may be examined from a number of useful viewpoints. One such viewpoint concerns the stages of adult development. Essentially, adult development is all about differentiating the adult learner from the child learner, and once the adult learner has been defined how does this definition act as a motivator for learning? According to one study (Aslanian and Brickell, 1980), wanting to cope with the adult demands of family and career transitions is a major motivator for learning. The need to give the adult learner an identity that is different from the child learner has been the implicit focus of a number of writers (for example, Maslow (1968), Loevinger (1976) and Levinson (1978, 1996). To understand the identity of the adult is to understand what motivates them. Indeed, according to Knowles, Swanson and Holton (1998) adult learning is inextricably intertwined with adult development. When studying adult learners it is therefore imperative that their identity, or stage of development, be understood. One way to ascertain this is to ask them directly about their perception of their identity and stage of development, and to confirm this indirectly through their reported comments.

Adult Attributions

Another useful viewpoint from which adult learner motivation may be examined is through attribution theory, which is socio-constructivist in origin. Weiner (1974) suggested that people's attributions influence their expectancy for performance, emotional reactions, task choices and persistence. Common causal attributions are self-perceptions of ability, the amount of effort required to complete a task, the difficulty of the task, and luck. Each of these attributions, depending on whether viewed positively or negatively, may affect future performance. For example, a person who thought high achievement on a task occurred as a result of luck may not expect to succeed next time. Alternatively, a person who perceived success to be a result of their ability is more likely to expect success next time. Seligman (1992) determined that a positive explanatory style for events that happened to a person meant that person was optimistic

and therefore more likely to be happier and more successful in their life's pursuits. On the other hand, a negative explanatory style indicates a pessimistic viewpoint that might lead to depression and ultimately to learned helplessness, and perhaps even suicide. With regard to adult learning motivation, it is useful to be aware of whether the learners are optimistic or pessimistic.

According to Biggs and Moore (1993), attribution theory is a metacognitive theory in that it may explain how people view the reasons for their academic successes and failures. Biggs and Moore indicate three approaches to learning: a surface approach, which is adopted by students who just want to rote learn in order to achieve a task; a deep approach, which is adopted by students who want to seek meaning and understanding; and an achievement approach for students who may use a deep approach more as a means to achieving high grades rather than for deeper comprehension. Other studies (for example, Boulton-Lewis, 1994; Richardson, 1994; Fuller, 1999) have shown a mixed result when examining the approaches to learning adopted by adults. Some adult learners have been distinctly surface oriented (Boulton-Lewis, 1994) and others deep oriented (Richardson, 1994). Fuller (1999), for instance, found a group of mature adults undertaking a tertiary Training and Development course to be distinctly deep learners when compared with another group of younger students at the same institution. In regards to adult motivation to learn it would appear important to ascertain whether a person's approach to learning was surface, deep or achievement oriented.

Adult Thoughts and Feelings about Self-Performance

The investigation of the mental life, that is in this study, the thoughts and feelings of the adult learner concerning their self-performance, promises a richness of data because such an investigation may examine the identity, or life phase, of the adult and how that might motivate them. These thoughts and feelings, once revealed, may in turn contribute to an understanding of adult learning theory. Merriam and Caffarella (1999), working within a socio-constructivist philosophy, have provided a useful framework for examining the adult learner. The adult learner may be examined in terms of the individual learner (essentially from the point of view of adult development phases referred to above), the context of learning (essentially, the interaction of the individual with their context from the point of view of social, econnomic and cultural role), and

the learning process (essentially age- and health-related factors that differentiate adult learning from childhood learning). While Merriam and Caffarella (Caffarella and Merriam,1999) later collapsed the three frames into two – an awareness of individual learners and how they learn, and an understanding of how the context shapes learners – either structure is useful in determining a definitive adult learning theory. Again, an investigation into the mental life of adult learners may well contribute further understanding to either or both of these frameworks.

The mental life of adult learners is not a well researched field. There has been plenty of research activity into childrens' cognitive processing (for example, Muth, 1993; Artzt and Armour, 1996), teachers' cognitive processing (Fang, 1996) and adults in non-tertiary learning situations (Leithwood, 1993), but little has been done with adult learners in a tertiary setting particularly when that setting involves the theory and practice of Training and Development as content. Perhaps one of the most promising investigations into adult learner thoughts and beliefs is the work of Kasworm (1999). Kasworm examined the belief structures of groups of undergraduate mature-aged learners via case study interviews. She identified five differing belief structures for learning action that she called "voices". The *entry voice* reflected a belief that the new collegiate classroom was confusing. The *outside voice* was reflected in beliefs and actions that anchored students within the "real world". The *critical voice* indicated a private cynical stance. The *straddling voice* valued both academic and real world knowledge, while the *inclusion voice* indicated an immersion into the academic world and academic knowledge. It is important therefore that another group of undergraduate, mature age students, who differ in time and place from Kasworm's (1999) group, be examined in order to determine the validity of these categories.

Need for the Study

Because we do not know this mental life, and we need to know more about motivation, conceptions of learning and attributions of adult learners, there is a need for a closer analysis of the thoughts and feelings reported by a group of adults in a tertiary setting in which the content concerns the theory and practice of Training and Development (or as it is internationally known, Human Resource Development). From the individual adult's perspective (hereafter referred to as the "participant"), a number

of issues and questions pertinent to this analysis require resolution if we are to find out about this mental life concerning self-performance. Does the participant enter the new learning situation with thoughts and feelings related to their expected performance? If so, what is the nature of these thoughts and feelings? To what can the participant attribute their formation? Do they affect performance in the new learning situation? Do these thoughts and feelings give some guidance to belief patterns about learning and attitudes to tertiary study? Answers to these questions surrounding the adult learner entering tertiary study later in life, and for the first time, may perhaps best be answered through a quantitative and qualitative approach. Instruments that measure an individual's degree of optimism and pessimism may indicate attributes as to how they view the academic world and their anticipated success in it. Instruments that measure an individual's predominant approach to learning may indicate how they will actually go about their learning in this new setting. Interviews in a naturalistic setting and self-report journals may reveal those thoughts and feelings about previous experience, current context, expectations of performance and utility of the academic knowledge to the "real world". When aggregated, data from these instruments will give a rich picture of the mental life of adult learners with regard to their self-performance. To date, few studies of this micro-analytic nature have been undertaken in a naturalistic setting of a tertiary classroom to investigate the thoughts and feelings participants experience while learning. There is a real need for a detailed study employing a cluster of quantitative and qualitative techniques that will facilitate further understanding of the adult learner. Such understanding may well be of assistance to the adult educator who, though presumably skilled in facilitating adult learning, may have little idea of the mental life of their learners.

Considering all of the above, there is a need to underpin the examination of the mental life of the adult learner with a theoretical framework that lends a structure to the variety of conceptions to be studied. Such a framework is detailed at the end of Chapter 2. Suffice to say here that framework connects adult learner covert behaviour, that is, adult thought processes, attributions and approaches to learning, with adult development, motivation and adult learning theory. Together, these conceptions contribute to an understanding of adult educational psychology.

Purposes of the Study

This study was designed with four major purposes in mind. The first purpose of the study was to describe richly the characteristics of each of the participants in terms of their idiosyncratic background and experience, the current context in which they live and work, possible motivations for undertaking tertiary study, what their expectations were and some reasons why these expectations were held. Information gained from this first purpose was to describe fully the context of the adult learner in terms of internal and external factors.

The second purpose of the study was to investigate some of the covert behaviours of the participants, particularly some of their intrapersonal thoughts of an achievement-related nature, during and after a learning session. More specifically, this purpose was to examine individual participants' thoughts and feelings about their performance, about the nature of learning tasks, and about other people involved in the learning situation. In the course of interacting in learning sessions a participant develops their own ideas, views and beliefs about self-performance that can be represented as their conception of self-performance. This conception of self-performance may be regarded as an evolving personal system of interrelated ideas, beliefs, views, emotions, and lines of reasoning concerning self-performance that can direct and control their achievement-related behaviour in the classroom.

The third purpose was to examine the approaches to learning that each participant reported prior to learning and whether these reported approaches were congruent with their reported thoughts and feelings. Specifically, did their reported approaches to learning relate to their motivation and achievement?

The final purpose of the study was to present the findings, and to consider their implications, so as to facilitate further research through examination and comparison with the evidence available from published studies and with studies not yet undertaken. The explanations of, first, the processes of self-attribution of performance as they related to participant motivation and the kinds of ideas and beliefs that participants held as a result of undertaking tertiary learning and, second, the conceptions of approaches to

learning and their relationship to motivation and achievement may well be the richer for the evidence obtained in this study.

Research Problems

In this study four general questions were investigated:

- What are the characteristics of adult learners entering a tertiary setting?
- What are the characteristics of participants' covert behaviour during a learning session?
- What are the conceptions of self-performance that adult learners appear to hold in a tertiary learning situation?
- What are the conceptions of approaches to learning that adult learners appear to hold and then develop in a tertiary learning situation?

Significance of the Study

The covert behaviour of adult learners is always hidden from the facilitator of adult learning interventions. Adults, generally, so this researcher believes, will behave in learning sessions according to how they perceive adults are meant to behave. That is, they appear to be listening to the facilitator and to fellow participants – they appear to be always on-task. They will rarely acknowledge that they do not understand a concept but they might from time to time challenge that concept. If they are bored they will often sit politely because their maturity tells them that even unpleasant experiences will come to an end soon. However, what thoughts and feelings are streaming through their minds is not often reflected in their overt behaviour. Such thoughts and feelings may well be assisting or impeding their learning, particularly those that relate to their own self-performance and their own self-concept. Reported thoughts and feelings related to learning are therefore of extreme interest to facilitators who wish to understand better the people for whom they are arranging learning interventions.

This study was of an exploratory nature. The reported findings were not intended to be generalisable except in the heuristic sense. The findings are significant in that they may suggest what others might look for in future research. The conception

of self-performance is but one domain of inquiry emerging amidst the complexities of adults' mental lives in a tertiary classroom. As these complexities are researched, better theories of adult learning and facilitation should evolve.

The use of stimulated recall methodology to investigate adult cognitive processing and accompanying feelings in a tertiary classroom is significant as there is little in the literature indicating such unique usage. Other studies have examined the mental lives of teachers, school students and other adults but this study opens the door for use of this technique for the committed facilitator of adult learning – that person who wishes to know about the mental lives of their students.

Outline of the Study

This chapter has established the context and direction of the study. The need for the study, major purposes of the study, the research problems and the significance of the study were presented.

Chapter 2 presents a review of the related literature and research pertinent to the study. Literature relating to the development of adult educational psychology, adult development and adult learner motivation is presented first. This section is followed by a discussion of literature dealing with the development of adult learning theories in an effort to describe the progress towards a definitive theory of adult learning. The central notion of adult thought processes is examined next followed by an abbreviated examination of attribution theory and student approaches to learning. A theoretical framework concludes the chapter.

In Chapter 3 the research design is described. The specific research questions, research design, the participants, the learning context, the data gathering methods, the phases in the study, the research methodology, the data sources including the quantitative and qualitative instruments, and the validity and reliability of the research data, are all described.

Chapter 4 describes how the quantitative and qualitative data were analysed and the reliabilty and validity information presented.

The four cases have been presented in no particular order. Chapter 5 contains a full account of the studies of Gail and Sam while Chapter 6 contains a full discussion of Dee and Pat.

Chapter 7 contains a summary and a description of the results.

Chapter 8 is the crux of the study. It examines in detail the identified variables that resulted from the quantitative and qualitative instrumentation.

The final chapter, Chapter 9, contains a summary of the study, some conclusions, possible theory development, implications and recommendations for further research.

CHAPTER 2

Review of Related Literature and Research

Overview

The review of related literature and research that follows is designed to accomplish two main purposes. The first purpose is to place the study contextually within an historical, sociological and, more importantly, a psychological framework. Historically, studies in adult learning have received the most interest during the last twenty years. Therefore, any study in adult learning draws from a limited tradition compared with, say, studies in children's learning. Sociologically, adult learning is examined within the context of the adult existing in an environment of interaction with significant others – fellow students, work colleagues, family and the community. This means that studies of adult learning require an appreciation of the social context of the adult. As important as these frameworks are, this study is embedded in a psychological framework. Psychologically, the concept of adult development contributes to an understanding of adult learning – what defines adulthood from childhood, or what is unique about being an adult in a learning situation. As well, psychology contributes much to the debate about adult learning theory – what is unique about adult learner motivation, adult learning processes and adult learning outcomes. Therefore, the sections below on adult educational psychology, adult development, adult learner motivation and adult learning theory focus upon this first purpose.

The second purpose of this review is to present the theory and research directly relevant to this study. The sections on adult thought processes, attributions and approaches to learning focus on the theoretical approaches and research evidence relevant to the phenomena examined in the current study. The chapter concludes with a conceptual framework designed to:

- act as a summary of the literature;

- give direction to the study; and
- act as a means of interpreting the results.

Literature supporting the design and methodology of the study is contained in Chapter 3, Design and Procedures.

The Development of Adult Educational Psychology

As already indicated the psychological framework is of prime importance here. More particularly, the focus is upon adult educational psychology. Adult educational psychology is an emerging field only receiving relatively recent attention from researchers and theorists. According to Smith and Pourchot (1998), traditional educational psychology has had little effect upon adult learning and there is no "formal association" between adult education and usual educational psychology (p.5). They suggest that adult educators are more concerned with being facilitators and coaches encouraging adult learners to be self-directed, rather than being concerned with what goes on in adult learners' heads. The current study intends to explore that latter concern. That is, the study will focus upon the covert behaviour of adult learners in an effort to give better guidance to adult educators when structuring learning experiences for adults. Indeed, Smith and Pourchot (1998) contend that new approaches to studying adult learning are required because of the complexity of adult lives. Such approaches will comprise the growing field known as adult educational psychology. Adult educational psychology is about:

> The study of learning activities and developmental processes and instructional practices and settings that promote learning and development as they occur across the adult years (p.6).

Athanasou (1999) is also concerned with the lack of association between adult education and educational psychology:

> Adult education and educational psychology are often treated as quite unrelated and separate fields of study…This separation is unnecessary as well as unhelpful because there are obvious links that can be made between these disciplines

especially in areas such as personal development, individual differences as well as the direct applications of psychology to adult learning situations (p. 7).

There is a demonstrated need, therefore, to bridge the gap between adult education and educational psychology. The gap has occurred because the major theoretical and research interest in educational psychology has traditionally been centred upon children's learning. Teacher education programs in tertiary institutions traditionally feature courses in educational psychology pitched, understandably, only to the K-12 school system. Teachers are expected to be aware of the psychology of children's learning. Yet adult educators, who often come from an industrial, commercial or public service background, do not have the same teacher preparation. It is therefore not surprising that many adult educators neither know nor care about the covert lives of adult learners. The current study will go some way towards rectifying that situation.

Following is a review of the important literature concerning three emerging component theories that contribute to the umbrella field of adult educational psychology: adult development, adult learner motivation and adult learning theory. While the three fields are treated discretely, for ease of analysis, they are mutually inclusive when efforts are made to understand the covert behaviour of the adult learner.

Towards a Theory of Adult Development

The first aspect of adult educational psychology to be considered is that of adult development. Adult development is a key area of interest in adult educational psychology and to understand the stage-phase view of adult development is to understand an important motivator of the adult learner. In a study of what motivates adult learners, Aslanian and Brickell (1980) found that coping with career and family life transitions motivated 83% of their sample. They concluded: "To know an adult's life schedule is to know an adult's learning schedule" (p.60). Such a conclusion is profound and has important ramifications for adult education, not the least of which is to indicate guidance for adult educators who arrange learning experiences for adults who are school leavers to those in pre- and post-retirement. To examine this conclusion,

the current study detailed the life schedules of four typical adult learners so that their motivators to learn might be revealed.

Ever since early research into adult development focused on questions such as the adult's capacity to learn and whether intelligence declined with age (Thorndike, Bregman, Tilton and Woodyard, 1928), researchers and theorists have been interested in identifying cognitive and affective stages of development. While much of this interest has been child oriented it has overlapped into the adult domain (for example, Arlin (1975)) with the most frequently cited life span models being those of Maslow (1968), Loevinger (1976), Erikson (1978), Gould (1978) and Levinson (1978 and 1996). Essentially, the literature is concerned with a definition of adulthood and identity, and while some developmental models may be true of child development, the task is to ascertain developmental models that include the adult.

Maslow's (1968) hierarchy of human needs is probably the most cited developmental model and is used extensively today in management development programs. For Maslow, an adult is motivated to satisfy certain needs, and once these needs are satisfied the adult will only be motivated by higher order needs. At the top of this hierarchy of needs is "self actualisation" which occurs once adults have reached a certain level of maturity and are motivated primarily by actualisation of potential. Whether Maslow's hierarchy is solely a developmental model or merely a hierarchy of needs is open to conjecture. Presumably students from any age group can reach self-actualisation, and of course some adults may never reach such a pinnacle. None the less, the model does go some way in explaining why adults are motivated to undertake further learning post-school.

For Loevinger (1976), developmental stages are concerned with separation and conflicts. For example, early in life the pre-social and symbiotic stages are concerned with the differentiation of self from non-self and the consolidation of being a separate person. Later in life, the individualistic stage is concerned with recognising inner conflicts and a heightened sense of individuality that progresses to acceptance of the inevitability of inner conflict and the conflict between needs and duties. At the final stage, the adult reaches that phase similar to self-actualisation in which a form of autonomy is achieved that goes beyond individualism.

Erikson's (1978) view of development is of the individual in a social context. He describes eight "psychosocial stages" that occur as the ego adjusts to meet the changing demands of society. Erikson's adult is concerned with establishing and guiding the next generation until maturity is reached whereby the sense of ego integrity accepts oneself and simultaneously sees one's life in its broader historical contexts. Adults at this stage in life focus on the 'other' rather than 'self'. For example, the mature adult's emerging value is care; that is, being concerned with guiding the next generation rather than being self-absorbed.

Adult development is based upon the adult's ability to separate themselves from what Gould (1978) terms the "false assumptions of childhood". Adult consciousness is developed when adults shed these assumptions. For instance, the path into adulthood is begun when an individual can shed the false assumption that their parents' world will prevail. While on one side the parent's world is a source of comfort it is also restricting upon the development of psychological, and other, independence. For Gould, maturity comes when the self is able to transcend the parents'world – from an "I am theirs" to an "I own myself" concept.

Levinson studied 40 men (1978) and 45 women (1996) to develop a general four stage framework of development. The framework emerged after his diverse focus group of men aged 35 to 45 years revealed remarkably common early experiences. The framework was reasonably confirmed in the later study of females and only after extensive analysis and intuitive understanding of the biographical interviews of his samples. For Levinson adulthood starts at 17 years of age and progresses in stages each covering approximately 25 years. Stages are characterised by a set of tasks and an attempt by the adult to grow their life structure. For example, similar to Erikson's mature adult, Levinson's mature adult seeks to find a better balance between selfish needs and societal needs.

Examinations of the stages of adult development, such as those cited above, are really about the development of identity during adulthood. Identity, according to Athanasou (1999), is the "self's sense of continuity, coherence and meaning" (p. 22) and one must agree with him that adult educators and trainers need to understand this

identity – that uniqueness that separates adulthood from childhood. Perhaps it is this understanding of identity that will provide the links between educational psychology and adult education referred to at the beginning of this section. For example, the concepts of self-directedness and independence in learning, two concepts derived from the work of Houle (1961) and Tough (1979), can be examined from the point of view of both self-directed learning strategies (planning, implementing and evaluating) and learner self direction (ownership of one's thoughts and actions). Learner self-direction is a product of adult life phase development. As well, education and training imply interventions in the lives of adults often by reinforcing and utilising participants' current and previous experiences. Such interventions are more useful if educators are aware where participants fit into lifespan frameworks. Additionally, adult development research is probably responsible for the concept of lifelong learning – that formal learning need not stop at school nor are there necessarily any diminution of cognitive abilities with advancing age. For example, Boulton-Lewis (1997) presents evidence that there is no serious decline in memory until adults are well into their 60's. Granott (1998) indicates that the act of learning itself is a developmental process and occurs in social contexts such as classrooms and work places where adults interact in joint problem solving to co-construct knowledge. Senge (1990), in his study of the learning organisation, would certainly agree with this assertion. Finally, Granott (1998) sees that the promotion of the intellectual, cognitive and social development of adults is a more desirable effort than a focus on what and how much is learned. One wonders though, what the proponents of the outcomes oriented competency-based training effort would say to this assertion.

According to Knowles, Holton and Swanson (1998), a close examination of the adult development literature suggests the following implications for adult learning:

- Adult learning is inextricably intertwined with adult development;
- Adult development occurs along multiple paths and multiple dimensions;
- Adult learning will vary primarily with stages of cognitive development;
- Motivation and readiness to learn will vary primarily according to stage of life-span development; and

- Adult learning facilitators must be attentive to learners' stage of development, and tailor learning experiences to fit that developmental stage (p. 178).

As well as the concept of identity, the adult development literature is about the definition of "adult". Indeed, the current concept is the "new adult learner" defined by Husson (1996) as being approximately 35 years old, working full or part time with their employers paying for tuition, and who are focused, goal-oriented and motivated. They have time constraints and will not tolerate hassles. They are serious and hard working and will apply their learning to their work while juggling multiple roles. At least one research study (Chu, Martinez and Hinton, 1999) has confirmed the existence of the "new adult learner". In this research, the authors examined the demographics of students in a Human Resource Development bachelor degree completion program that was similar to the program in this current study. They found that gender balance, age (22 years to 50 years), years in employment (6 years to 15 years), extent of employer support and the degree of family support for mature-age studies were generally supportive of the literature in defining the concept of the "new adult learner". Interestingly, this current study also confirmed the concept of the new learner. The population from which the target cases was drawn shows an almost equal (51% female, 49% male) gender balance, an age span of 22 years to over 56 years, most in full time employment and most undertaking study for personal development and skills enhancement (Woods, 1998).

Summary of the adult development literature.

This section commenced with the assertion that hitherto educational psychology has had little effect upon adult education. This was because, traditionally, adult educators were more concerned with teaching/learning strategies, such as self-directed learning, than what went on in the minds of the adult learners. As well, perhaps the background and preparation of adult educators has militated against an understanding of educational psychology. The link between educational psychology and adult education may well be found in the adult development literature. For example, the section on development phase models allows us to understand the general nature of the adult learner. Transitions, or change events, in adults' lives affect attitudes and attitudes

affect adult motivation to learn. Such transitions create life experiences and life experiences need to be acknowledged in adult educational situations.

The phase models also probably generated the concept of lifelong learning – that learning is continuous throughout life. Provided cognitive functioning persists, adults will remain in a learning disposition. Indeed, according to the literature, learning itself is developmental so that there are numerous implications from adult development for adult learning. Some of these implications are that adult learning varies according to the stage of cognitive and affective development an individual is in, and that readiness and motivation to learn will be similarly affected.

Adult Learner Motivation

The second aspect of adult educational psychology to be considered is that of adult learner motivation. According to Burns (1998), adult motivation depends on the needs of the individual within a situation. A worker who is demotivated by pulling a lever monotonously as part of an assembly line may well be motivated if that lever were a poker machine that promised immediate monetary rewards. For Burns (1998), motivation is the willingness to exert high levels of effort towards achievable goals. Therefore, motivation is a key to learning. Differentiation in performance amongst people of equal ability and aptitude may well be caused by differentiation in motivation states.

Central to adult motivational theory, and indeed central to this current study, is Wlodowski's (1999) assertion that: "As psychologists, we are aware that to better understand learning may require us to perceive a person's thinking and emotions as inseparable from each other and from the social context in which the activity takes place" (p. 68). Individuals have their own thoughts and feelings guided by personal interests and goals but who live in society. Both ways of being human exist at the same time – a major tenet of socio-constructivism.

Wlodowski maintains that social science theories show at least four motivational conditions that enhance the adult motivation to learn – *inclusion, attitude, meaning* and *competence* (p.69).

Inclusion refers to that state in which the adult learner feels comfortable – comfortable in showing dissension towards a topic of debate, being respected and having connectedness with a learning group. *Inclusion* is all about belonging to a group in which there is shared understanding and support for each other's learning and well-being. *Inclusion* creates a learning environment that, according to Wlodowski, "invites adults to access their experience, to reflect, to engage in dialogue, and to allow their histories to give meaning to a particular academic or professional knowledge – all of which enhance motivation to learn" (p.70).

"An attitude is a combination of concepts, information, and emotions that results in a predisposition to respond favourably or unfavourably toward particular people, groups, ideas, events or objects" (Johnson, 1980 cited by Wlodowski, 1999, p.71). *Attitudes* therefore affect human bevaviour and learning because they allow individuals to make sense of the world, and determine how to deal with the world. *Attitudes* can be personally helpful as in the case of a positive expectancy of success with new learning, or personally harmful, as in the case of a fear of failure. Such positive and negative *attitudes* may well be products of previous experience with learning but this is not to say that those *attitudes* are immutable.

Mezirow (1997) indicates that the *meaning* of individual experience is the defining condition of being human. Making, understanding and changing *meaning* are fundamental aspects of adult development and these occur within the adult's sociocultural context. *Meaning* may be the increase in complexity of an experience or idea, or it may be the ordering of information that gives clarity to a particular concept. Adults may be motivated by a sense of inclusion and have positive attitudes but if the learning is not perceived as meaningful then their involvement will diminish.

In humans there is an innate disposition to be competent in life skills so that they may feel confident about their interaction with the world (Wlodowski, 1999). Adults who are learning are more likely to continue with that learning as they feel a gradual

progress towards some level of *competence*. Such *competence* may be measured against some personal standard or against an external standard such as those laid down by trade licensing authorities. Achievement of *competence* allows a person to become more confident, and this confidence may well motivate the adult to achieve higher levels of competence. Therefore, *competence* and confidence are mutually supportive.

This study is interested in adult learner motivation for two reasons:

- as a means of understanding the thoughts and feelings of the adult learner; and
- once the motivators are understood how may adult educators successfully interact with the adult learner.

Summary of the adult learner motivation literature.

This section included an outline of what constitutes adult motivation to learn. Wlodowski has defined an intuitively valid model for examining adult learner motivation that is not only of interest in itself but provides a useful model for adult instruction. The model will be examined in more detail in Chapter 8. By examining an adult's sense of inclusion, their attitudes, their desire for meaning and competence, Wlodowski has established that adult learner motivation is dependent upon these four conditions.

This current study is interested in examining the adult development issues and adult motivation issues by analysing what goes on in the minds of four adult learners. Do the participants in this study confirm or deny the tenets, for example, outlined in Wlodowski's (1999) model?

Adult Learning – an Emerging Theory

The third aspect of adult educational psychology to be considered is that of adult learning theory. Congruent with the increasing interest in adult developmental stages and adult learner motivation is the interest in the search for a theory of adult learning. In her earlier literature review of adult learning research, Merriam (1993) indicated such interest had been the result of the desire of adult educators to distinguish their

profession from other areas of education, particularly children's education. It seems there is an implicit understanding among adult educators that their focus does have some unique characteristics, so the quest has been launched for a theory of adult learning.

Merriam (1987) asks whether the field of adult education "needs" a theory at all, and if it does, is the task obtainable? She quotes Courtney (1986) who argues that because adult education is "principally a species of moral and social intervention rather than a science it cannot generate theory" (p. 187). Notwithstanding this rather narrow view of adult education, Merriam concludes that such a proclamation does not mean that further research and theory building should not be attempted. Indeed, progression of knowledge and advancement of the discipline will not take place if one accepts Courtney's view.

In their latest interpretive summary of adult education literature and research, Merriam and Caffarella (1999) appear to have moved away from the search for a single theory of adult learning and instead are content to state: "This book is testimony to the fact we know quite a lot about learning in adulthood....In the process of reviewing and reflecting on all of this material, we arrived at our own understanding of learning in adulthood" (p. 387). This understanding serves as a useful model for any examination of adult learning. Essentially, the authors state: "...that learning in adulthood can be distinguished from childhood in terms of the *learner*, the *context*, and to some extent the *learning process*" (p. 389, italics added).

Merriam and Caffarella (1999) indicate that the focus on the individual adult *learner*, grounded primarily in psychology, has been the prime mover of research and practice in adult learning until this past decade. The previous discussion on adult developmental phases is testament to that fact. That discussion indicated a range of developmental models that have potential influence upon the adult as *learner*, particularly in the assertion that adults simply accumulate more experiences as they progress through the stages. Indeed, this recognition - that adult experience is an important determinant that defines the adult *learner* (for example, Knowles, 1980) - has progressed to such a situation that experience is no longer an assumption but a 'given' (Brookfield, 1986). Both developmental issues and life experiences are linked to adult

motivation to participate in learning. There are a number of adult learning theories that acknowledge this link, for example, Knox (1985), Mezirow (1991) and Daloz (1986).

For Merriam and Caffarella (1999) the *context* of the adult learner encompasses two dimensions: the *interactive* and the *structural*.

> The *interactive* dimension acknowledges that learning is a product of the individual interacting with the context. Recent theories of situated cognition, reflective practice, and cognitive development are representative of this interactive dimension. The *structural* dimension includes consideration of factors such as race, class, gender, cultural diversity, and power and oppression (p. 383).

The *interactive* dimension acknowledges that the *context* in which adults find themselves is quite different from the *context* in which children find themselves. For example, adults are independent of, whereas children are dependent upon, a carer. Adults have taken the responsibility of managing their own lives and have taken on many different roles such as worker, partner, and parent. It is these social roles, rather than just chronological age, that differentiate adults from children. Such social roles also cause conflict and can restrict the adult from adopting a full time learner role – a luxury afforded to most children.

The *structural* dimension of the *context* of adult learning acknowledges the wide diversity of any modern society. According to Merriam and Caffarella (1999), race, religion, sexual preference, socioeconomic status and cultural diversity all affect the decisions that adults take when determining whether, and where, they will undertake further learning. Such diversity has also exposed adults to a broad range of views thus enabling them to learn from an expanded knowledge and attitude base.

In their last area of interest, the *learning process*, Merriam and Caffarella (1999) indicate there are fewer differences between adults and children than in the other two areas of the *learner* and their *context*. The differences that do exist are in the process factors of speed (an adult's response rate to learning slows with age) and meaningfulness (adults are unlikely to engage in learning unless it is meaningful).

As already indicated in the section on adult motivation, Wlodowski (1999), asserted that meaning was one of four conditions required to motivate adults. Perhaps, as the developmental literature indicates, because adult learning is closely tied to their life situation adults are not inclined to become involved in learning that is meaningless. While this life situation may act as an extrinsic motivator, for example, a pay increase if learning is successful, in summarising the literature on motivation, MacKeracher (1996) observes that many motives come from within the learner in formal learning situations. This assertion is supported by Newstead, Hoskins, Franklyn-Stokes & Dennis (1997) who, in a comparison of mature and entry-level tertiary students, determined a far higher degree of intrinsic motivation in the former group.

Additionally, adult learning may suffer from age related factors such as health, medication and fatigue. Acquisition of information may become more difficult as the working memory processes information more slowly with age, and coupled with increasing interference from previous learning and the adult environment, the impact of these may be different on adults than children.

Finally, there may well be a case for adult cognitive functioning and development to be different from that of children. Perhaps adult thought is qualitatively different from that of children. For example, Arlin (1975) posits that there may be a post-Piagetian stage of cognitive development in adults called problem finding. Kegan (1994) proposes the highest level of mature adult thinking is concerned with dialectical thinking, that is, the acceptance of inherent contradictions and ambiguities in thought processes. Dialectical thinking may not occur until adults reach their forties or fifties.

As a result of their exhaustive interpretive summary of the research and literature Merriam and Caffarella have probably arrived closer to a definitive concept of what differentiates adult learning from children's learning than any other authors. By examining the way the individual learner, their context and their learning processes differ from children they have constructed a configuration that is a useful tool for understanding adult learning. Indeed, in a later publication (Caffarella and Merriam, 1999) they appear to have collapsed the domains of the learner and the learning process

into just one domain – the individual – while retaining the contextual domain. The authors, in this later study, strongly support an integrative perspective in the further development of research that links these individual and contextual domains. For them an integrative perspective "means conceptualizing learning in adulthood using a combination of two major lens or frames: (1) an awareness of individual learners and how they learn; and (2) and an understanding of how the context shapes learners, instructors, and the learning transaction itself" (p. 4).

In this study, Merriam and Caffarella's configuration guided the theoretical framework upon which the research was based. Details about the individual cases were gathered and examined, extensive description of their learning context was stated, and reported thoughts and feelings as to their learning processes were gathered, coded, researched and related to Merriam and Caffarella's model.

Adult Learning Theories

While Merriam and Caffarella have contributed greatly to our understanding of what differentiates the adult learner from children it is important to examine a number of attempts at delineating an adult learning theory. Such attempts underpin Merriam and Caffarella's configuration of the adult learner. This section includes discussions on andragogy, self-directedness, transformational theory and some of the lesser known adult learning theories.

Andragogy.

Perhaps the seminal work in a desire to differentiate adult learning from children's learning was generated by Knowles (1970). He defined the concept of "andragogy" as "the art and science of helping adults learn" (p 43) and initially tried to forge a distinction between andragogy and pedagogy. In a later position (Knowles, 1980), contrary to this, he indicated that pedagogy and andragogy lay on a continuum from teacher-directed to learner-directed learning. Some researchers (for example, Candy, 1991) prefer to define adult learning in terms of who accompanies the learner in the learning situation. Adults, it is suggested, rely less on another person in the learning process than do children.

In Knowles' last book, which was completed after his death, (Knowles, Holton and Swanson, 1998) there is an acknowledgment that, as a result of significant research, andragogy as a concept has reached the stage of a model for adult learning practice. The model (p.182) considers the goals and purposes of learning (individual growth, institutional growth, societal growth); and, individual, situational and subject matter differences, all of which impact upon the core adult learning principles. These core principles are:

- the learner's need to know;
- self-concept of the learner;
- prior experience of the learner;
- readiness to learn;
- orientation to learning; and
- motivation to learn.

Holton and Swanson (1999) indicate that this "andragogy in practice" model is designed to overcome two widely reported criticisms of Knowles – that his assumptions about adults fit all situations and people, and that emphasis solely upon the learner disregards the learner's relationship to society.

Self-directedness.

Knowles' concept of andragogy assumed that adult learning is characterised by an increasing desire for self-directedness, or what Boud (1981) terms autonomous learning. Self-directedness is about adults being responsible for their own decisions and for their own lives (Burns, 1998). Self-directed learning is thus about adults taking responsibility for determining what they will learn, where they will learn it and when and how the learning will be evaluated.

The emphasis upon adults as independent learners was derived from the work by Houle (1961) and Tough (1979). There have been recent challenges to this concept that individuals want to have control over their learning and that learning increases as a

result (for example, Swanson, Provo, Gamble and Tillson, 1997). In their early interpretive summary of adult learning, Merriam and Caffarella (1991) asked whether self-directed learning is unique to adults, what is the quality of that learning and whether self-directedness is a personality characteristic. The answers to such questions revolve around examination of those variables that determine how people learn on their own - either by design or chance, for example, the learner's own motivation, the circumstances in which they find themselves, and their ability, previous knowledge and experience with the content. In their second interpretive summary, due to the influx of research, Merriam and Caffarella (1999) are able to devote an entire chapter to self-directed learning. They group research into three facets of self-directed learning:

- the *goals* of self-directedness;
- the *process* of self-directedness, and
- self-directedness as a *personal attribute* of the learner.

The authors indicate that the *goals* of self-directedness are based upon the philosophical position of the advocates and can be grouped into three aims:

- to enhance the ability of learners to be self-directed;
- to foster transformational learning, and
- to promote emancipatory learning and social action.

The *process* of self-directedness, in which people take the primary initiative in planning, expediting and evaluating their own learning, is concerned with a variety of linear, interactive and instructional models. With regard to self-directedness being a *personal attribute* the literature is concerned with the assumption that learning in adulthood means becoming more self-directed and autonomous.

As previously mentioned in the discussion on the development of adult educational psychology, self-directedness appears to be a major tenet of adult learning. Smith and Pourchot (1998) warned that adult educators who act as coaches and facilitators of this self-directedness may lose concern about what goes on inside the heads of the adult learner and about individual differences. It was also indicated in that

discussion this study is focused upon what goes inside the heads of adult learners. Smith and Pourchot further suggest this interest in self-directedness is one arena where adult educators and educational psychologists can collaborate.

One researcher interested in what goes on "inside adults' heads" is Schommer (1998) who, over the past 8 years, has researched the epistemological beliefs of adult learners, that is, beliefs about the nature of knowledge and learning. She ascertains that beliefs about the source, organisation and stability of knowledge, and the speed and control of learning, are important research areas. For instance, do these beliefs persist and can they be changed?

Transformational theory.

Along with andragogy and self-directedness the adult learning literature often refers to the transformational theories of Mezirow. Mezirow (1990) delineates adult learning by claiming it is a process of:

> Becoming critically aware of how and why our presumptions have come to constrain the way we perceive, understand, and feel about our world: of reformulating these assumptions to permit a more inclusive, discriminating, permeable and integrative perspective, and of making decisions or otherwise acting upon these new understandings. (p. 14)

Significant transformational learning involves three phases: "critical reflection on one's assumptions, discourse to validate the critically reflective insight, and action" (Mezirow, 1997, p. 60). Mezirow's theory is about how adults interpret their life experiences. For Mezirow learning is the making of meaning. All human beings have a need to understand their experiences and to make sense of what is happening to them. He does acknowledge that learning can result also from the adding of "knowledge to our meaning schemes or learning new meaning schemes" (Mezirow, 1991, p.223).

Lesser known theories.

In addition to the above three major thrusts – andragogy, self-directedness and transformational theory - in distinguishing adult learning from children's learning there have been other attempts at delineating adult learning. Such attempts are important in any examination of the development of an adult learning theory because they illustrate, historically, the seriousness of the efforts to define the whole field of adult learning as having characteristics separate from children's learning. Knox (1980), for example, has suggested that adults are motivated by a discrepancy between current and desired levels of proficiency. Indeed, the concept of training needs analysis, which is the starting point for any training intervention for individuals, groups and organisations, is premised upon the need to fill the gap between current and optimal performance. Whether recognition of this need by individuals is enough to motivate them, as Knox proposes, is problematic. Cross (1981) developed a Characteristics of Adults as Learners (CAL) model that is based upon differences between adults and children and consists of two classes of variables: personal characteristics and situational characteristics. McCLusky's (1970) Theory of Margin was designed to help explain how adults deal with various changes in their lives. Jarvis (1987) has developed a model, based upon empirical evidence, which suggests there are nine possible responses to a life experience.

According to Merriam and Caffarella (1999), these lesser known models of adult learning are perhaps not models of learning at all. Cross's CAL model is concerned with adult characteristics that may be useful in designing instruction but tells educators little about how adults learn. Perhaps McClusky's model belongs more in the domain of adult development than learning though it may (like other life-span models) suggest when learning interventions are optimal. Knox's profiency model is about the gap between current performance and proficient performance that is useful in needs analysis but not for an understanding of what happens next in the training cycle. Jarvis' contribution is significant as he indicates a wide range of learning outcomes, one of which might be that the learner exits the learning experience unchanged, or even harmed – a challenging thought.

While adult educators continue to draw upon the work of educational and developmental psychologists they have also been influenced by writers from other fields, particularly sociology, critical theory and feminist pedagogy. From the sociological perspective Jarvis (1987) indicated that learning can not be isolated from the world in which the learner lives. Adults are influenced by their sociocultural environment for it may affect their opportunity to learn and what they choose to learn. Bonk and Kim (1998) are interested in how life-span developmental processes (social, cognitive and intellective) take place in the context of work, family and the community. For them, different contexts provide different levels of support (for example, the availability of mentors and technology) that can assist or impede adult learning.

Proponents of critical theory aim to uncover the socially oppressive forces that hinder individuals from developing their full potential and what it is that empowers people to change the oppressive forces in their lives. Freire (1970) is the leading advocate in this area. A related area of influence upon adult educators is the interest in feminist scholarship. Advocates suggest that women's learning needs differ from men's and they are interested in how women's learning environments can be especially structured (Hayes, 1989). For example, Caffarella and Olson (1993) noted that women, perhaps more than men, place a higher value on relationships and interdependence, have more uncertainty about balancing their roles (mother, learner, paid worker, for example) and the discontinuity of these competing roles.

Summary of the adult learning theory literature.

This section aimed to situate important literature and research in adult learning theory into an historical and developmental context – the first purpose indicated in the Overview to this chapter. The important driving force behind the literature is the desire to differentiate adult learning from children's learning. Merriam and Caffarella (1999) have probably achieved this differentiation more than any other attempts. Their configuration of the adult as different from the point of view of the learner, the learning context and the learning process is an extremely useful model for both theory building and theory testing. The adult learner can be examined using the field of psychology and the sub-field of adult educational psychology. The adult learner can be examined in the learning, social and economic contexts within which adults operate. The learning

process itself may also be examined in order to discover how the information processing of adults is affected by age, health, medication and perhaps, more significantly, the enormous number and variety of prior experiences.

The adult learning theory literature can be grouped into four domains of interest: andragogy, self-directedness, transformation and the lesser known theories and influences. Andragogy attempts to explain that adults learn differently (and by assumption, need to be 'taught' differently) from children and they will not learn unless there are certain key principles operating. Self-directedness is one of these key principles and has received more emphasis than any of the others. Transformational theory has also received much recent attention and may well be the next major research effort. The lesser known theories and influences are of historical importance but will probably not receive any further research effort.

Taking all of the above into consideration there is not yet a complete theory of adult learning for no single attempt has incorporated the learner, the learning process and the social context. As well, most theories are not unique to adults nor do they take into account all types of learning undertaken by adults. Such an example is informal learning, which is defined by Marsick and Volpe (1999) as "learning that is predominantly unstructured, experiential and non-institutional" (p.4). As well, the theories might need to address learning in formal and everyday situations. Particularly, in terms of this study, there are significant areas of research and theory that have not been applied exclusively to the adult learner, or at least are still being developed in relation to adult learning. These areas, placed under the umbrella of adult learner covert behaviour, are the determination of adult thought processes in the learning situation, application of attribution and other motivational theory to adult learning and assessment of adult's conceptions of learning. The next section considers each of these in turn.

Adult Learner Covert Behaviour

If adult education and educational psychology are to develop the formal association desired by writers such as Smith and Pourchot (1998) and Athanasou (1999), it appears that research into what goes on in the minds of the adult learner, their covert behaviour, is a sound place to start. Such research can marshal a tradition of

investigation into attributional theory and conceptions of learning and, to a much lesser extent, adult learner thought processes. By combining these traditions, and examining in detail the thoughts and feelings of a number of adult participants in a learning situation, then perhaps this research can make a significant contribution towards building the desirable links between adult education and educational psychology.

Adult Learner Thought Processes

There appears little in the literature about the thought processes adult learners undergo during a formal learning situation. One exception is the study by Verloop (1989) who examined the changes in cognition of student teachers while undergoing tertiary study. There is, however, much in the literature about adult cognitive processes in other situations. For example, Carpenter and Just (1992) examined the mental animation techniques and analytic reasoning tasks of applicants applying for positions as firemen and policemen in New York City, and found that there were two processes to distinguish average and superior performance. These processes were the ability to induce abstract relations and the ability to dynamically manage a large set of problem solving goals in working memory. Leithwood (1993) studied the problem-solving processes of effective superintendents during regular meetings with senior administrative staff in a school system. Conclusions were that effective superintendents used a variety of processes for dealing with constraints and interpreting problems.

As well, there is much in the literature about the thought processes of school teachers. However, this research is limited to teachers as presenters of information not as adult learners. Nevertheless, it is useful to consider because the research does examine the thoughts of an adult group. As Fang (1996) indicates, there is a shift in research on school teaching towards a focus on teachers' thinking, beliefs, planning and decision-making processes. According to Clark and Peterson (1986), the process of teaching involves two domains: teachers' thought processes, which go on inside teacher's heads and are unobservable, and teachers' actions which are observable. Teachers' thought processes involve planning, interactive thoughts and decisions and theories and beliefs. Recent research in the field of teachers' thoughts include: examinations of the interactions of preservice teachers and their pupils (Corrigan, 1998); whether teacher cognition differs according to student characteristics and social

environment (Palmer, 1997), and an examination of a secondary teacher's thinking within a natural classroom (Moallem, 1994).

Gaining access to the mental lives of teachers is fraught with difficulty. Research into teaching recognised this need twenty-five years ago when the National Institute of Education (NIE) expressed a commitment for future research to studies that understood the mental lives of teachers. In one report, the NIE (1975) states: "what teachers do is directed in no small measure by what they think. Moreover, it will be necessary for any innovations in the context, practices, and technology of teaching to be mediated through the minds and motives of teachers" (p.1). Winne and Marx (1977) suggest an extension of the research effort to embrace the unobserved and previously undescribed internal events in the teaching-learning environment. "Specifically, we see the mental life of both teachers and students in classrooms as critical items to be studied if we are to understand the process by which teaching influences students' learning" (p. 670). Marliave (1976), Clark and Yinger (1977), Conners (1978) and MacKay and Marland (1978) are examples of researchers who took up NIE's challenge to study the covert behaviour of teachers.

In addition to studies of teachers' thought processes there have been studies of school students' thought processes. An examination of these studies is interesting because there may be important ramifications for adult learners. Intuitively, there may well be many similarities and differences between the mental lives of child learners and adult learners. For example, according to Wittrock (1986), research on children's thought processes:

Studies the effects of teachers and instruction upon the student perceptions, expectations, attentional processes, motivations, attributions, memories, generations, understandings, beliefs, attitudes, learning strategies, and metacognitive processes that mediate achievement (p. 297).

Studies of adult learners' thought processes need to take into account the effects of a wider range of influences than just the facilitator and instruction. One such influence for the adult learner is the possible mediating effect of external pressures like work and family responsibilities. However, research on students' thought processes examines

how instruction influences what students think which, in turn, mediates their learning and achievement. Winne and Marx (1982) found that students' perceptions of instruction and the cognitive processes they used in response to instruction were related to achievement. Winne and Marx (1982) postulate a cognitive mediational model and suggest:

> that teachers do not directly influence product variables such as achievement. Rather, teachers influence students by causing them to think and behave in particular ways during teaching. These mediating events, in turn, may lead to changes in outcome variables. Hence, the effects of teaching on learning may be mediated by students' behaviors and cognitive processing during instruction (p. 493).

Such research has progressed beyond the process-product paradigm that suggests that teachers directly impact upon student behaviour. Instead, the research is suggesting that student's mediate instruction and it is this mediation that influences the product. While this research appears well advanced in children's learning there is little in the literature about similar research with adult learners. It is interesting to note here, though, that Jarvis (1987) postulates there might be three possible social products from an adult learning experience: growth of the individual, the individual may remain unaltered or they might be harmed by the experience.

Such a mediational model has, however, been viewed by Nuthall (1999) as limiting the ways student responses are described and reported. Nuthall found in his study that there was "evidence of a range of different responses that do not look like either specific cognitive or metacognitive strategies" (p.37) that are said to mediate between instructional stimuli and achievement outcomes.

The literature also contains studies of the thought processes of children while learning mathematics. For example, a study by Artzt and Armour (1996) examined the problem-solving and perceptions of seventh grade students as they worked on solving a mathematical problem. Other studies in this area include Macmillan (1990), Shannon and Curtin (1992), King (1993) and Muth (1993). Science too is a major interest for

researchers. Appleton (1996) explored the cognitive responses of students to science lessons incorporating discrepant events. Similar studies include those by Eggin and Main (1990), Nakleh and Krajcik (1991), Jenkins (1995) and Shepardson and Jackson (1997).

Arguably, the definitive research effort since 1990 on students' thought processes has emerged from the work of Nuthall (1999). In his recent study on how elementary students learn he indicated "indirect and partial" evidence for the existence of five distinguishable socio-cognitive activities or processes involved in the acquisition of knowledge and beliefs. Based upon classroom observations, recordings and interviews he suggests the five activities are:

- Acquiring and clarifying information;
- Creating associative links with related knowledge and experience;
- Elaborating and integrating the content of experiences;
- Evaluating the truth and consistency of information; and,
- Metacognitive monitoring of the cognitive processes.

Given this research into school learning, it is important to note here that such research indicates a possible need to replicate that research in adult learning if that learning is to be understood as well as children's learning is being understood.

Interestingly, the above five activities weave through the findings of Kasworm (1999) who examined the belief structures of groups of mature-aged undergraduates. She found that most adult students experienced two levels of action: an "apprenticeship" in the student role followed by the construction of a "learning world". In the apprenticeship role the adult learners "constructed a world of learning by the rituals and routines of the classroom lectures, note taking, papers, examinations and grades" (p.2). Because these students had come from outside the college setting they focused on becoming a good and successful student. As these students moved beyond this level they entered the learning world where they:

made subtle and complex metacognitive decisions about the approach to learning. These adults were active decision-makers regarding what materials should be learned at a surface level approach and what materials and ideas should be learned in an in-depth approach for long-term retention (p2).

As these adult learners came into the collegiate environment deeply embedded in their work practices and activities they articulated a difference between "academic learning" and "real world learning". This dichotomy, and the need to progress from the apprenticeship stage to a learning stage, was underpinned by five belief structures that Kasworm designated as "knowledge voices". Knowledge voices defined the individual's belief structure for making meaning in the classroom and outside it. The "entry voice" reflected the belief that "the collegiate classroom contained learning transactions that were a new and confusing culture of actions, words and evaluative systems" (p3). The "outside voice" brought a strong set of beliefs and actions that anchored them in their adult roles as worker, family and community member. While they perceived the college qualification as necessary they saw the classroom as detached from the "real world". Learners who expressed a "critical voice" were cynical that the classroom could enhance their real world knowledge and college facilitators were incompetent and unknowing. Those students who expressed a "straddling voice" shared beliefs and actions from both the academic and real world. They were able to see connections between academic learning and the adult world of meaning. There were some adult learners who adopted an "inclusion voice" whereby they became so immersed in the academic world they expressed interest in higher studies and even in becoming an academic.

Kasworm's study is important because the findings do suggest new descriptive understandings of the nature of learning involvement and meaning making by adult learners. In this current study the beliefs of the target sample will be examined in the light of Kasworm's, and others', findings.

While Nuthall's (1999) research is about children's thought processes it is interesting to contemplate whether adults experience cognition in a similar way. Intuitively, this may well be the case. However, while much has been researched concerning school children's and school teachers' thought processes there is less in the

literature about the reported thought processes of adults in non-school situations. There is even less in the literature about the thought processes and feelings of mature adults in tertiary learning situations – a gap addressed by this study.

The above studies on thought processes place their focus on the cognitivist perspective of learning. This perspective is concerned with how the mind makes sense out of the stimuli in the environment, or how information is processed. The studies below, on attributions, also focus on this cognitivist perspective.

Attribution Theory

Ever since Heider (1958), attribution theory has been concerned with how people think about the events they experience. The underlying premise is that thought influences action. Weiner (1972, 1974) suggested people's attributions influenced their expectancy for performance, emotional reactions to performance outcomes, task choices and persistence. Common causal attributions are ability, effort, task difficulty and luck. Covington and Beery (1976) extended Weiner's work and incorporated a motivational component in their self-worth theory that assumes " a central part of all classroom achievement is the need for students to protect their sense of worth of personal value " and "perceptions of ability are critical to this self-protective process" (Covington. 1984, p. 5). Seligman (1992), building upon Weiner's work, introduced the concepts of explanatory style, which is " the manner in which you habitually explain to yourself why events happen" (p. 15), and learned helplessness, which is the "quitting response that follows from the belief that whatever you do doesn't matter" (p. 15). He indicates that explanatory style has three dimensions: permanence (whether events are viewed as having permanent or temporary effects); pervasiveness (whether people use universal or specific explanations); and personalisation (whether people blame themselves or others for what affects them). Explanatory style and learned helplessness are inextricably linked. An optimistic explanatory style prevents helplessness while a pessimistic explanatory style exacerbates helplessness.

According to Goetz, Alexander and Ash (1992), attribution theory is "the most influential cognitive theory of motivation at present" (p. 546). While this assertion is arguable it appears, intuitively, that once attributions are made these influence people's

expectancies for future performance, how they feel about that performance and their motivation to persist with learning. People declare how they feel about events that happen to them in either an optimistic or pessimistic explanatory style. Seligman (1992) suggests in formal learning situations optimists try harder in the face of challenge and pessimists develop learned helplessness.

Goleman (1998), building on Seligman's assertions, believes that optimism is a powerful factor in competence studies of top performers in the organisations dependent on selling products and services, while hope – "the near cousin of optimism" (p.128) – is integral to the make up of top performers in the human services.

According to Woolfolk (1993):

> The attribution theory of motivation suggests that the explanations people give for behavior, particularly their own successes and failures, have strong influences on future plans and performance. One of the important features of an attribution is whether it is internal and within a person's control or external and beyond control (p.362).

Therefore, in this current study, the researcher was interested in determining whether the main axioms of attribution theory applied to the four participants. That is, how well do the participants demonstrate beliefs that ability is fixed, thereby setting performance goals to protect them from failure; or that ability can be improved, thereby setting learning goals in order to handle failure constructively. As well, as the following section indicates, there is a link between attribution theory and student approaches to learning.

Adult Approaches to Learning

The way adults approach their learning may well be an important indication of their motivation to learn. This study is interested in a qualitative comparison of the assessed learning strategies and motives of the participants in the study with the strategies and motives actually reported by them.

It is useful to recognise the difference between the "how, when, where and why" of learning and the "what" of learning. The "how, when, where and why" is metacognition, which is defined by Flavell (1976) as "one's knowledge concerning one's cognitive processes and products" (p. 232), and the "what" of learning is cognition. Attribution theory, according to Biggs and Moore (1993), is "essentially a metacognitive theory because it refers to the learner's awareness of success and failure and the causes attributed to each" (p. 308). Metacognition is not a new concept and has previously been referred to as "reflective self-awareness" (Dewey, 1910) and, so Biggs and Moore (1993) state, it is metacognition that underlies learners' approaches to learning.

Biggs and Telfer (1987) identify three approaches to learning: surface, deep and achieving. The surface approach is usually adopted by learners who "just want to get by", and the strategy used is rote learning whereby learners concentrate on key points and try to accurately reproduce them on request. There is little attempt to understand and analyse a problem and is used as a short cut for short term gains such as avoiding failure. Surface motivated learners, according to Biggs and Moore (1993):

> focus on what appear to be the most important topics or elements and try to reproduce them accurately. Because of this focus, they do not see interconnections between elements, or the meanings and implications of what is learned (p.311).

Deep learning, on the other hand, is motivated by a desire to seek meaning and to understand a problem. Deep learning uses higher order cognitive processes such as synthesis and shows more evidence of metacognition than the surface approach. The deep approach to learning, according to Biggs and Moore (1993), usually means a learner will:

- possess a great deal of relevant content knowledge;
- operate at a high, or abstract, level of conceptualisation;
- reflect metacognitively on what is to be done;
- enjoy the process; and

- be prepared to invest time and effort (p. 312).

The achieving approach is similar to the surface approach with the addition of the personal satisfaction that comes from earning high grades. Achieving learners are pragmatic and cleverly ascertain what is required to earn high grades and then work only on those tactics that lead them there. Biggs and Moore (1993) indicate:

> The achieving strategy is to maximise the chances of obtaining high marks and while this (hopefully) involves optimal engagement in the task (like the deep strategy), such engagement is the means, not the end (unlike the deep strategy); it really depends on what earns the most marks (p. 313).

Biggs and Telfer (1987) have determined a connection between learning outcomes and the strategies used to achieve them. Learners who use higher order cognitive skills achieve deep level learning results while surface level learning results when learners learn facts by rote methods. Whether deep approaches are more desirable than surface approaches probably depends upon the learner's intentions and what outcomes are desired. Therefore, motivation may well be important.

Three recent studies that examine approaches to learning are interesting because they use samples similar to the participants in this current study. Boulton-Lewis, Wilss and Mutch (1996) examined the structural organisation, conceptions and knowledge of their own learning of 40 teachers in an in-service course about adult learning. The Structure of Observed Learning Outcomes (SOLO) (Biggs and Collis, 1982) taxonomy was used and responses fell into the categories of belief about learning, factors influencing learning, learning processes and learning outcomes. Most of the sample conceived of learning in terms of surface approaches, or quantitative rather than qualitative outcomes. None of the sample indicated that they were, or should be, responsible for their own learning. In this respect they do not fit the picture of the self-directed adult learner so much supported by Knowles. Perhaps as teachers they are used to highly structured learning programs (as learners themselves and as directors of children's learning) and this may militate against an orientation of self-directedness.

Boulton-Lewis *et al.* (1996) conclude by declaring that the results from this sample were similar to a previous sample of tertiary students in Boulton-Lewis (1994).

In a study of mature students in higher education, Richardson (1994) indicated a tentative hypothesis that mature students are more likely than younger students to adopt a deep approach to their studies and less likely to adopt a surface approach. Three possible reasons why mature students tend to adopt a deep approach were given. These were:

- mature students were more likely to be studying out of interest or pleasure rather than purely vocational motives;
- they were far removed from the secondary educational experiences that encourage surface approaches; and
- mature life experiences tend to facilitate a deep approach.

Fuller (1999) examined the relationships between university students' conceptions of learning, their approaches to learning and their use of learning strategies. The research samples were a first year group, a fourth year group and a group of training and development students undertaking the same program as the participants in this current research. Overall, the study produced little evidence of a consistent relationship between conceptions of learning, approaches to learning, learning strategies or academic achievement. However, an interesting conclusion demonstrated that the training and development cohort scored highest on qualitative, or deep, conceptions while the fourth year group scored highest on surface approaches. Herein lies a fundamental difference between the participants in this current study, Fuller's training and development group and those samples in his and the Boulton-Lewis studies of teacher undergraduates and postgraduates. Perhaps the training and development cohorts seek knowledge and understandings to support their work as organisational trainers and, in seeking to apply relevance to their workplace, are more likely to adopt deep strategies to classroom learning. However, one does wonder why the teacher cohorts did not appear to seek similar outcomes. Perhaps it was their younger ages, they were not in the workforce and the subject matter in their programs may lend itself to certain approaches.

In the light of this research and literature it is therefore of interest to examine the participants in the current study. How well do they compare with similar adult learners in the research? Do they demonstrate, for example, similar surface, deep and achieving approaches to learning?

Theoretical Framework

When examining the literature one wonders about the nature and extent of the theories posited for adult learning. As the literature suggests, most of the conceptualisations thus far have not embraced a micro analysis of adult thoughts and feelings in a learning situation. It is through the eyes of adult learners that the conceptual ideas developed thus far, and the implications of those ideas for adult learning facilitators, will emerge.

Miles and Huberman (1994) define a theoretical framework as a model that "explains either graphically or in narrative form, the main things to be studied – key factors, constructs or variables – and the presumed relationships among them" (p. 18). In the diagrammatic representation, see Figure 1, these identified conceptualisations, or emerging component theories, are placed in a logical juxtaposition in order to provide:

- an overview of the literature;
- a direction to the current study; and,
- means of interpreting the results.

The framework is aimed at demonstrating linkages between the conceptualisations with the view of forging an association between the practice of adult education and the theory of educational psychology. The resultant entity is the umbrella conceptualisation of adult educational psychology.

Figure 1 indicates that the umbrella concept of adult educational psychology consists of three sub-concepts:

- adult development;
- adult learner motivation; and,
- adult learning theory.

Each of these in turn is mutually inclusive; for example, self-directedness appears in two conceptualisations. Below this line of sub-concepts, and influencing each, is the concept of adult learner covert behaviour. Adult learner covert behaviour in turn consists of the sub-concepts of:

- adult thought processes;
- attribution theory; and
- approaches to learning.

These also are mutually inclusive; for example, a learner who thinks themself lucky to solve a problem is attributing a cause to their behaviour.

The theoretical framework, as well as providing a summary of the literature, will also guide the process of the study and assist in interpreting the results. The study will identify the thought processes, the explanatory style and the approaches to learning of a group of adults in a tertiary setting. Once these data have been collected the theoretical framework will be revisited in order to draw some conclusions about the data and some implications for facilitators of adult learning. The results will go some way to forging a link between adult education and educational psychology.

ADULT EDUCATIONAL PSYCHOLOGY

Adult Development ◆ Adult Learner Motivation ◆▶ Adult Learning Theory

Adult Learner Covert Behaviour

Adult Thought Processes ◀▶ Attribution Theory ◀——▶ Approaches to Learning
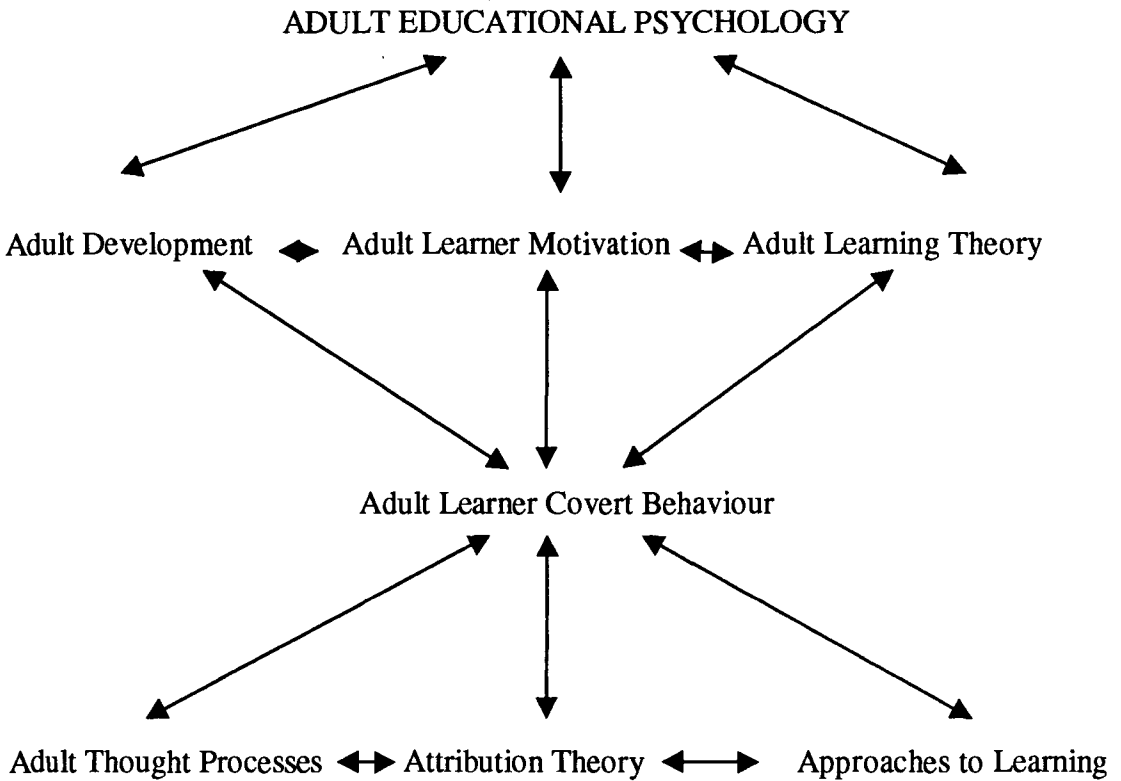
Figure 1. A theoretical framework incorporating key elements in the literature and their relationships

Summary of the Literature

The review of literature and research reveals a burgeoning field of investigation into adult learning and education. Adult life-span models are useful when seeking a definition of adult. Interestingly, chronology plays a small part in such a definition. Rather, there is emphasis upon what might be termed the philosophy of maturity, that is, an adult's mature ability to understand self actualisation, or the separation of self from non-self or from the other. Philosophy of maturity is about the ability to distinguish selfish needs from the needs of others and to essentially understand what one wants from life. Such understanding encourages self-directedness in learning, in learning how to learn and how to share that learning with others, not in competition but in collaboration. It is this collaborative learning that is at the crux of the learning organisation - that organisation where individual and group learning aggregates ensuring the progression and life of the organisation.

Adult development is about identity – identity that separates adulthood from childhood. Desire for autonomous learning, the need for adults to utilise previous and current experience and the realisation that some cognitive abilities may decline with age, all contribute to the identity of adulthood. As well, the growing field of adult educational psychology, in conjunction with adult life-span theory, is showing much interest in adult identity and learning throughout the adult years.

For a number of years there has been a search for an encompassing theory of adult learning. A number of models have been promoted but none encompasses the three domains of the adult: the individual learner, the context of that learning and the learning processes of the adult. It is in each of these domains that a case can be made for a theory of adult learning that differs significantly from childhood learning. Perhaps it does not matter that there is no single theory so long as research can be guided by the three domain paradigm above.

Knowles' andragogy dominates the adult learning literature. There are incalculable adult teaching sessions being conducted around the world every day incorporating his core adult learning principles. Transformational theory has also received its share of investigation while most of the other attempts at theory have not been replicated. Perhaps the latest version of Knowles' model – andragogy in practice – will prove to be the next focus of investigation.

Three other areas of interest to this study also appear in the literature – adult thought processes, attributions and approaches to learning. While much of this literature emerges from the study of school learners and learning, intuitively, and in some cases, empirically, there is much it can offer research into adult learning and the adult learner. Particularly, as will be seen in Chapter 4, research into children's thought processes has created validated instrumentation for ascertaining such covert behaviour. While attributional theory may equally be applied to adults and children the studies reported here were concerned mostly with adult attributions in life situations and the workplace. This was typified by the popular studies of Seligman and Goleman. Student approaches to learning do not appear to differ at all whether the subjects are children or adults. While the instrumentation to ascertain the approaches are different, the results

can be applied equally. Notwithstanding this, the literature on adult approaches to learning is revealing and pertinent to this study.

In conclusion, while much has been reported on the nature of adult learning – the self-directedness of the adult, the context of adult learning, the andragogical theory of learning – no study appears to have applied a micro-analytic approach to adult learners prior to a learning experience, during that learning experience and on completion of that experience. Particularly, no study appears to have examined adult cognitive processes and feelings, their attributions and approaches to learning in a systematic fashion. The following research goes some way in filling that gap in the literature.

CHAPTER 3

Design and Procedures

Overview

This chapter begins with:

- the research questions, including the assumptions and limitations underlying these;
- a description of, and rationale for, the design of the study;
- a description of, and justification for, the selection of the participants,
- the participants' learning context; and
- a description of, and justification for, the data gathering.

Subsequent sections describe:

- the phases through which the study progressed; and,
- the research methodology used, including reports of reliability and validity.

Specific Research Questions

The research aimed to examine the nature of the covert behaviour of a group of adults in a formal learning situation related to three major areas:

- What are the characteristics of adult learners entering a tertiary setting?

> What are their backgrounds in terms of education and experience?
> What motives do they have for entering the course?
> What expectations do they hold about the course and is there a relationship with their motivation?
> To what do they attribute these kinds of expectations?

- What are characteristics of participants' covert behaviour during a learning session?

What categories of participant covert behaviour are reported during a session?

What is the frequency of the various covert behaviours reported by participants?

What are the characteristics of participants' reported covert behaviour that pertains to self-performance?

- What are the conceptions of self-performance that adult learners appear to hold in a tertiary learning situation?

What ideas, beliefs, views, emotions, lines of reasoning make up the learner's conception of self-performance?

What relationships exist among the ideas, beliefs, views, emotions and lines of reasoning of the learner's conception of self-performance?

What seems to be the origins of these ideas, views, beliefs, emotions and lines of reasoning of the learner's conception of self-performance?

What role does a learner's causal perception of success and failure appear to fulfil in a conception of self-performance?

What are some of the characteristic qualities of a learner's conception of self-performance?

- What are the conceptions of approaches to learning that adult learners appear to hold and then develop in a tertiary learning situation?

What are their conceptions of approaches to learning before the learning experience?

How do their approaches to learning relate to their motivation?

Do these approaches change during the learning experience?

Assumptions Underlying the Study

This investigation of the covert behaviour of adults was based upon two substantive assumptions:

- That the adult learner entered and participated in achievement-related situations with thoughts and feelings about their self-performance; and,

- That the adult learner's conception of self-performance influenced their achievement-related behaviour.

As well, the following assumptions were made about methodological issues:

- The target sample, under conditions of stimulated recall from videotape recordings, were able to provide legitimate, that is, honest and genuine, data about their thoughts and feelings; and,

- An adequate characterisation of each of the adult learner's conception of self-performance and its relation to learning experiences can be derived from all sources of data used, and that it is possible to do this.

Limitations of the Study

Certain limitations of the study are acknowledged:

- The sample of tertiary institution, learners and learning situation was small;

- The sample was not random but chosen on a basis of convenience;

- The verbal ability required and possibility of self-censorship in reporting introspective and reflective data was an unknown; and,

- While essentially a naturalistic study in character, certain observer intrusive effects may have distorted the behaviours reported.

These limitations precluded the making of wide-ranging generalisations beyond the target sample. However, the data gathered when aggregated with similar data from other studies, may well assist in theory building about adult learner covert behaviour.

Design of the Study

General Context of the Study

This was an exploratory study with a qualitative emphasis as described by Denzin and Lincoln (1994):

Qualitative research is multi-method in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meanings people bring to them. Qualitative research involves the studied use and collection of a variety of empirical materials – case study, personal experience, introspective, life story, interview, observational, historical, interactional and visual texts – that describe routine and problematic moments and meanings in individuals' lives (p.2).

It is in this general context that the study examined a group of adults in a naturally functioning classroom using "empirical materials" such as case study, personal experiences, interviews and observations in order to describe their thoughts and feelings, or mental life.

Specific Context of the Study

Adults' conceptions of self-performance in tertiary learning situations are largely unknown so the case study method was selected. Yin (1984) defines case study research as "empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (p.23). As Denscombe (1998) indicates, the defining characteristic of a case study is the "spotlight on individual instances rather than a wide spectrum...(the) aim is to illuminate the general by looking at the particular" (p. 30). The case in this study was the case of covert self-performance behaviours involving four participants in an adult learning situation.

The Participants

The participants in the study were four mature-age students, two male and two female, who were enrolled in a tertiary course for the first time in their lives. All were employed Training and Development (or in international terms, Human Resource Development) practitioners who enrolled to undertake an undergraduate program (the

Associate Degree of Arts in Training and Development) in order to update their theory and practice in the field of Training and Development.

Selection of the Participants

The four participants were drawn from a larger population of adults all of whom were attending a university course in Training and Development for the first time. The larger population were professionals working full time in a training role within government and private organisations. All had enrolled in the course after submitting resumes and expressions of interest in the course. According to Woods (1998), the demographics of this larger population were 51% female and 49% male with 71.5% of the men aged 40 years or more and only 47 % of females in this category. Age modes were 41-45 years for both genders. None of the adults had experienced sequenced, long term formal, or classroom learning since leaving school so this formal learning experience was unique to them. So therefore, the adults were not "tertiary-wise" in their perceptions of learning, and the lack of experience meant their opinions on the learning process were fresh and unfiltered by previous tertiary experience. Additionally, as adult educators in their own right it was assumed they would have an intrinsic interest in the research thus motivating them to participate for the duration of the study.

According to Denscombe (1998), firstly, the selection of the cases must be justified and the prime justification is that the cases must be typical. Secondly, the specific cases should contain crucial elements that are especially significant so that either theory-building or theory-testing can occur; that is, the researcher can predict certain outcomes if the theory holds true. Thirdly, the cases may be a convenience sample providing there are no other cases available, and finally, as a bonus, the cases need to be intrinsically interesting. In this study, all these criteria were met.

During the first semester of their course the whole class completed the Attribution Style Questionnaire (ASQ) (Petersen *et al.*, 1982) (see Appendix 1) and the Study Profile Questionnaire (SPQ) (Biggs, 1987) (see Appendix 2), and indicated that if selected, they would be willing to participate for the duration of the study. Six students were selected of which four were designated as study participants, and two were nominated as reserves in case any of the targets withdrew. All six were selected on the

basis of Denscombe's criteria mentioned above. Firstly, the six were considered typical of the population – in this instance the entire group of Training and Development students who were experiencing tertiary education in their field at the researcher's institution for the first time. They were typical because they were a random selection drawn from the group and they displayed no obvious idiosyncratic features. Secondly, on top of this typicality, the strength of their SPQ profiles (that is, their responses to the SPQ indicated quite powerful predilections to certain beliefs about learning) and the face validity of their ASQ profiles (that is, there were strong tendencies in either their optimism or pessimism styles), indicated that they were prime candidates to test efficacy of the research questions. Thirdly, they were a convenience sample as there were no other groups of Training and Development adult learners available in the researcher's institution. Finally, because of their willingness to participate and, following short interviews with each, their interest in the study, ease of establishing rapport with the researcher, and their apparent ability to verbalise their thoughts and feelings, they were all considered to be intrinsically interesting.

All six of the participants completed consent forms as required by the researcher's institutional Committee for the Conduct of Ethical Research. This mandatory procedure allowed the researcher to gather and present data on individuals providing the individual was not identified and full confidentiality was maintained. As a result, the names of the four selected students in this study are pseudonyms.

The Learning Context

The participants were enrolled in a three-year undergraduate program and were in the first year of the course when selected by the researcher. The intention was to gather initial data that were fresh and unhindered by previous formal learning experience. All units experienced by the participants had identical learning designs, that is, students self-selected work groups and worked in those groups most of the time. On occasions the facilitator used the whole class grouping, but most interpersonal interactions were limited to up to six other students.

The course in which the participants were enrolled consisted of eight units of learning. A unit contained content applicable to the theory and practice of Training and

Development, for example, training needs analysis, instructional skills, program development and program evaluation. Each unit was conducted over four eight-hour sessions with each semester containing two units. There were therefore eight learning sessions per semester. Each session was on a Saturday starting at 8.30am and finishing at 4pm with coffee and lunch breaks. There was a two-week gap between sessions and units during which students were expected to complete formal tasks and to consolidate individual learning.

Each learning session usually started with some direct input from the facilitator who would either revise previous learning or introduce new material. The facilitator would set a problem for resolution within the various small groups who would then discuss the situation amongst themselves. Sometimes the groupings were in dyads or triads. On completion of the discussion a spokesperson, either self-nominated or elected, would put forward the findings of their group to the whole class. Whole class discussion would continue under the direction of the facilitator. Once this student-centred process was completed the whole cycle would start again.

The classroom in which the learning took place was a typical university classroom. One wall contained large windows with a view to gardens and three walls contained white boards and pin-up boards. There were audio visual facilities and the room was air conditioned to the comfort levels of the students. The room was arranged with tables and chairs in groups of approximately six comfortable positions so that all students had visual contact with others in the group. Each set of six tables was placed strategically so that the students may observe the facilitator and other groups with ease.

Data Gathering

The kinds of data for considering the stated research problems, the sources of, and techniques used to obtain the data are outlined below.

Kinds of Data Gathered

In order to answer the research questions the kinds of data collected were of two kinds: demographic and covert. Demographic data were collected in order to be able to

richly describe the participants in terms of their life context. For example, their age, gender, backgrounds in terms of work experience and education were considered helpful in this regard. More significantly, data were collected about the participants' covert behaviour in order to describe their thoughts and emotions prior to, during, and after a learning episode. For example, expectations, attributions, conceptions, perceptions, motives, ideas, beliefs, emotions and lines of reasoning were sought in order to build a picture of covert behaviour during learning.

Sources of Data

Mostly, data were obtained from accessing the four participants' thought processes – their perceptions, thoughts and feelings about the learning experience. Gaining access to the mental lives of learners is fraught with difficulty but an effort has to be made if there are to be any advances in the understanding of adult educational psychology. As was indicated in Chapter 2, research into teaching recognised a similar need twenty-five years ago when the National Institute of Education (NIE) expressed a commitment for future research to studies that understood the mental lives of teachers. Many of these studies were correlational in that linkages between teacher behaviour and student outcomes were sought. This current study did not seek similar linkages; rather it sought to examine the mental lives of four adult learners during learning sessions in order to understand, and then improve, the interaction between adult educator and adult learner. In order to achieve this, the source of data for the study is the self-reported thoughts and feelings of the adult learners.

Techniques for Gathering the Data

The general pattern of data gathering outlined indicates a variety of techniques was used to gather the significant data. Five sources were used to retrieve the data significant to the study: questionnaire responses, verbal reports in interview format, written reports, researcher field notes and videotapes. Two questionnaires were administered in order to gain insight into the participants' explanatory style and their strategies for learning. Verbal reports were gained through a series of semi-structured interviews that were both conventional and stimulated. The conventional interviews were conducted using a variety of standard questions, while the stimulated interviews

were conducted using videotapes as prompts for the participants. Each participant was asked to keep a self-report journal in which they were to record any thoughts and feelings pertaining to their learning as they occurred. As well, the researcher kept field notes of observations of the participants during each learning session. Finally, videotapes were made of learning sessions as aids to the stimulated recall methodology. Each of these techniques is now described.

Attributional style questionnaire (ASQ).

The Attributional Style Questionnaire (ASQ) (Petersen *et al.*,1982) is a self-report measure of patterns of explanatory style, that is, the tendency to select certain causal explanations for good and bad events. There are three dimensions relevant to a person's causal attributions and each dimension is associated with a particular aspect of adaptation to an uncontrollable event (Tennen and Herzberger, 1985). The validity of the ASQ, and where it was previously used, is described later in this chapter.

The first dimension is the *locus*, or personalisation, of one's causal explanation: Did this event occur because of something about the person (internal attribution) or something about the situation (external attribution). Internal attributions for bad events are associated with a subsequent loss of self-esteem as are external attributions for good events. This tendency indicates a pessimistic view on life. Internal attributions for good events are associated with maintenance of self-esteem as are external attributions for bad events. People with an optimistic view tend to attribute in this fashion. The relationship is shown in Table 1.

Table 1

The Relationship between Locus/Personalisation, Self-esteem and Optimism/Pessimism

Locus/Personalisation		
Events	Attribution	Level of Self-esteem
Bad (Pessimistic)	Internal negative	Low
Bad (Optimistic)	External positive	Steady
Good (Optimistic)	Internal positive	Steady
Good (Pessimistic)	External negative	Low

The second dimension is the *stability*, or permanence, of the causal explanation: Did this event occur because of something that will persist (a stable attribution) or something that is transient (an unstable attribution). People with a tendency to pessimism, and to give up easily, believe the causes of bad events are permanent and the causes of good events are temporary. Optimistic people believe that the causes of bad events are temporary and the causes of good events permanent. These relationships are detailed in Table 2.

Table 2

The Relationship between Stability/Permanence, Hopefulness and Optimism/Pessimism

Stability/Permanence		
Events	Attribution	Level of Hopefulness
Bad (Pessimistic)	Stable negative	Low
Bad (Optimistic)	Temporary positive	High
Good (Optimistic)	Stable positive	High
Good (Pessimistic)	Temporary negative	Low

Finally, the model considers the *globality* of the causal explanation: Will the cause of this event influence many aspects of life (a global explanation) or influence only the currently experienced event (a specific explanation). Optimists believe bad events have specific causes, and once realising this, will give up just on that aspect. Optimists also believe that good events will enhance every experience, and as a consequence, they will persevere. Pessimists believe that bad events have universal causes so they give up totally. They believe good events are caused by specific factors and their perseverance only applies to those specific factors. Table 3 indicates these relationships.

Table 3

The Relationship between Globality/Pervasiveness, Perseverance and Optimism/Pessimism

	Globality/Pervasiveness	
Events	Attribution	Level of Perseverance
Bad (Pessimistic)	Global negative	Give up totally
Bad (Optimistic)	Specific positive	Give up on that part
Good (Optimistic)	Global positive	Enhances everything
Good (Pessimistic)	Specific negative	Give up on that part

The ASQ used in this study was based upon this conceptual framework so that data were collected and analysed on attributional style rather than an explanation for a particular event. The scales in the instrument were so anchored that external (internal negative), unstable (stable negative) and specific (global negative) attributions received lower scores, whereas internal (internal positive), stable (stable positive) and global (global positive) attributions received higher scores. All the negative attributions together determined a respondent's hopelessness (or pessimism) score and the positive attributions determined the respondent's hopefulness (or optimism) score.

Specifically, the ASQ has twelve hypothetical events – six good events and six bad events. The instrument assumes that all respondents will agree as to which events

are "good" and which are "bad". Of course, it may be argued that what one person views as a "good" event, for example "getting a raise", another may view as "bad" because it puts them into a higher tax bracket. Notwithstanding this, each event has four questions that are always in the same order. The respondent indicates the strength of their response on a scale from 1 (low) to 7 (high). The first question asks for the one major cause of the event. This is not used in the scoring but it is necessary for respondents to answer the next three questions on whether the cause of the event is internal or external, stable or unstable, global or specific. Scores are derived by averaging within dimension and across events for individual dimension scores or across dimensions and across events for composite scores. Composite scores determine the level of hopelessness and helplessness. Each individual dimension ranges from 1 to 7 and the composite scores from 2 to14. For example, to determine an internal negative score ASQ items 6, 14, 18, 26, 30 and 42 (six bad events) are summed and divided by 6. To determine a composite score, for example hopelessness, items 7, 8, 15, 16, 19, 20, 27, 28, 31, 32, 43 and 44 are summed and divided by 6.

Study process questionnaire (SPQ).

The SPQ is a 42 item, self-report questionnaire designed to focus on students' approaches to learning. It is designed to assess the extent to which a tertiary student at university endorses different approaches to learning and the more important motives and strategies comprising those approaches (Biggs, 1987). Table 4 indicates the relationship between approach, motive and strategy (after Biggs, 1987, p.3).

Data were collected and analysed using the following sub-scales: Surface Motive and Surface Strategy, Deep Motive and Deep Strategy and Achieving Motive and Achieving Strategy. Profiles are always reported in that order. Each respondent received a score out of 10 on these sub-scales. For example, a score of 10 and 9 on Surface Motive and Strategy, 5 and 6 on Deep Motive and Strategy, and 6 and 4 on Achieving Motive and Strategy would indicate a Surface Predominant profile. As each sub-scale consisted of 10 deciles, scores rated 8, 9 and 10 were designated 'above average' and indicated with a '+'; 'average' scores were rated 4 to 7 and designated as a '0', while 'below average' scores were rated 1 to 3 and designated as ' - '. Profiles were derived from the sub-scales and these are listed in Table 5 (Biggs, 1987, p.14).

Table 4

Motive and Strategy in Approaches to Learning and Studying

Approach	Motive	Strategy
Surface	Surface motive is to meet requirements minimally; a balancing act between failing and working more than necessary.	Surface strategy is to limit target to bare essentials and reproduce them through rote learning.
Deep	Deep motive is intrinsic interest in what is being learned: to develop competence in particular academic areas.	Deep strategy is to discover meaning by reading widely, inter-relating with previous knowledge.
Achieving	Achieving motive is to enhance ego and self-esteem through competition; to obtain highest grades whether or not material is interesting.	Achieving strategy is to organise one's time and behave as a 'model student'

On completion of the questionnaire each student's actual profile was determined by comparison with the optimal profiles below.

Table 5

Deriving Profiles from Sub-scale Scores

Sub-scale score (deciles)

Surface		Deep		Achieving			Profile	
M	S	M	S	M	S	Symbol		Name
10	9	5	6	6	4	++ 00 00		Surface (predominant)
10	10	1	2	1	1	++ -- --		Surface (exclusive)
5	5	10	10	5	5	00 ++ 00		Deep (predominant)
2	1	9	10	2	2	-- ++ --		Deep (exclusive)
6	4	6	5	9	10	00 00 ++		Achieving (predominant)
1	2	2	1	9	10	-- -- ++		Achieving (exclusive)

(Note: M=Motive; S=Strategy)

Description of reliability and validity issues concerning the SPQ is contained later in this chapter.

Interviews.

Interviews of the sample were of two types: semi-structured face-to-face interviews in the students' work places and stimulated recall interviews at the university. In terms of the interview paradigm indicated by Fontana and Frey (in Denzin and Lincoln, 1994) the interviews were formal interviews in a preset, field setting using a semi-structured question format by an interviewer who was somewhat directive. According to Bell (1987), the major advantage of the interview is the opportunity to allow the interviewer to follow up and to probe responses. While survey responses must be taken at face value interview responses can be evaluated on the spot by the interviewer. Such evaluation was undertaken in this study. The procedures detailed by Hook (1981) as the correct use of interviews as a method of research were followed in

this study. For example, while free flowing responses were encouraged interviewees were reminded of the purpose of the interview by the use of rehearsed, structured questions. The interviews were audiotaped and transcribed at a later date. While the researcher was mindful of the criticisms of the interview as a research tool, particularly with regard to positivistic notions of reliability, validity and objectivity, it was considered that these criticisms probably applied less to those interviews that aim to access respondent's covert behaviour. It was considered that the advantages of interviews outweighed the disadvantages.

The nature of the data collected justified the interview as the major data collection method. According to Denscombe (1998, p.111), interviews should be used when the data are based on emotions, experiences, and feelings, are likely to be personal and provide privileged information.

Each participant was interviewed in their workplace prior to any research treatment in order to establish each student's background, motivation and expectations for learning at tertiary level. The interviews were semi-structured so that the students felt at ease with the researcher but the researcher did ensure that details collected from each student provided data on their thoughts, emotions, feelings and experiences. These interviews occurred part way through the student's first semester at university. Semi-structured interviews were selected because, in Denscombe's (1998) terms, they allow the interviewer "to be flexible in terms of the order in which the topics are considered, and, perhaps more significantly, to let the interviewee develop ideas and speak more widely on the issues raised by the researcher" (p. 113).

A second series of semi-structured interviews was conducted also in the workplace and during the mid-year break to discover thoughts and feelings the participants had in reflection of their first semester and in expectation of their second semester. These interviews were also pre-treatment.

The stimulated recall interviews.

Apart from these conventional interviewing techniques interviews were also conducted using stimulated recall. Stimulated recall interviews with the sample group

yielded data on their interactive thoughts, that is, those thoughts that actually occurred during the session. These interviews were conducted at the university immediately after, or as close as possible to, the cessation of the morning session and participant thoughts and feelings were stimulated through the use of videotapes of each session. Each interview ranged from 90 to 120 minutes for each participant and was audiotaped. Usually, two interviews were conducted consecutively and independent of one another. The participants not being interviewed remained in the afternoon learning session and the two not interviewed on one day were interviewed after the next available morning learning session. Transcripts of all interviews were then prepared for later analysis. Procedures and techniques for structuring aspects of the stimulated recall interviews with the participants were developed from those used by King (1979) and are presented in Appendix 3. During the recording of the videotapes, a session running sheet (see Appendix 6) was prepared that described the sequence of the session activities so that quicker cueing of the tapes could be made during the post-session interview.

Immediately following the three hour morning classroom sessions the tapes were placed into a large videotape player (VTR) in an adjoining room and the each of the participants was asked to sit before the machine at a desk with the researcher. While it may have been desirable for the researcher to preview the tapes it was decided that an immediacy effect was important in order to capture self-report covert behaviour. As well, the researcher is an experienced teacher who can easily spot important and relevant information. The interviews were recorded on audiotape.

The interviews with the participants consisted of their reporting interactive thoughts from three consecutive classroom sessions through the use of stimulated recall. Participants were interviewed individually and the order of interview was varied over the three sessions. The researcher controlled the VTR by a remote control but the selection of stimulus points was also available to the participants. On a number of occasions they selected points that prompted interactive thoughts. On most occasions, however, the researcher manipulated segments of the interview in order to probe for self-performance data. For example, the researcher would ask: "At this point (the facilitator) said you were going to do a role play – tell me what you felt when he said this?" or "It looks as if you are listening intently to (peer) –what are you thinking?"

Each entire three-hour session was played back with the participant but not always in real-time. The session running sheets were used to identify quiet times such as silent reading periods and short transitional breaks when the entire group was off-task. The tapes were fast-forwarded in these instances. Normally, the tapes were allowed to run for as long as it took to exhaust most of the reported self-performance behaviour. Thus, each stimulated recall interview varied in length.

Self-report journals.

Each participant was asked to keep a journal in which they were encouraged to record random thoughts and feelings about their learning. These recordings were made both during the sessions and during reflective times outside the classroom. The advantage of classroom use of self-report journals is similar to the "think aloud" procedure described later in this chapter in that thoughts and feelings can be recorded as they occur. Use outside the classroom encouraged each participant to reflect upon their learning after the event. The validity and reliability of such journals is, of course, dependent upon the honesty and self-understanding of the particular participant.

Field notes.

According to Berg (1998), the central component of case study type research is the use of field notes. He states: "Providing such narrative accounts of what goes on in the lives of study subjects derives from having maintained complete, accurate, and detailed field notes" (p.145). To attain this rigour he offers a number of guidelines, three of which were pertinent to this study:

- *Record key words and phrases while in the field.* Berg indicates that there will always be some memory erosion by the researcher, but because of the memory-triggering effects of key words and phrases this should be lessened. In this study, field notes were recorded during the observation phase. These notes recorded general information about the classroom, such as seating arrangements, the learning strategies used by the facilitators, the content of the sessions and a running sheet of the session sequences;

- *Make notes about the sequence of events.* Berg suggests that as researchers jot brief, cryptic notes, they should indicate their observed sequence of events: what occurred before the event, the event itself and what occurred after. In this study, notes were recorded specifically about transitions or when the facilitator changed the state of the classroom climate; for example, when he indicated a role play was the next activity; and

- *Write the full notes immediately after exiting the field.* Berg suggests that the longer researchers wait to translate their cryptic notes to full notes, the greater the likelihood of erosion. In this study the researcher wrote up the notes on the afternoon following the morning observations in an effort to combat possible contamination from intervening events.

Videotaping of the sessions.

Stimulated recall was the major data collection method and the stimulus used was videotape. The entire morning session on each day was recorded on videotape. The camera was mounted on a tripod and placed facing the class at the right front of the classroom. Natural light from wide windows at the right of the camera assisted in effective lighting so no extra lighting was required. Sound was recorded through the built-in camera microphone. This was sufficient and there was no need for extra and possibly intrusive microphones.

The researcher operated the camera and he regularly panned the entire classroom but frequently recorded close-ups of the target participants. The target participants were not aware of these close-ups occurring as a public television monitor was not used. Both panning and close-ups were used to facilitate the collection of participant covert behaviour.

The researcher also prepared a session running sheet during the recording. This running sheet described the sequence of events throughout the session. Facilitator strategies, student responses, transitions, significant and intriguing questions and comments, intra- and inter-group interactions were recorded against the clock and the tape counter. The researcher highlighted these as potential stimulus points for the later stimulated recall interviews. For example, a typical running sheet would start:

Tape Counter	Event	Time
000-189	Beginning of session by facilitator	0831
	Dee attending to introduction	

An actual example of a running sheet is contained in Appendix 6.

Phases in the Study

The study was divided into two major phases – a pilot phase and the study phase. The pilot phase was used to trial the instrumentation and the study phase itself was divided into a before phase, a during phase and an after phase.

The Pilot Phase

During the pilot phase two volunteers from the class, who were not the study participants, were asked to trial the instrumentation. They firstly completed the ASQ and SPQ. Secondly, the entire stimulated recall methodology was piloted. This required a trial videotaping of a live lesson during which the researcher became familiar with the equipment and its use. Interviews followed during which the process of cueing the tape from a previously prepared running sheet was piloted. The interviews were audiotaped in order to test the technical aspects of recording and to provide transcripts for analysis. More importantly, the whole stimulated recall methodology was rehearsed in order to give the researcher confidence in its use.

On completion of the pilot study an analysis of the audiotape justified the assumption upon which the study was based, namely, adult students do enter and participate in a learning situation with thoughts and feelings about their self-performance. The research design and procedures were found to be workable. Stimulated recall methodology was judged to be a useful tool with adult learners. In terms of the most effective interviewing strategy, the pilot study indicated that use of stimulated recall methodology to elicit interactive thoughts with probing questions to obtain self-performance thoughts and feelings yielded relevant data. The pilot study

volunteers were able to recall interactive thoughts suggesting that the procedures and roles of both the participant and the interviewer were sufficient and functional. The volunteers' willingness and ability to verbalise their thoughts and feelings confirmed the assumption that adults are comfortable doing this once appropriate rapport with the researcher is established. The two volunteers were designated as back-up in case any of the selected participants were unable to proceed.

The Study Phases

The phases in this study were arranged into a simple chronological sequence aligned to the naturalistic progress of the participants through their study year. As Figure 2 shows, the research paradigm indicates a number of data collection points on variables during the three phases of "before", "during" and "after". At the "before" phase data were collected in order to understand the nature and range of the participants' characteristics before entry to the learning sessions. In the "during" phase there were a variety of areas of focus that were used to understand and interpret the kinds of participant covert behaviour occurring during the learning sessions. The "after" phase was used to discover and interpret the thoughts and feelings of the participants on the outcomes of the learning experience.

The before phase.

The first phase involved administration of the SPQ and ASQ to the whole class. These were evaluated and results were given back to all individuals who were interested in finding out their profiles. From those in the group who indicated a willingness to participate in the research two males and two females were selected on the basis of face validity of their SPQ and ASQ results. As well, one male and one female were selected as volunteers for the pilot phase and back-up to the participants. They were not required as participants.

All four of the participants were interviewed in order to discover their background, their attitudes towards learning, expectations of the course and later their reflections. Two interviews were conducted – one part way through the participants' first semester and the second during the between-semester break. In this "before" phase

the researcher tested the assumption that students do enter a learning situation with thoughts and feelings about their self-performance and that it was possible to establish the rapport required for effective data collection. Having limited experience in qualitative interviewing techniques the researcher tried a number of different strategies in order to evaluate his technique in terms of quality and quantity of data elicited.

Before Variables	During Variables	After Variables
Participant characteristics:	Participant self-oriented covert behaviour:	Assignment grades
*backgrounds		Unit results
*demographics	*motivation	Post hoc comments
*education/experience	*concerns	
*perceptions of course:	*views on course progress	
• self in learning situations	*facilitator intentions	
• learning approaches (SPQ)	Participant approaches to learning	
• attributions (ASQ)		
• motives	Participant cognitive processes	

Figure 2

Data collection points in the study

The during phase.

Data collection that started in phase one continued into a second phase. It was in this second phase that the bulk of the data were collected. The research consisted of observing and collecting data during three consecutive three-hour classroom sessions approximately two weeks apart. This was undertaken by videotaping each three-hour session and by the researcher gathering field notes. The sessions occurred throughout the semester during the mornings leaving the balance of the day for interviewing.

The end phase.

The "end" phase yielded data more from records rather than the participants themselves. The participants provided some ad hoc comments about the unit of instruction they had just completed but these added little to the richness and variety of data already collected. Three of the participants also handed their self-report journals to the investigator (the fourth declined to keep a journal), and it was during this phase that a formal member check was carried out with one of the participants. This involved the perusal by the participant of the entire write-up of that person's case (similar to the final version included in the case study chapters). Written feed back (see, for example, Appendix 5) was received from the participant, the tenor of which confirmed a high degree of accuracy of interpretation including confirmation of biographical information and agreement with the researcher's characterisation of self-performance behaviour. Assignment and final unit results for each participant were gathered from official student administration records.

Research Methodology

The research project was designed as a case study of adult covert behaviour using four instances in order to investigate the thoughts and feelings about self-performance of adults in a tertiary learning situation. The case study method was selected because adults' conceptions of self-performance in a tertiary learning situation are largely unknown.

The Case Study Method

Intensive studies of individual cases should be undertaken to establish some understanding of the covert behaviour-- the cognitions and feelings - that are experienced while adults are undertaking learning. In Yin's (1984) terms this is the "contemporary phenomenon". The fact that the research took place in the tertiary classroom during normal teaching sessions (Yin's "real-life context") also indicated a sound reason for selecting the case study approach. The classroom is a naturalistic setting comprising complex interpersonal, intrapersonal and personal/contextual interactions that combine to impact upon the covert behaviour of participants.

Therefore, as King (1979) indicated: "The case study method, by its approach to the phenomena and its informal techniques for data gathering, seemed to offer the most effective means for studying the realities of the classroom" (p.76). While King was referring to a children's classroom, it appeared equally appropriate for adult learners in a similar formal classroom configuration.

The validity and reliability of both overt and covert observations have been frequently questioned (see, for example, Patton, 1990). The notion is that people will behave differently if they know they are being observed than if they did not know. This current study did not rely on covert observation but was mostly concerned with the self-reporting of covert behaviour. In this, the researcher agrees with Patton (1990) that:

> Conventional anthropological research methods have been based on a consensus view of society that assumes that people are basically cooperative and helpful and willing to have their points of view understood and shared with the rest of the world...any and all covert methods of research should be considered acceptable options in a search for truth (p. 210).

According to Stake (1994), there is no one best procedure for conducting case study research: "Perhaps the simplest rule for method in qualitative case work is this: Place the best brains available into the thick of what is going on. The brain-work ostensibly is observational, but more basically, reflective" (p.242). As there is "no one best procedure" the procedure selected in this study followed the typical steps of case study research outlined by Marsick and Watkins (in Swanson and Holton, 1997). These are:

- Identifying a focus and assumptions;
- Using the literature;
- Bounding the case or deciding upon a unit of analysis and sample;
- Selecting data collection methods that are appropriate to the task;
- Analysing data patterns as they emerge; and,
- Describing and interpreting the phenomenon in light of what is known.

This procedure was selected because it had face validity, an inherently logical approach and was used widely in research cited by Marsick and Watkins. Each procedure is explained below accompanied by examples of how these were applied from this current research.

Identifying a focus and assumptions.

Case study researchers have a more generally stated focus than quantitative researchers because the study is essentially exploratory and an examination of new domains. In this study the focus was upon a micro-analysis of the thoughts and feelings reported by a set of adult learners that have hitherto been uncharted.

Using the literature.

An examination of existing literature serves in only determining the focus for the case study researcher and is not used to frame the hypotheses that the deductive researcher is seeking. The literature is revisited time and again as concepts emerge from the research and further understanding is sought. For example, in this study the concept of fear of failure emerged as an important feeling and, as a result, the adult learning literature was re-examined in order to determine the prevalence of the phenomenon in other studies.

Bounding the case.

The case is bound by whether the researcher is seeking to build theory or simply describe and interpret the unique experience of those undergoing examination. This research is a micro-analysis of four adults, and while no unique theory may emerge, an understanding of the covert behaviour of adults in a learning situation will be generated. Such an understanding will contribute to existing theory, and may even question the veracity of that theory.

Selecting data collection methods.

Case study researchers use multiple data collection methods to triangulate sources and strategies in order to offset the short-comings of any given method (Denzin and Lincoln, 1994). In this study, a unique combination of quantitative data collection instruments (Attribution Style Questionnaire and the Study Process Questionnaire) and qualitative methods (semi-structured interviews, field notes and self-report journals) were used in order to provide the required triangulation.

Analysing data.

Case study research typically begins with a broad environmental scan and through a process of iterative analysis narrows to a focus that emerges from the voices of the sample in the study (Marsick and Watson in Swanson and Holton, 1997). The researcher interprets the voices and while member checks add some validity, the problem of selective memory and interpretation does remain. In this study, a member check was carried out with one participant, and a trained observer validated the category system used to record the number and types of thoughts and feelings. These processes assisted in objective reporting of results.

Describing and interpreting the phenomenon.

Case studies richly report situations unique to the individuals concerned and tell a story about those individuals. In themselves they are not meant to be generalised. However, as Marsick and Watkins (in Swanson and Holton, 1997) indicate "rich quantitative and descriptive data across cases enable readers and researchers to compare case findings and ultimately build generalisable theory" (p. 147). In this study, the data do not present crisp theories but do provide the reader with some rich, interpretivistic and meaningful data that can be acted upon and compared with other findings.

The Stimulated Recall Method

The current investigation required the researcher to study the mental life of adult learners in a tertiary situation. For this purpose the stimulated recall method was selected as the major data gathering methodology. This methodology is an intensive and analytical interview approach that condenses the three usual components of the observation-interview method: observations, discussions and interviews with participants over a period of time (King, 1979).

Stimulated recall is a sub-set of methodologies termed "process tracing". "Process tracing refers to verbal report methods that attempt to obtain data on the intellectual processes used by subjects as they render judgements and make decisions or solve problems" (Shavelson, Webb & Burstein, 1986, p. 79). It is used to describe research in which subjects are asked to think aloud while performing a task (the "think aloud" method), recall thoughts after having completed a task (the "retrospective interview") and think aloud while viewing a videotape of themselves performing a task ("stimulated recall"). Each method produces a verbal protocol that the researcher interprets as a series of mental operations. From these mental operations the researcher infers that the subject has reached a judgement, decision or solution to a problem. The verbal protocol may serve as the basis of a verbal characterisation of the subject's thought processes.

King (1979) quotes Connors (1978) as defining stimulated recall methodology as a

...branch of introspective methodology in which audio and/or visual cues are presented to facilitate a subject's recall of the covert mental activity which occurred simultaneously with the presented cue or stimulii (p.1).

More precisely, King and Tuckwell (1983) indicate:

Recall of what a person was thinking and/or feeling during (a lesson) is stimulated by some means, usually with the use of audiotapes or videotapes. The thoughts and feelings as recalled are spoken aloud and recorded on

audiotape. These reported thoughts are later transcribed, coded and analysed. (p.1).

While used in a variety of settings, for example psychotherapy, at the classroom level stimulated recall methodology involves the use of (usually) a videotape. On completion of the taping participants watch the recording. The stimulus tends to assist the participant in recalling the thoughts and feelings experienced in the actual session. The expression of these interactive thoughts is then recorded on audiotape and later transcribed for intensive analysis.

There have been a number of studies (for example, Muth, 1993; Nakleh & Krajcik, 1991) where reported thoughts and feelings have been a major focus of research, but these have been reported as they were being experienced rather than at a later date in response to a stimulus. Muth (1993), for example, used the "think aloud" procedure. The thoughts and feelings are usually reported to an observer through a neck microphone. While a good case for validity can be made for this method the current researcher believed this method was intrusive for students surrounding the participant and could cause the participant some embarrassment.

There is a tradition of research scepticism toward the use of introspective techniques, probably because of a dominating positivistic paradigm. Lately, there has been much debate about the ethics of bringing "repressed memories" of a patient in therapy and using those "memories" in the courts to prosecute, for example, incestual behaviour that occurred some decades ago. Notwithstanding this, there are some precautions that can be taken to enhance the probability of accurate recall of thoughts (at least in a classroom setting) that was the critics' major objection to the technique. According to Marland (1977), these precautions include the interviewer's use of skilful questioning techniques, use of a small time lag between recall of thoughts and the actual event, and appropriate preparation of the interviewee. In this study, the interviewer designed questions that were not presumptive or leading and were verified as such by the pilot phase participants. Instead, questions were designed to elicit what the participant's were thinking or feeling. For example: "What did you feel when you received your assignment result?" Such questions are cited by Patton (1990, p.291) as "feeling questions". Feeling questions are aimed at understanding the emotional

responses of people to their thoughts and experiences. This type of question must be differentiated from those questions that Patton terms "opinion/values questions" that seek answers to people's cognitive and interpretive processes. For example, "What did you think about when the facilitator said you should now read the article for key points?"

With regard to Marland's other precautions, the time lag was relatively small. Recall occurred immediately after the session concluded or as close as possible to the conclusion. Additionally, the interviewer stressed that only thoughts and feelings occurring during the session were relevant.

A major criticism of the accuracy of recall of thoughts deals with the question of whether the participant can remember. In the current investigation the researcher encouraged participants that if they could not recall then say so. Memory loss did occur on a number of occasions. For example one of the participants, in response to the question "How would you sum up your thoughts and feelings at this point?" replied, "Sorry, I can't remember exactly what my thoughts and feelings were – I am just looking around at this stage". This response was not coded. As well, there is a question over whether actual thoughts are being reported or whether there is distortion or selectivity of thoughts. Again, interviewer prompts to encourage validity were used from time to time. Therefore, while there may be no single way to establish the validity of individual thoughts, in similar studies Marland (1977) did report a logical consistency between interactive thoughts and events on videotape: "validity and reliability can be assumed but not demonstrated or guaranteed" (p.227).

There have been a number of children's classroom investigations using stimulated recall methodology in which researchers have reported rich and interesting data (Clark and Peterson, 1976, Nolan, 1978). More recently, Artzt and Armour (1996) examined the problem-solving behaviours and perceptions of seventh-grade students using videotape and stimulated recall interviews. Appleton (1996) explored the cognitive responses of primary school students to science lessons incorporating discrepant events by examining video tapes, stimulated recall interviews and field notes.

These investigations have indicated that the subjects must be able to verbalise their thoughts and feelings as accurately and as completely as possible in order to provide data that is reliable and valid. An assumption is that adults will have a more advanced capacity for this ability than do children. It is not surprising therefore that adults have been subject to stimulated recall techniques as well. Much of this research concerns school teachers and preservice teachers. However, the study by Gilbert, Trudel & Haughian (1999), that examined the interactive decision-making factors considered by coaches of youth ice hockey games, and the study by Smagorinsky and Coppock (1995), that examined the processes engaged in by dancers as they worked out a choreographed interpretation of the relationship between two characters in a story, are examples where stimulated recall has been used in wider fields.

Corrigan (1998) examined the interactions of preservice teachers with their pupils and explorations of their thinking by conducting stimulated recall interviews. Dunkin, Welch & Merritt (1998) examined Sydney teachers' knowledge in civics and citizenship education by using videotapes of lessons and stimulated recall interviews. Artiles, Barreto & Pena (1998) traced changes in and relationships between teachers' knowledge, beliefs, and interactive thinking about teaching culturally diverse learners by using in-depth interviews, surveys and stimulated recall interviews.

While the literature in which stimulated recall is an important methodology for the investigation of teachers' thinking is quite plentiful, the literature using the methodology on adults as learners in tertiary institutions is not so plentiful. However, the current study is based upon the assumption that verbal protocols gained from stimulated recall methodology, be they children's or adults', are reasonably accurate representations of that covert behaviour. The current study, therefore, attempted to explore the potential of the technique with adult learners.

.

The observation-interview methodology.

According to King (1979), stimulated recall methodology is a condensation of the observation-interview methodology. Observation-interview methodology consists of three components: an observation of an individual's behaviour, a discussion with the individual about that behaviour and an interview with the individual. The observation

phase occurs in real-time, that is, as events occur. In this study, while limited observation occurred in real-time (mainly in order to prepare videotape cueing points for the stimulated recall phase), most observation was left until viewing of the videotapes with the participants. Both the discussion and interviewing components were combined and also conducted in conjunction with the viewing of the videotape. The purpose of this was to gain access to the participant's thoughts, feelings, conceptions and perceptions.

The interviews were structured and sequenced such that the participants perceived the sessions to be concerned with the recall of interactive thoughts. Interactive thoughts are those thoughts reported as occurring during the sessions. Non-interactive thoughts are those thoughts reported before or after the session, and often occur while viewing the videotapes when the participant makes a presumption of what they might have been thinking. Participants were reminded of the need to report only interactive thoughts during preparation for the interviews and on occasions during the actual interviews themselves. Hence, stimulated recall techniques have the potential to yield valuable data on participant interactive thoughts and may also serve as a trigger for in-depth investigation of participants' underlying beliefs, ideas and lines of reasoning.

Of vital importance to the observation-interview methodology is the relationship between interviewer and participant. Such a relationship must be of mutual respect so that a positive rapport can be attained (King, 1979). Because the interviewer was unknown to the participants prior to this study, and had no relationship with them apart from a research relationship during this study, the interviewer spent considerable time with each of the participants in order to develop the rapport required. This meant discussing the purpose of the research, assurances of anonymity and a sharing of results. Such trust building was important for two reasons: it allowed participants to reveal their own understanding of self-performance and it was important in building validity.

Some limitations of the observation-interview method are recognised. Data are obtained in an informal manner but informality is required if an adequate relationship between interviewer and participant is to be attained. This relationship, coupled with the preparation and perceptiveness of the interviewer, determines the success of the

investigation. In this study, the interviewer was mindful of just how far he could probe the private thoughts and feelings of the participants.

As well, reliability of the self-reports is a possible disadvantage of the interview method. In this study consistency was strengthened by triangulation of data from other sources, the plausibility of the reports and identification of common themes that ran through all of the five interviews.

Attributional Style Questionnaire (ASQ)

Data on explanatory style, either optimistic or pessimistic, were gathered from the sample during their first semester at university. The instrument used was the Attribution Style Questionnaire (ASQ) (Petersen, *et al.*, 1982). This instrument measures the degree of permanence, pervasiveness and personalisation that people attribute to the causes of events in their lives. Tennen and Herzberger (1985) indicate the ASQ has been applied to research on *inter alia* achievement motivation, self-esteem and responses to aversive life events. Henry, Martinko and Pierce (1993) used the ASQ to examine the relationship between attributions and performance in an undergraduate computer course and found a relationship between optimism/pessimism and course results. The ASQ consists of a scale describing 12 hypothetical events – half of which are "good" events and half of which are "bad" events. Respondents are asked to imagine the events happening to them and are asked to rate each event in terms of permanence, pervasiveness and personalisation. Permanence refers to time. Pessimistic people believe that causes of bad events that happen to them will endure for all time, for example "diets never work", while optimistic people believe the causes are only temporary. Pervasiveness is about space. Pessimistic people have universal explanations for their failures, while optimistic people have specific explanations, for example "my injured leg stopped me from winning this time". Personalisation is about how people feel about themselves and will affect their self-esteem. Seligman (1992) suggested that optimistic people are more successful learners than those determined as pessimistic - an assertion supported by Henry, Martinko and Pierce (1993).

The ASQ was selected as the survey instrument to measure explanatory style because it has been employed successfully with adults in tertiary situations (Petersen, *et*

al., 1982). It is easy to administer with no reports of respondents having difficulty completing the scale. The two sub-scales, bad and good events, have internal reliabilities of .72 and .75 (Cronbach's coefficient alpha) respectively. Test-retest correlations of .64 for bad events and .70 for good events have been achieved. Reliability was therefore considered satisfactory for this study. However, the problem alluded to earlier about respondent's perceptions of "good' and "bad" events does need to be considered before a full endorsement can be given. In terms of validity, Petersen *et al* (1982) reported "considerable construct, criterion and content validity" (p.297). Despite these reservations the ASQ was considered valid in this context.

Study Process Questionnaire (SPQ)

In order to discover each student's approach to learning the sample was given the Study Process Questionnaire developed by Biggs and Telfer (1987). This is the tertiary students' version of the Learning Process Questionnaire, also developed by Biggs and Telfer (1987). The SPQ determines whether a learner regularly adopts a deep, superficial or achieving approach to learning. Respondents indicated on a 5 point Likert-type scale their responses to 42 statements about learning. From these responses an individual learning profile was determined. The SPQ was selected to provide an indication of learning approaches because it was created, and had been normed, for Australian tertiary students albeit those in undergraduate Education courses. There were no norms for similar samples to this one but the researcher considered the Education samples to be close to this sample. Essentially, the SPQ demonstrates adequate internal consistency within scales and across populations reporting alpha coefficients ranging from .51 to .85. Biggs (1987) cites Watkins and Hattie (1981) and O'Neill and Child (1984) as independent studies that have verified the validity and reliability of the SPQ though actual figures are not quoted.

Indeed, the Watkins and Hattie (1981) study is of interest because of the similarity with the current study of the sample examined. Watkins and Hattie administered the SPQ to 249 first-year Australian university students. They found that students aged 21 years or over produced lower scores on reproducing, or surface, motivation and higher scores on internalising. They concluded that "more mature

students tended to be less motivated by pragmatic concerns and to be more liable to adopt a deep-level approach in their work" (p. 392).

The SPQ is reasonably well used with populations similar to the current study. For example, Zeegers (1999) used the SPQ to ascertain approaches to learning of 227 first year university science students, and Mashishi and Rabin (1999) administered the SPQ to a group of fourth year accounting students.

Validity and Reliability of the Research Data

A number of major reliability and validity issues had to be addressed in the gathering of data for this investigation. The case study approach was selected because it appeared to be the best approach for a micro-analysis of the thoughts and feelings of a group of adult learners. Stimulated recall methodology utilising videotape was deemed to be the most effective data collection method largely because of its viability in this research situation and the large numbers of studies that have used it in the past. The quantitative instruments, the ASQ and SPQ, have proved valid and reliable in a myriad of other situations and their unique use in this research was deemed to be appropriate in order to triangulate data from the stimulated recall methodology. However, there are other validity issues to be considered.

The prime validity issue concerned the possibility of individual participants acting and reporting self-performance data differently because they were subjects of the study. This was obviated wherever possible by not informing the participants which of them was the subject of videotaping until after the event. As well, because the duration of the taping was over three hours there was less likelihood of sustained "acting", if indeed this was ever a conscious or sub-conscious decision. The reporting of self-performance was a more difficult matter. Did participants tell the interviewer what he wanted to hear? There is no way of ever knowing whether this occurred. However, this was obviated as much as possible by only revealing the general thrust of the investigation rather than the specific areas of the study. As well, data were collected from a number of sources in order to triangulate information, and the interviewer intuitively believed the participants wanted to be honest so that they could receive legitimate feedback on completion of the study.

The possible intrusive effects of the video camera and the presence of the researcher in the classroom were of lesser concern. However to obviate this concern, a trial run plus a large number of taping sessions over long periods probably meant that the target participants and the rest of the class became less aware of the intrusion. Indeed, the researcher spoke to some non-target participants and they reported a virtual lack of awareness of any intrusion.

In studies that utilise the observation-interview methodology there is a real danger that the interviewer will have credibility problems. For instance, it is likely, if the subjects are children, they will perceive the interviewer in an adult/teacher role. This credibility issue was confronted in this study by addressing each of Denscombe's (1998, p.116) interviewer effects. Firstly, there was no significant age gap between the interviewer and the sample. Nor was gender, social status, professional expertise or ethnic origin of any importance. The discrepancy between educational qualifications may have been a minor factor, but as the interviewer was cognisant of Denscombe's requirements to remain neutral and avoid antagonism while promoting warm involvement, this was discounted. While the interviewer did perceive some reluctance by the participants early in the process, the interviewer felt that, owing to the length of time available to develop positive relationships, participant perception of the interviewer was as a legitimate researcher. Indeed, as part of the member checking procedure one participant sent an unsolicited letter (see Appendix 5) to the interviewer indicating, *inter alia*, confirmation of this relationship.

Summary

This study was designed to examine the covert behaviour of adult learners in a regular functioning tertiary classroom. In the "before" phase, two interviews with the four participants were conducted, and at the "during" phase, three sessions were videotaped of all four people for use with follow-up stimulated recall interviews. In the "after" phase, information pertaining to achievement was gained from administrative sources.

Four target participants reported their interactive thoughts and described their thoughts and feelings pertaining to self-performance while experiencing a learning situation. Two quantitative instruments and a self-report journal were triangulated with the interview data to support the themes that emerged from the participants' interactive thoughts. Such a research design was intended to yield data that provided some insight into the covert behaviour of adult learners. These insights may well contribute to a broader understanding of the unique covert behaviour of the adult learner.

CHAPTER 4

Data Analysis

Overview

In this study quantitative and qualitative data are linked through analysis. Miles and Huberman (1994) suggest that the reasons why this shall occur is to:

- enable confirmation of each set of data by triangulation;
- elaborate analysis to provide richer detail; and,
- to provide fresh insight.

Miles and Huberman (1994) conclude:

> Qualitative data can help the quantitative side of a study during *design* by aiding with conceptual development and instrumentation. They can help during *data collection* by making access and data collection easier. During *analysis* they can help by validating, interpreting, clarifying, and illustrating quantitative findings, as well as through strengthening and revising theory" (p.41).

Quantitative data collected were compared against each participant's reported covert behaviour data in order to make meaning of the participants' underlying beliefs about learning. The comparison was done by detecting aspects of the covert behaviour that confirmed the quantitative results. For example, when a participant who stated they like to read an article in depth in order to understand underlying meanings, this statement was compared to their approach to learning profile. If their profile indicated a Deep approach, then this statement helped confirm that profile. Quantitative data were collected by administering the Attributional Style Questionnaire (ASQ) and the Study Process Questionnaire (SPQ) to all four of the participants. Qualitative data were collected from the transcripts of the stimulated recall interviews with the participants, and from field notes and self-report journals. These data were treated quantitatively by categorising reported thoughts and feelings according to an adaptation of the Content Analysis System of Student Interactive Thoughts (CASSIT) (King, 1979) recording system (see Appendix 4). The data were treated qualitatively by inductively combining

like ideas, beliefs, emotions and lines of reasoning into characterisations, or variables, according to Miles and Huberman's (1994) "tactics for generating meaning" that are discussed next.

According to Woolfolk (1993), a variable is "any characteristic of a person or environment that can change under different conditions or that can differ from one person to the next" (p. 577). More precisely, Swanson and Holton (1997) indicate that variables are " the phenomena that vary depending on the conditions affecting them" (p. 72). The identified variables are the core of this study, and in the discussion that follows in Chapter 8 and Chapter 9, Miles and Huberman's (1994) "tactics for generating meaning" (p. 246) were utilised.

Miles and Huberman indicate that the tactics available for generating meaning in qualitative research depend upon whether the purpose of the research is to describe or to explain phenomena. They present a range of thirteen tactics that proceed from description to explanation. The tactics are:

- *Noting patterns, themes.* When working with text recurring patterns or themes pull together many separate pieces of data. There are patterns of variables involving similarities and differences, and patterns of processes involving connections of time and space within a context;
- *Seeing plausibility.* Plausibility is an initial intuitive impression that points to a conclusion that looks reasonable;
- *Clustering.* This is trying to understand a phenomenon better by grouping and then conceptualising objects that have similar patterns or characteristics;
- *Making metaphors.* Metaphors allow meaning to be made about abstract ideas by mapping them on to more concrete ideas;
- *Counting.* A good deal of counting goes on in the background when judgements of qualities are being made; for example, themes or patterns may emerge a number of times and these are counted as frequencies;
- *Making contrasts or comparison.* These are natural processes and are almost intuitive when presented with sets of data – what are the differences? What are the similarities?

- *Partitioning variables.* Monolithic variables may in fact consist of a set of variables that may be unbundled into meaningful units;

- *Subsuming particulars into the general.* While clustering groups of like data together the resultant question might be what is this specific thing an instance of?

- *Factoring.* This tactic seeks to hypothesise the commonality in disparate sets of data;

- *Noting relations between variables.* As in statistical analysis the aim is to discover what sort of relationship, if any, exists between variables and the strength, if any, of causation between them;

- *Finding intervening variables.* When two variables intuitively should go together but do not, a possible reason is a third intervening variable that is upsetting the conceptualisation;

- *Building a logical chain of evidence.* This tactic seeks to ascertain causes between variables so that a chain of variables may result in a cause and effect scenario over time and space; and,

- *Making conceptual/theoretical coherence.* This requires the researcher to move conceptually from an examination of interrelationships to constructs and theories.

Therefore, at the descriptive end of their continuum of tactics is the process of noting patterns. The human mind finds patterns quickly and easily in data but such patterns need to be subject to scepticism (both the researcher's and others') before they represent useful knowledge. At the other end of the continuum, Miles and Huberman indicate that an explanatory tactic is to connect discrete facts and to group these into lawful, intrinsically consistent, comprehensible and abstract patterns. The tactics used in this study were drawn from across the Miles and Huberman spectrum. Specifically, "counting" was used to group reported statements into frequencies so that judgements could be made about trends for each participant in each training session. In order to examine the causal explanations and basic underlying covert behaviour variables the following tactics were used: "noting patterns", "seeing plausibility", "clustering" and "partitioning". The explanatory tactics of "noting relations between variables" and "making conceptual/theoretical coherence" were utilised to seek answers to the research questions. The analysis of each specific data is now described.

Questionnaires

Participants' scores on the two questionnaires used in the study were converted to profiles, according to the dictates of the instrument's scoring scheme, in order to provide an insight into each participant's belief systems as measured by their scores.

Attributional Style Questionnaire (ASQ)

Each of the participants received a score on their tendencies to select causal explanations for good and bad events that they hypothesise happening to them. From these tendencies each participant was given a score along a continuum starting with pessimism and proceeding to optimism. The underlying assumption of the ASQ is that optimism improves self-esteem, hopefulness and the level of perseverance, and pessimism leads to erosion of self-esteem, hopelessness and the ability to persevere. As the reliability and the validity of the ASQ have been determined, the assumption was made that the scores of each participant indicate a reasonable assessment of their belief system in regard to explanations for events that happen to them. For example, a participant indicated one major cause for the item, "You become very rich", was a win in the lottery. The participant scored their explanation as 1, which indicated that it was due entirely "to other people or circumstances" - an indication of an external attribution to the personalisation, or locus, dimension.

Study Process Questionnaire (SPQ)

A profile for each of the participants was gained from their responses to the questions included in the SPQ. Each profile was compared with the range of profiles normally generated by that instrument in similar samples. Thus for each participant a profile of both motive and strategy for learning was ascertained. An important assumption of these profiles was that, even though they had not been normed for this particular sample of participants, the norms from similar respondents were acceptable to the researcher and used.

Interviews

Two types of interview were conducted: semi-structured face-to-face interviews in the workplaces of each of the participants and stimulated recall interviews at the university. Transcripts of all interviews were made in order to detect themes, benchmarks and signposts to the underlying beliefs about adult learning. The semi-structured interviews sought background and demographic data about each of the participants as well as expectations of future learning and reflections about past learning. The stimulated recall interview transcripts were examined to test this information and to further examine the thoughts, feelings, chains of reasoning and beliefs that the participants reported during learning sessions. As previously indicated, these data were compared with the quantitative data generated by the two instruments.

The Content Analysis System of Student Interactive Thoughts (CASSIT)

In order to quantify and categorise adult thoughts and feelings during learning sessions an established but modified content analysis system of the stimulated recall transcripts was used. The Content Analysis System of Student Interactive Thoughts (CASSIT) was developed by King (1979) and consisted of nine categories of interactive thoughts and feelings. Interactive thoughts and feelings are those reported by participants as occurring during the learning session.

King developed the Content Analysis System of Student Interactive Thoughts (CASSIT) for use in primary classrooms in accordance with the principles and requirements for developing a content analysis system provided by Holsti (1969). According to Miles and Huberman (1994), content analysis is "a long and well-developed tradition of dealing quantitatively with qualitative data. The issue is one of counting the frequency and sequencing of particular words, phrases or concepts" (p. 49).

King created CASSIT by inductive means using Holsti's principle of data reduction in which the data is systematically transformed and aggregated into units that permit precise description of relevant content characteristics (King, 1979, p.119). King

applied two fundamental coding steps. "First, the data source is segmented into units which are meaningful to the research problem. Second, the units are placed into one of several discrete, clearly defined categories; the categories being relevant to the researcher's theories" (King, 1979, p.119).

King developed CASSIT according to the following phases:

- The differentiation of interactive phenomena from non-interactive phenomena. Interactive phenomena occur during the actual session while non-interactive phenomena occur before or after the session and often while participants are viewing the process after the event;
- The establishment of a unit of analysis. The unit selected was a single thought or idea embodied in a word, a part of a sentence or an entire paragraph; and,
- The classification of the many different units of interactive thoughts and feeling into distinguishable groups. Each group consisted of a set of thought units that shared one or more distinct characteristics. These groups were the categories of student interactive thoughts and feelings. According to King (1979), the categories were "mutually exclusive, were exhaustive in that all data were classifiable, and they reflected the purposes of the research" (p. 120).

For the current study, modifications were made to some of the category names and some of the sub-headings were deleted because they did not apply to adult learners. A new category titled "metacognition" was tentatively developed, but there were too few instances of thoughts and feelings concerning the category that it was dropped from the final analysis. The fact that CASSIT was inductively derived from primary classroom data was an initial concern in the current study; however, the pilot study referred to on page 63 confirmed the efficacy of CASSIT with adult learners. A full description of the modified CASSIT is presented in Appendix 4. In brief, the main components consist of a set of nine guidelines for distinguishing between interactive and non-interactive data, a unit of analysis based upon a single idea or thought and nine categories of units of interactive thoughts. The nine categories are as follows:

- *Subject Matter.* Units in which a student's thoughts are focused specifically upon the content of the classroom session;

- *Cognitive Processes.* Units in which a student reports a thought process involved in learning the subject matter;

- *Behavioural Moves-Self.* Units in which the student reports thoughts about an action they were performing, had performed, or were considering performing in relation to the learning process. Such an action must reflect a personal orientation;

- *Behavioural Moves-Student.* Units in which the student reports thoughts and feelings about an action involving other students;

- *Behavioural Moves- Facilitator.* Units in which the student reports thoughts and feelings about an action involving the facilitator;

- *Self-Performance Thoughts.* Units in which the student is thinking about their own performance behaviour and outcomes;

- *Self-Performance Feelings.* Units in which the student reports an emotion pertaining to their performance behaviour and outcomes;

- *Feelings.* Units in which the student reports an emotion during the session that is not associated with their own performance. Both positive and negative feelings were categorised; and,

- *Non-Task-related.* Units of thoughts that do not pertain to the subject matter of the session.

Given the purpose of this study in categorising self-performance thoughts and feelings units, five of the categories above, namely, behavioural moves-self, behavioural moves-student, behavioural moves-facilitator, self-performance-thoughts and self-performance-feelings, were analysed further.

King (1979) examined a number of reliability coefficients for the original CASSIT and arbitrarily selected 0.70 as an acceptable level of reliability. He reported coefficients of reliability for intercoder reliability of 0.73 and for intracoder reliability a coefficient of 0.86.

Check coding was carried out in the current study according to the guidelines for improving reliability of qualitative data detailed in Miles and Huberman (1994). According to Miles and Huberman, check coding is carried out because:

> Definitions become sharper when two researchers code the same data set and discuss their initial difficulties. A disagreement shows that a definition has to be expanded or otherwise amended. Time spent on this task ... reaps real rewards by bringing you to an unequivocal, common vision of what the codes mean and which blocks of data best fit which code. Check coding not only aids definitional clarity but also is a good reliability check.(p. 64).

Miles and Huberman suggest that the process of reliability is determined by each person separately coding 5 – 10 pages of the first transcript. The two researchers then review each rendition together. A reliability coefficient is determined by the number of agreements and disagreements each person renders. Thus:

Reliability =   Number of agreements
                 Total (Number of agreements + number of disagreements)

A coefficient of 0.70 is considered to be acceptable for a first effort. Subsequent efforts should be around 0.90. Similarly, single, or intracoder, reliability should aim for about 0.80 after four weeks and both coefficients should be around 0.90 after later efforts.

In the current study a colleague of the researcher was trained for three hours on the use of CASSIT by analysing the pilot transcripts. Using the Miles and Huberman process, a reliability coefficient of 0.75 was established as an acceptable benchmark for intercoder reliability. On the first run through the coefficient achieved was 0.79. Both coders conferred at length in order to check there was agreement on the units of analysis and that these units were correctly being assigned to CASSIT categories. A second check coding was carried out and the coefficient rose to 0.91. Using the same system the researcher coded the same pages of transcript on two occasions one month apart. Coefficients recorded were 0.82 and 0.95 respectively. Therefore, intercoder reliability, an index of system reliability, and intracoder reliability, an index of stability of the researcher's own coding, both fell within the acceptable levels as laid down by Miles

and Huberman. CASSIT therefore appeared to be a reliable instrument in this study and confirmed the coefficients reported by King (1979) for his data.

Attributional Analyses of Student Covert Behaviour Data

The transcripts of the stimulated recall interviews contained both interactive and non-interactive thoughts. The check coding system applied to the reliability of coding data into CASSIT categories also included a reliability check of distinguishing non-interactive from interactive covert thoughts. As already indicated the reliability checks were carried out until agreements between checks exceeded 0.90. Some of these data were elicited incidentally in association with student reports of interactive thoughts. Other data were obtained in a more direct manner from semi-structured questioning. Much of these data pertained to student self-performance. Analyses of these data were undertaken for each of the cases in order to describe each person's conceptions of self-performance according to the procedure indicated by King (1979).

As in the King study, the analyses of the data pertaining to student self-performance sought to identify two sets of phenomena:

- the causal explanations of a student's expression of thoughts and feelings about self in the learning situation; and,
- the underlying covert behaviour of a student; that is, the characteristics of a student's underlying beliefs, ideas, views, emotions and lines of reasoning - the base that seems to influence the causal derivations of behaviour (King, 1979, p. 127).

King indicated that the distinction between the two sets of phenomena may be purely arbitrary; however, regardless of this the data in this study were considered from an attributional perspective.

Causal Explanations of Behaviour

Inductive reasoning was used to analyse the data in order to obtain causal explanations of behaviour. The researcher examined the stimulated recall transcripts and noted statement patterns that appeared to be contextually related. Where such

patterns indicated a possible relationship to self-performance the researcher pursued the point by probing questions aimed at eliciting an indication of the participant's covert behaviour. The questioning tactic tended to result in a chain of comments usually linked in the following way:

Cognition → emotional → reason → consequent behaviour
              consequence   for cognition

The student's report of an initial cognition did not always precede an emotional consequence or reason when reporting self-performance. In those instances, the researcher elicited such consequences or reasons by asking such questions such as: "Why did you think/feel/do that?" The reason provided by the participant tended to be related to the initial cognition, so usually the researcher probed further by asking: "Why do you think (the reason given) made you think/feel/do (the initial cognition or emotion)?" Participant responses tended to indicate belief systems, lines of reasoning and ideas underlying their thoughts and feelings.

The following examples of chains of comment contain an initial cognition followed by some expression of emotion, a reason for that cognition and some consequent behaviour:

"I'm thinking about the topic (*initial cognition*) → which is not inspiring me (*emotion*) → because this is all old hat (*reason*). → You can see the rest of the class - no-one's really switched on" (*consequent behaviour*).(Pat, Session 1).

"When I got back the assignment (*initial cognition*) → I felt it was quite a good mark (*emotion*) → because I was only expecting about 50% to 70% (*reason*). → I know it is not as good as some of the others' so I guess I have to put in even harder "(*consequent behaviour*). (Sam, Session 3).

After collating chains of comment that reasonably matched the pattern of linkages the researcher placed those chains into clusters based upon a broad category such as "Approach to Learning" and "Self-perception of Ability". Therefore, most chains of

comment were reasonably grouped under a variety of headings that encapsulated a characterisation peculiar to the target student. As a consequence, a dynamic view of a student's covert behaviour pertaining to self-performance in the learning situation was ascertained.

The Underlying Covert Behaviour of Students

During the process of searching the stimulated recall data the researcher became aware of numerous participant thoughts and feelings that seemed to be fundamental to all other thought and action pertaining to self-performance. When these generic ideas, beliefs, emotions and lines of reasoning were recorded an interesting array of phenomena were revealed that contributed greatly to an understanding of individual conception of self-performance. For instance, in the following exchange there is an explicit delineation of the pressures facing the adult in a learning situation:

Pat: I'm having trouble finding time and motivation for the assignments. It's old age catching up. Once I was always full of adrenalin. I have so much to do at work in my new role. It requires a lot of maths and physics and as I left school early I have to self-teach.

Researcher: So what is your expectation of your assignment mark?

Pat: I'm hoping to do better than I have done but it will mean getting up at four o'clock in the morning. But, yeah I'll get a pass – just.

Other underlying thoughts and feelings reflected a single idea, belief or point of view:

Dee: "I perceive that most of these people are probably better qualified for this particular course". (Session 2.)

Gail: "It evoked feelings of anger in me". (Session 2.)

Pat: "I try to get mentally prepared to be the spokesperson – but I don't jump up and volunteer". (Session 3.)

Sam: "I'm trying to get the relevance that, as the material is based upon large industry how it connects with the smaller industry I'm in". (Session 1.)

Descriptions of the phenomena of underlying student covert behaviour yielded a number of insights into participant causal perceptions of success and failure in themselves and how they viewed their own performance in relation to other students in the groups. The phenomena seemed to influence greatly the causal explanations and perceptions participants expressed in relation to their behaviour. This descriptive approach has ascertained some ideas, beliefs, emotions and lines of reasoning pertaining to self-performance in each of the participants. By grouping these inter-related commonalities the researcher has been able to infer some of the more significant characteristics that underlie the participant's conception of self-performance during a first-time tertiary learning experience.

Self-report Journals and Field Notes

The self-report journals were read as an additional means of triangulation of data gathered from the other means. This self-report data were subjected to the same scrutiny by using the "tactics for generating meaning" techniques previously referred to. For example, one journal entry reported: "A little disappointed overall. Will need to increase effort next year to improve my grades". This entry is a good indication of the participant's state of mind at the time it was written. Information in the journals was not prompted by questions asked by the researcher but were reflections of each participant about their learning experiences. As such, the data could be the result of a more free flowing process of thought and therefore of acute interest in confirming or denying understandings from other data sources.

Data from field notes was used principally to add structure to the stimulated recall interviews and to aid the cueing of the videotapes.

Characterisation of Participants

All of the information gained from all of the sources was used to paint a rich portrait of each participant. Such information was examined so that consistencies and confirmation about participant learning belief systems could be reported.

Summary

The study sought to combine quantitative and qualitative data in order to determine some of the characteristics underlying adult learners' conception of self-performance. Quantitative data were collected using the Attributional Style Questionnaire (ASQ), the Study Process Questionnaire (SPQ) and the Content Analysis System of Student Interactive Thoughts (CASSIT). The ASQ was used to determine the attributional style of each participant. While specific attributions for particular events were ascertained during the qualitative sifting of data it is assumed that these particular attributions have a tendency in the direction as indicated by the overall style determined by the ASQ. The SPQ was used to determine individual motives and strategies generally adopted by the participant when approaching a learning situation. Qualitative sifting of the data was used to confirm or deny the approach as ascertained by the SPQ. CASSIT was used to group units of interactive thoughts and feelings into mutually exclusive, exhaustive and relevant categories. Initially, nine categories were determined, and five of these that were specifically about self-performance, were further analysed. Reliability coefficients for CASSIT were deemed to be acceptable.

Data were also analysed using qualitative means. Two sets of phenomena pertaining to student self-performance were identified: the causal explanations of each student's expression of thoughts and feelings about self in the learning situation, and the characteristics of each student's underlying beliefs, ideas, views, emotions and lines of reasoning. While the distinction between the two sets of phenomena may be purely arbitrary it was considered that both sets made a worthy contribution to the attributional perspective of the research.

This study therefore analysed data quantitatively but utilised qualitative data to confirm information, to provide richer detail and to provide fresh insight into the research

problem. The result of the analysis has enabled the confirmation of some characterisations, or variables, of the adult learner in a tertiary setting.

CHAPTER 5

Gail and Sam

Introduction

The case study of the covert learning behaviour of four adults illustrate how these adults perceive and behave in a tertiary learning situation for the first time, in this instance a conventional classroom setting designed to introduce these adults to the broad concept of Training and Development. While each study consists of a unique and idiosyncratic description of the person and their behaviour, suggesting diversity in how individual adults view the complexity of the same learning setting, there are similarities across the four studies. As each study evolves and certain characterisations are explored these characterisations are related, where appropriate, to concepts, thoughts and theories revealed in the review of related literature and research (Chapter 2).

An analysis of these descriptions proceeds on an individual basis in order to develop a profile of each adult student's behaviour and conception of self-performance. This chapter contains the studies of Gail and Sam and Chapter 6 contains the studies of Dee and Pat. The profiles on each student are presented by examining data gained from each of the three sequences in the research.

During the first sequence, the researcher interviewed each student prior to the research treatment in order to establish each student's background, motivation and expectations for learning at tertiary level. The students also completed the Attribution Style Questionnaire (ASQ) and the Study Process Questionnaire (SPQ). These events occurred part way through their first semester at university.

In the second sequence, each student was interviewed during the mid-semester break to discover their thoughts and feelings about their first semester experiences and expectations for their second semester.

The third sequence occurred during second semester in which each student was observed in the morning for three hours over three sessions. Each session was at least

one week apart. Students were interviewed during the lunch break on each occasion in order to discover reported thoughts and feelings about the morning's learning situations. Gail, Dee and Sam kept self-report journals in which they recorded random thoughts and feelings about the learning situation. Many of these entries occurred outside classroom hours. These data sources provided an opportunity for analysis of the students' covert behaviour during the sessions. The causal perceptions and explanations of student behaviour, as reported by the student, were also examined in order to create a characterisation of each student's conception of self-performance.

<div align="center">*Gail*</div>

First Sequence

The first sequence of the research design contained the initial interview with Gail, during which she reported her background, and her completion of the ASQ and SPQ.

Biography.

Gail was in her early 40's and left secondary school at Year 11 when she was 15. She had been studying business, although "it was not necessarily what I wanted to do but girls were supposed to do secretarial things." She left school because her guardian decided "it was time to get a job although I had a really inspiring teacher so I felt like I was ripped out of the womb of learning."

Gail became interested in the hospitality industry when living and working in a hotel. However, her first position was in a bank in a large rural city. At 18 she met her husband and started a family. The family moved to a seaside tourist-orientated community that aroused her interest in hospitality. With the arrival of her third child Gail saw the need for counselling for nursing mothers. This generated her desire to restart formal learning so she enrolled in a community-counselling course. During the course she realised, "I had a leaning towards people and what it was that made them tick."

While working as a waitress she was asked to train others. Her reaction was at first hesitant but the desire for more knowledge led her to enrol in a Technical and Further Education (TAFE) course in hospitality studies. Her motivation for this was, "I did not want to be inadequate in my job, and in the back of my mind I was thinking training." The studies led to a position as trainer in a large training organisation responsible for training people within the hospitality industry. Selection came as a surprise because she did not think her skills were adequate for the position.

Early motivation.

Gail reported she was a "middle of the road student who would appreciate a pat on the back, saying you're doing well, which we never got at school." She soon realised that self-motivation was driving her to undertake further study at a tertiary level, and once embroiled in study, she stated:

> As I was an adult there was no way I was going to fail this. You get one chance at these things. You can't mess around and not do assignments and fail and think "I'll come back", because there's financial considerations and time. So that was a large driving force for me.

In the TAFE course there were other mature aged students who would help each other and spend lunchtimes talking about the experience. This support group motivated each other, "We hung around the lecturers because we were craving the knowledge." However, university was not an option for Gail directly from high school, "I was shy, I was insecure – you know – I couldn't have said boo." But there were still fears when she eventually chose a tertiary option and asked of herself, "How much time will it take? Am I good enough?" Gail saw entering university as a challenge because of her "insecurities" so she was "surprised and elated" when she won a place. Once the decision was made she felt that, "I was on an even keel. There's nothing I don't understand so I'm not concerned (about that) – given time and explanation of everything."

Gail's first experience in the university library was one of shock, "It literally terrorised me – I was almost hysterical – just thinking I've got a whole year course to

get through and I can't find any books." Gail's resolve took her to a friend who was a librarian and she showed her how to search the database. Her first experience with the database and subsequent successful borrowing of books generated a great sense of achievement. With this stressor under control though, another one loomed large, "The biggest stress, I think, is just trying to keep your deadlines, just trying to get your assignments in on time."

ASQ score discussion.

Gail's score on the ASQ, which is a measure of her explanatory style for selecting certain causal explanations for good and bad events, is tabled below:

Table 6

Gail's Attributional Style Questionnaire (ASQ) Negative Score

Dimension	Score	Possible Range
Internal Negative	4.5	1 – 7
Stable Negative	5.0	1 – 7
Global Negative	3.3	1 – 7
Hopelessness	8.3	2 – 14

In the above table the lower the score the stronger the tendency to adopt that dimension.

Table 7

Gail's Attributional Style Questionnaire (ASQ) Positive Score

Dimension	Score	Possible Range
Internal Positive	6.3	1 – 7
Stable Positive	6.3	1 – 7
Global Positive	4.8	1 – 7
Hopefulness	11.2	2 – 14

In the above table the higher the score the stronger the tendency to adopt that dimension.

The scores indicate that Gail is essentially an optimistic person (11.2 on a 2-14-point scale). This optimism can be explained by the high scores on the Internal Positive (6.3), Stable Positive (6.3) and Global Positive (4.8) dimensions.

Her Internal score measures the locus, or personalisation, of her causal explanations. Did this event occur because of something about the individual (internal attribution) or something about the situation (external attribution)? Her high positive response indicates that she attributes good events in her life to her own efforts rather than to something external to her. Gail's Stability, or permanence, score measures the stability of the causal explanation: Did this event occur because of something that will persist (stable attribution) or something that is transient (unstable attribution)? Her positive response indicates a marginal inclination that good events in her life will last but the high negative score also indicates the opposite tendency that bad events may well persist. This vacillation may well have been affected by an illness that was manifesting itself during the administration of the ASQ. Her Global, or pervasiveness, score is a measure of how the cause of events will influence many aspects of her life or just a particular experience. Gail's score again is only marginal which indicates some fluctuation between her attribution for pervasive influences and specific influences.

Together, these scores indicate a tendency to hopefulness over hopelessness. According to the ASQ Gail does vacillate between optimistic and pessimistic attributions for events that occur to her. Such vacillation appears to some extent in the qualitative attributional analysis of her self-performance covert behaviour.

SPQ score discussion.

Gail completed the SPQ in order to determine her motives for learning and the strategies she uses in processing that learning. Gail's profile (0+0+00) is most like the profile of a deep predominant student; that is, a student who wants to follow their own academic interests, relate to their previous experience, generate their own examples and follow up their own leads. This deep predominant profile is supported in the analysis

that follows whereby Gail demonstrates an intrinsic motivation to extract meaning from her learning, to read widely and to relate new content with her own experiences.

Summary of the First Sequence

During the first sequence Gail experienced, in Kasworm's (1999) terms, an "apprenticeship" in the student role at both the TAFE college and the university. She reported a strong inner drive to succeed and attempted to be successful by forging strong connections with fellow mature-aged students and the lecturing staff. In order to overcome her sense of insecurity she fell into a comfort zone generated by this connectedness and the desire to address the rituals of university life such as searching the library and meeting assignment deadlines. Both an inclination to optimism and a desire to seek deep learning strategies underpin the characterisation of Gail as an apprentice in the student role. Because she had come from outside a university setting she focused her attention and meaning making on becoming the good and successful student.

Second Sequence

The second sequence in the research design contained an interview with Gail after her first six months of tertiary study. She made some interesting observations about her own motivation and that of her fellow students:

> I am really struggling and wonder why I'm doing it. Being ill all the time is not helping either. I keep reminding myself there will be an outcome at the end. Sometimes I wonder what the relevance of it all is but it eventually comes to you. I just have to keep thinking there's a reason for it. If I had a choice I'd say forget it. It's just too hard because of the time that is expected to be put into assignments. I'm working up to fifty hours a week plus running a family and trying to have a social life. But it is well worth it.

On other students:

I think there's quite a few of them who have pretty high egos and want to have their voices heard. I like the participants to stick to the subject and to stop thinking that what they have to say is incredibly important – and some of it is, but a lot isn't. I feel exasperated and annoyed at the domination of some students. I think some of my friends think I'm more annoyed than I am. I don't lose sleep over it – just talk it through with my friends and husband.

On this point of perceived student domination she has some advice for the facilitators:

I feel it's really important to the facilitators that they pull (these students) into line a lot quicker and watch the rest of the group for their body language as to how they are reacting.

Gail indicated her approach to researching her assignments:

In the beginning I quickly try to get into the library and to get as many books on the subject as I can. I look for relevant bits (of information) – some books look relevant but are not. I make notes as I go and then input them into my computer along with my own thoughts. I draft my answer and give it to others to read and share information. Sometimes, though, you hide information. There's a bit of competition but we are all keen to get through. We do help each other a lot – for instance, one person typed up another's paper otherwise it wouldn't have been in on time. We are hoping to achieve this together.

Gail elucidated her views on "surviving" the course:

I'm a survivor. I survive each unit as it comes up. And then try to forget about it. I don't think much about it – that would just be another pressure in my life. I would just like to be only doing this – but that's not going to happen. If some of the assignment demands could be lessened it would be helpful, but there are standards to be maintained, I suppose. I guess we are getting out of it a little

easier (than other undergraduates) but facilitators need to be aware of how stressful it is.

In this interview, much like the students in Kasworm's (1999) studies, Gail appears to have transcended the apprenticeship student role evident in the first sequence and entered the phase in which she is constructing a learning world for herself. She opened her mind to knowledge and beliefs that transected her role in the world of work and family and her role in the classroom. Relevance and meaning are important to Gail as is her desire for inclusion with classmates in sharing information and her desire to learn from her peers. In this respect she demonstrated two of Wlodowski's (1999) conditions for adult learning motivation.

Gail's Profiles from the Interviews

In these interview statements Gail appears to be confronted by the enormity of her personal struggle. The reality of the study task before her gave rise to self-doubt about her likelihood of completing the program satisfactorily. Some of the self-doubt derived from the perceived conflict in her division of time between family and work needs and her study commitments. Other aspects of self-doubt seem based around her difficulty in forging association between what she is learning and what she knows, or between learning and her work environment. Gail's belief structure of making meaning appears to be (in Kasworm's (1999) terms) a "straddling voice" belief structure in which both worlds of knowledge – the "real" and the "academic" - are valued. Each world informed the other through new understandings and perspectives, but only after considerable cognitive effort on her part.

Gail's early experiences as a student were characterised by a lack of self-confidence and a lack of extrinsic motivation. As an adult learner her determination to succeed was driven by two desires: that learning opportunities were limited by time and financial resources, and a premature removal from secondary schooling that left her frustrated. Other frustrations occurred when her persistent illness and her perception of dominating students in the sessions, appeared to be limiting her learning. However, despite these limiting factors her optimism, and desire to survive and overcome difficulties, is most evident.

Third Sequence- Quantitative Analysis of Covert Behaviour

During this sequence Gail was observed over three 3 hour learning sessions and she also completed a self-report journal. Data from the observations and report were treated quantitatively and qualitatively.

Gail's reported covert behaviour during the three sessions was divided into interactive and non-interactive thoughts and feelings. Only the interactive thoughts and feelings, that is those thoughts and feelings actually experienced during the sessions, were quantified. The modified version of the content analysis system of student interactive thoughts, CASSIT (King, 1979), was used for this purpose. The number of interactive thought units in each of the ten categories for each session was expressed as a percentage of the total number of thoughts identified. See Table 8 on page 103.

Most of the thoughts reported by Gail were self performance-feelings (26%), behavioural moves-student (nearly 20%), and cognitive processes (nearly 19%). Self performance-thoughts(14.1%) and behavioural moves-facilitator (11.3%) were well reported while subject matter (5.1%) and behavioural moves-self (5.1%) were not. There were no non-task related or feelings-positive and feelings-negative thoughts reported at all.

Table 8

Percentage Distribution of Student Thoughts over CASSIT Categories for Each Session: Gail

Categories of Student Covert Behaviour	Session 1	Session 2	Session 3	Percentage of Total
Subject Matter	-	13.3	1.7	5.1
Cognitive Processes	20.0	16.7	19.0	18.6
Behavioural Moves – Self	1.7	5.0	8.8	5.1
Behavioural Moves – Student	18.3	13.3	28.3	19.8
Behavioural Moves – Facilitator	15.0	11.7	5.3	11.3
Self Performance – Thoughts	18.3	20.0	5.3	14.1
Self Performance – Feelings	26.7	20.0	31.6	26.0
Feelings – Positive	-	-	-	-
Feelings – Negative	-	-	-	-
Non Task Related	-	-	-	-

For Gail, the interactive thoughts in five categories were further analysed according to sub-categories of what the thoughts were about. This more intensive analysis enabled a clearer understanding of Gail's thoughts and feelings during the sessions. This information is contained in Table 9 on page 104 .

Table 9

Within Category Percentage Distributions of Sub-Categories of Selected Student

Thought Categories: Gail

Categories		Within Percentage	Percentage of Total
Behavioural Moves – Self			
Seek public participation		55.6	2.8
Avoid public participation		-	-
Attending-listening		-	-
Not attending-listening		11.1	0.6
Motive to attend		33.3	1.7
	Total	100	5.1
Behavioural Moves – Student			
Perceptions of other student's performances		14.3	2.8
Inferences of other student's thoughts		5.7	1.2
Interaction – positive		14.3	2.8
Interaction – negative		14.3	2.8
Perceptions of other students' behaviour		51.4	10.2
	Total	100	19.8
Behavioural Moves – Facilitator			
Perceptions of facilitator's instructional moves		45.0	5.1
Perceptions of facilitator's reactions		15.0	1.7
Interactions		-	-
Perceptions of facilitator's overt behaviour		40.0	4.5
	Total	100	11.3
Self Performance – Thoughts			
Self assessment – success		20.0	2.7
Self assessment – failure		4.0	0.6
Perceptions of task difficulty		8.0	1.2
Perceptions of task structure		4.0	0.6
Self attributions		32.0	4.5
Self expectations		32.0	4.5
	Total	100	14.1
Self Performance – Feelings			
Anxiety		28.3	7.3
Morally neutral – positive		50.0	13.0
Morally neutral – negative		17.4	4.5
Morally unneutral – positive		-	-
Morally unneutral – negative		4.3	1.2
	Total	100	26.0

An examination of significant categories using information from Table 8 and Table 9 combined follows.

Self performance-feelings.

Thoughts about performance that involved an accompanying emotion were analysed further according to anxiety, positive and negative morally neutral (such as happiness and disappointment) and unneutral sub categories (such as pride and shame). The majority of Gail's thoughts involved feelings of happiness and cheeriness though concern and worry ranked next. Unhappiness and disappointment were a minority and she reported no thoughts that generated a sense of pride in her self-performance. This category showed a significant increase in Session 3 probably as a result of her increasing positive attitude as the debilitating effect of her illness upon her motivation diminished.

Behavioural moves-student.

Thought units in which Gail reported her thoughts about an action involving other students were sub categorised in an attempt to identify the nature of her concerns with her peers. She was primarily aware of what other students were doing (51.4%) particularly their off-task behaviour. Such off-task behaviour was an almost constant source of frustration for Gail probably as a result of her deep learning motivation and desire for meaning. To a lesser degree she was concerned with equally positive and negative interactions with her peers (14.3% each) and was often aware of how they were performing. She was least involved in perceiving what her peers were thinking.

A comparison across sessions showed a significant lower percentage of thoughts concerning other students in the middle session. Contextual factors contributing to this may be the corresponding rise in self performance-thoughts that peaked during the middle session. Gail appeared to be more interested in herself than others in this session. It was during this session particularly when the belief structure previously identified as a "straddling voice" became quite prominent. For instance, there were frequent comments about the difficulty, yet desirability, of valuing the contribution of what she was learning and what was happening in her work and home life. Frustration was a dominant feeling – frustration with the lack of congruency between classroom best practice and the practice in her workplace.

Cognitive processes.

Cognitive processes refer to those units in which Gail's thoughts were involved in learning the subject matter. During session one, Gail's mental actions were impaired by her illness that was becoming serious and leaving her debilitated. She found it difficult to remember content. She had trouble concentrating on learning, was only processing the bare minimum of content and had trouble learning large chunks of information.

During the second session, the quantity of these thoughts lessened a little and the nature of these thoughts changed. She reported that most thoughts were concerned with relating the content to her own workplace, how it related to her own experience and what needed to be done at her workplace to incorporate the new information.

In session three, the quantity of cognitive processes increased and concerned Gail's learning style. She reported in detail that her learning involved highlighting of main points, summarising these points and then editing them into a coherent whole. She stated that it was the process of writing that suited her learning best. It was her awareness of these metacognitive activities that pervaded the final session.

Self performance-thoughts.

Self performance-thoughts concern those thoughts pertaining to Gail's performance behaviour and outcomes. Nearly two thirds of her thoughts concerned causal explanations of her behaviour and expectations of success and/or failure while 20% concerned her self-assessment of her success. Thoughts about failure, task difficulty and structure comprised a lesser proportion of her thoughts.

Gail's quantity of self performance-thoughts was high in the first two sessions but dropped markedly in the third. This could be accounted for by a significant increase in self performance-feelings. It was during the third session that Gail reported feeling more comfortable with her own performance and was becoming increasingly aware of her own behavioural moves and those of her fellow students. She also reported that her illness was causing her less anxiety during this session.

Behavioural moves-facilitator.

This category gives an indication of what thoughts Gail had, as a facilitator in her own right, involving the actions of the facilitator of this unit in her own learning. She was most aware of the facilitator's instructional moves and his overt behaviour but was not much involved in perceiving his reactions and she reported no interactions with him at all.

The decline in the number of thought units, from 15% to 5.3%, over the three sessions indicates a decreasing interest in the facilitator. This may be explained by the fact the facilitator had established a pattern of behaviour that became so automatic Gail was no longer aware of his instructional moves. Similarly, there may have been more emphasis upon group and paired work to the extent the facilitator appeared to be redundant in her own mind.

Other categories.

Thoughts and feelings about subject matter were minimal. Over the three sessions Gail reported only a few thoughts that were focused specifically on the content of the sessions. Most thoughts pertaining to content were more properly categorised as "cognitive processes" (above) or "behavioral moves-self".

Behavioural moves-self are those thought units in which Gail reported an action she was performing, had performed, or was considering performing in relation to her learning process. These were further analysed in terms of the motives and covert behaviours that prevailed while she was learning. Over 55% of her thoughts were about her desire to seek public participation and 33% concerned her level of motivation to attend to what was happening in the sessions.

The trend over the three sessions shows an interesting increase in the quantity of behavioural moves-self thought units. This trend indicated that Gail became increasingly introspective and self-analytical about her own performance, and in the last session, she reported the highest percentage of thought units of all participants. Perhaps

the experiences of the classroom were such that Gail became increasingly aware of her need to participate publicly.

No thoughts and feelings, either positive or negative, unrelated to self-performance were reported. Nor were there any non task related thoughts.

Summary of quantitative analysis of covert behaviour.

The quantitative analysis of Gail's covert behaviour in the three sessions provided some insight into that behaviour during learning. Many of her thoughts and feelings involved her own performance. While she did report some anxiety and unhappiness the majority of these feelings were positive. She reported a large number of thoughts about causes of her behaviour and expressed many considerations of expectations she had for her own performance. There were a large number of thoughts concerning her fellow students, particularly her perceptions of their behaviour. As well, there were a number of interactions with her peers that were both positive and negative in nature. As a facilitator herself it was understandable that she would be aware of the behaviour of the facilitator in this experience. She reported a majority of thoughts about his instructional moves and was aware of his overt behaviour as a person. There was no direct interaction with him at all during the three sessions.

Gail reported few thoughts about her own behaviour. While there were some thoughts that were off task, she did consider her public participation in the class and felt generally motivated to attend to the learning tasks. She never contemplated thoughts that actively promoted avoidance of public participation.

Third Sequence-Qualitative Attributional Analysis of Self-performance Covert Behaviour

Much of Gail's mental activity during the three sessions pertains to her thoughts and feelings about her self-performance, of other students, cognitive processes and the instructional moves of the facilitator. A qualitative examination of these thoughts and feelings reveals some of her underlying beliefs, ideas, views, emotions and lines of

reasoning. This examination was based upon an analysis of the causal explanations of her stated thoughts and feelings.

Causal explanations of Gail's behaviour.

The transcripts of the interviews with Gail contained several chains of comment that included causal explanations and perceptions of her own behaviour, behaviour of other students and the facilitator. She reported an initial cognition that was often followed by a causal explanation and an emotional consequence. For example, on one occasion she arrived at the session late and made the following comment:

> I don't think I missed that much (cognitive statement) because there were other people arriving and getting coffee (causal explanation). I was pleased that I was ready to start the day (emotional consequence). (Session 1)

The conjunction "because" (either explicit or implied) was sought in the transcripts to identify possible causal chains of comment. An examination of these linked comments revealed that they could be clustered into public participation, approach to learning, self performance, the facilitator's instructional strategies and the subject matter. Each of these concepts is detailed below by reporting verbatim comments and a discussion on the comments. Each discussion is followed by a summary in which a characterisation relevant to the concept is posited.

Public participation.

Gail's willingness to take a leadership role in the group with whom she worked was one area that she reported frequently. Mostly, she reported reluctance to adopt such a role:

> I didn't want to take a leadership role because I was feeling tired so I was quite happy for someone else to take that role. (Session 1)

I thought this was too hard (being the spokesperson) because I wasn't convinced I understood exactly what the topic was. I felt very insecure when I saw how flamboyant the other spokespersons were. (Session 1)

On other occasions, she reported a willingness to become the leader but an underlying reluctance often held her back:

I wanted to take this leadership role because I've changed my mind (about that) but I was disappointed when someone volunteered before me. (Session 1)

The other participant just got up and didn't give me a chance. It wasn't an issue because I see that particular person as a leader anyway. (Session 1)

Someone said "let someone else be the leader", and I quietly said "I would do it", but it wasn't loud enough.' (Session 1)

Gail reported upon this underlying reluctance on a number of occasions. It appeared to stem from a number of her life experiences that as a child and young adult she was encouraged to be "seen and not heard", not encouraged to speak her mind and was rarely asked for an opinion. During the sessions she reported this reluctance being caused by a lack of assertiveness, her feelings of insecurity and a doubt about the relevance of her contributions.

Gail also reported positive feelings about being part of the work group:

I was pleased with the group because we all supported the views of the paper we were reviewing. (Session 1)

The group I'm in is exceptionally well balanced, as there are no grandstanders. (Session 1)

However, on another occasion with another group:

Half of the group are grandstanders. I enjoy paired discussion because I get a bigger say. (Session 3)

She showed disappointment when she perceived off-task behaviour of this group:

Some are not even vaguely interested in discussing it - they were talking about their dentists - and this made me really anxious because I'm here to learn. Next time I'll select a group a little less dominant. (Session 3)

When the group became dysfunctional, she said:

I was flabbergasted. I was thinking I want to get out of here so I'm leaving at 3pm. (Session 3)

Gail appeared motivated by a need for inclusion with her learning group but her reluctance and lack of assertiveness sometimes prevented a full commitment to inclusion. As well, she reported frustration with the group's off-task behaviour that appeared to offend her personal need for commitment to the learning task. Perhaps the desire for inclusion was really the desire to establish a "comfort zone" by creating a sense of connectedness through in-class interactions, and when the connectedness did not always eventuate, frustration, and sometimes anger, was the result.

Summary of characterisation – public participation.

Gail reported a strong desire to be part of the learning group – a demonstration of how inclusion fosters involvement. Gail sought connectedness that she perceived as a sense of belonging and an awareness that each group member cares for the others and in turn is cared for. Connectednesss requires a shared understanding among group members that they will support each other's well being. When connectedness is joined with respect it creates a learning climate in which adults can share experiences, reflect on those experiences and construct meaning for their own experiences inside and outside the classroom. Gail's frustrations stemmed from her perceptions that the group

dynamics were not always as she wanted them and her own reluctance, feeling of insecurity and lack of assertiveness prevented connectedness in its purest form. Therefore, in summary, a desire for public participation, or inclusion, may well be modified by the extent to which the individual has a well-formed self-concept and a tolerance for others' foibles.

Approach to learning.

Gail made a number of references to her approach to learning and a number of these references concerned the assignments that had to be completed for assessment:

I'm only learning the bare minimum for the assignments - enough to get me through each unit. I am not driven to get an 'A' but I am driven to get through. (Session 1)

On another occasion:

There is always a big gap between the mark I expect and the actual mark. I expect a 'B' or a 'C' - I don't expect to fail. I got 17 out of 20 and I was pleased about that. (Session 3)

Her personal motivation is best summed up by her comments:

I'm driven by not wanting to become a failure. I'm not driven by wanting to be the best. I label myself average. (Session 2)

Others are doing second degrees and others are from trade backgrounds who are struggling - I say I'm in the middle. (Session 2)

These comments appear at odds with Gail's deep approach to learning that was reported in her SPQ results and are in stark contrast to the statements:

I like to read the articles slowly and really comprehend what the author is saying. I had no fear of doing a three-minute presentation on the assignment

because I had put a lot of time into the assignment and was confident I knew it all. (Session 1)

I was getting quite angry at this (the speed reading) because I wanted to

read it in more depth. (Session 1)

Perhaps what is happening here is that Gail has constructed a learning world beyond the "apprenticeship" role that she appeared to be in during the first part of her program. She has become an active decision-maker regarding what materials should be learned using a surface level approach and what materials should be learned using an in-depth approach for longer-term retention. Underpinning this decision-making may well be the desire to link these actions to the nature and type of knowledge in the classroom to her adult life world. Indeed, Gail often reported her need to link the content and subject matter of the sessions with her workplace:

For me to learn I do like to be able to see how this is relating to me - how can it be applied in my own company and what needs to be done to implement it. This is happening 80-90% of the time. (Session 2)

I'm able to relate the paper read to my own work situation and between sessions I think about the links between the paper and what was happening at work. (Session 2)

Gail also reported an activity-oriented learning process:

I highlight the interesting points and then summarise them. This enables me to comprehend them so I think the writing process is a learning thing for me. (Session 3)

When given the time to go back over the points I can get a lot more out of them by editing them two or three times. (Session 3)

However, during the time frame of the sessions Gail was suffering from a debilitating illness and this meant some underlying frustration:

> Things have to be broken down quite simply. I find it hard to process large
>
> lumps of information because of my memory loss. (Session 1)

Gail is reporting a constructivist view of learning whereby she is actively constructing her own knowledge in her own way. Again, this constructivist approach places Gail squarely into the learning world beyond mere "apprenticeship". Perhaps the basis upon which Gail decides content is interesting is the potential utility of the learning to her adult life beyond the classroom. Assuming this is the case then relevance and meaningfulness of learned content are strong motivators for Gail.

Summary of characterisation – approach to learning.

Once adults pass through the "apprenticeship" student role into the role of constructing their own learning world, they are more likely to make an active choice between adopting surface and deep strategies. Such a decision may well be based upon the perceived relevance and meaning of the classroom learning with what occurs in the adult's own world of work. By making a conscious effort to interpret, and reflect upon, the classroom work in the light of their own previous and current experiences adults are constructing their own meaning. Indeed, once adults accomplish this they are well on their way to truly transformational learning.

Self-performance.

Gail's illness was of extreme concern to her during the period of the interviews and it appeared to be a root cause of many of her self-performance thoughts and feelings:

> I think I could do better and would enjoy the classes more but my current
>
> physical state will not allow it. I'm terrified I'm not going to be able to

perform well enough. I forget where I put things and its affecting the people I work with. (Session 2)

I don't give the best that I could because of how I feel and that's a source of frustration. I'm extremely tired today therefore I'm frantic about my ability to concentrate. I'm still not well and my assignment was lost when my computer crashed. (Session 3)

My patience is limited lately because I feel so tired and I'm frustrated with all the verbosity (of other students). (Session 3)

These feelings were further reported when she added:

The assignments are added stress and I am not wanting to drop out. I wonder what my options are if this fear of failure continues. (Session 1)

Gail summed up her frustration when she reported:

I'm whining and I'm not a whiner. I usually have lots of energy and this condition is unbelievable. (Session 3)

This frustration almost went to the limit when she reported:

I was thinking of withdrawing, so I rang the facilitator to renegotiate my assignment submission date and, because he was able to do that, I felt a little better. (Session 3)

On reflection, Gail reported:

The unit has been enjoyable for me because it has really gelled with what I'm doing in the workplace.(Session 3)

The literature on adult learning indicates that the learning process may well suffer from health related factors. Of course, children's learning may also suffer from

these factors but the adult learning literature suggests the adult learner is more prone to health problems as the adult ages. In this instance, Gail has reported a serious debilitating illness that affected her capacity to learn. Such depleted capacity was exacerbated by the verbosity of other students and a fervent desire not to give in lest this be interpreted as failure.

Gail's thoughts and feelings often oscillated between enjoyment and frustration:

I'm feeling good because I'm being listened to. I'm enjoying my input

because I've got some fairly intelligent things to say. (Session 1)

I'm enjoying today and enjoying the discussions we are having.
(Session 2)

However, there were moments of frustration:

I get so frustrated because I'm not in an ideal situation and I wonder why

I'm persisting with all this. (Session 2)

Sometimes her fellow students generated these feelings:

I'm contributing quite well but sometimes I don't because some members of my group are so articulate. Sometimes I get so annoyed at that I just keep my mouth shut and let them get on with it. (Session 1)

I'm sure others are frustrated too that what we are learning in class should be reflected in the outside world. (Session 2)

However, this thought is modified by:

I know I said "frustrated" but I also feel very positive that these changes could occur. (Session 2)

How adults view their chances of success depends to a large extent on how they see themselves. Self-concept, according to the literature, is an important motivator for learning. Gail "feels good" when she is listened to and has intelligent things to say, but in the almost constant self-comparison with other students, her self-concept takes a battering. At these times Gail wonders why she persists, but in the end once she realises that her real world can be altered according to the lessons of the classroom, her motivation receives a boost.

Summary of characterisation – self-performance.

Health and self-concept may be important contributors to an adult's perception of their own self-performance. It appears a given that if health is as close to perfect as it can be, given age-related factors, then the learning process will not be affected by health. Similarly, one's self-concept, or the image people have of their own abilities, may well affect how the adult views their self-performance. If the individual undervalues these abilities then motivation to learn may be seriously undermined.

The facilitator's instructional moves and the subject matter.

Gail referred to the facilitator's teaching strategies and the content of the sessions on a number of occasions. For example, she reported that:

The revision sessions were not necessarily all that important because we've always got previous handouts to recall. However, I can see what he is trying to do - to get all to contribute, to get them to share their thoughts. (Session 1)

On discussions, she indicated:

I don't mind small group discussion but I liked the paired discussions better because I can concentrate and not be distracted by everyone else's opinion. (Session 1)

However, contrarily:

I liked that (small group) discussion because when you're in a group there's so many people who are contributing. (Session 2)

One of the sessions contained a video and subsequent small group discussion on sexual harassment:

I thought "I hope it is modern". It made me angry because I know sexual harassment goes on and the guys would only discuss the administrative procedures not the personal side. It's an important issue that can get your adrenaline pumping and you think how you can have input into it. (Session 2)

Another session involved a role-play:

Role-plays are used by the facilitator to get us to think differently. They should be a fun exercise. If you can introduce some fun into adult education, particularly at university level, you are doing well. (Session 1)

Another exercise required the students to speed read some articles:

The facilitator went on in lengthy detail about speed-reading and I thought this is something I can do because I speed-read anyway and get through papers quickly with good understanding. (Session 1)

Gail reported a few comments about the facilitator's timing of activities:

He doesn't allow us enough time to discuss things - we haven't got time to digest the information. (Session 2)

However, she did report value with exercises that involved summaries of information:

I found it a good learning exercise. I can see he is training us to edit our work. (Session 3)

She expressed positive feelings when:

I was really excited about his comments on my work. It was like an injection and that gave me such a boost. (Session 3)

On her expectations for one of the sessions:

I hope the facilitator keeps on track and keeps the class under control - just gets on with it. (Session 1)

We have been off-task a lot today and that's made me frustrated. I wish we were told to keep on target, but then we are adults and we do what we please. (Session 3)

Summary of characterisation – facilitator and subject matter.

It appears that adult learners are aware of the facilitator's instructional strategies and these strategies can evoke strong thoughts and feelings. Positive thoughts occur when the facilitator makes comments upon written work or instigates learning activities to the liking of the learner. However, the facilitator may well frustrate the deeply motivated individual by cutting short activities, by giving them activities that do not satisfy their need for understanding or by allowing off-task behaviour.

Analysis of Journal

Gail completed a jotting journal in which she recorded her random thoughts and feelings pertaining to her learning experiences on the course. These jottings were not restricted to the classroom but were entered on other occasions as she felt the need.

The dominant theme in her journal concerned Gail's illness and how it underpinned her learning experiences. For example: "Feeling worse today than yesterday – very shaky – hoping that I can survive the day". The illness caused her to become frequently frustrated by the off-task behaviour of her fellow students and often

referred to their "highjacking" of the plans of the facilitator. This highjacking took the form of unnecessary questions to the facilitator that had the effect of bogging down the pacing of the sessions. She found that she had to engage constantly in self-talk to keep focused, and when other students dominated she went off task. The facilitator's emphasis upon lecturing, and his acceptance of tangential questions from the class, sometimes caused this off-task behaviour. At one stage, Gail considered withdrawing from the course because her illness meant every day was a struggle. This contrasted with her normal healthy alertness, brightness and energy.

Another theme in her journal concerned her feelings of self worth, essentially her sense of insecurity. On a few occasions she felt insecure because of a lack of knowledge required for an assignment, and on another occasion, the assignment required input from her own experiences. The fact that she could not rely on a text made her anxious. She was pleased when the facilitator acknowledged her public utterances and was somewhat surprised at the boost to her confidence she received when she acted as group spokesperson for the first time.

A third theme indicated her perception of self-ability. While she was enjoying her learning, particularly because of missed opportunities in Year 11, she was not shaken from her self-assessment of being average. Indeed, her motivation was to pass rather than to excel. When she received a grade of 29 out of 45 this confirmed her self-assessment. However, later when she received a much higher grade (17 out of 20) for a later assignment and she discovered that others did not out-perform her she was ecstatic – "Felt fantastic when I received my assignment grade".

A Characterisation of Gail's Perception of Self-performance

The results of an attributional analysis of Gail's behaviour, together with the relevant findings of the quantitative data and interpretations from her interviews and journal, have enabled an interpretation to be made of how Gail might have perceived herself and her self performance during the training sessions. The analysis contributes to an understanding of her underlying ideas, beliefs and implicit theories about learning as an adult.

Fear of failure.

A fear of failure appears to pervade much of Gail's reported thoughts and feelings. This fear appears to be underpinned by a fluctuating sense of a lack of belief in her own ability – a sense that she often referred to as insecurity. Attending university directly from high school was not an option because of insecurities that seemed to have been formed in early childhood. When she did win competitive jobs later in life many of these were accompanied by surprise that she should be able to win such positions.

When she was accepted into university this acceptance was accompanied by a similar sense of surprise that had occurred for her in many other similar circumstances. She wondered whether she was good enough to cope with what she perceived to be a difficult situation, and one which, until the time of acceptance, had not been within her realm of possibilties. As well, her immediate fears concerned her perception of the time that would need to be taken to undertake the university course. She had set herself the challenge to gain successful entry and when this occurred there was a palpable feeling that it all had been too easy and that almost anyone could achieve entry. She was thus down-playing her own sense of worth and ability.

Once the course was underway there were frequent bouts of self doubt and her fear of failure emerged many times. During the training sessions she reported being concerned about volunteering to be the group's spokesperson. Her perception was that other students had a flamboyance and confidence that she did not possess. When she was ready to volunteer she often was not assertive enough and other more forceful personalities jumped ahead of her. Her fear of failure often resulted in an avoidance of failure. Gail reported upon this underlying reluctance on a number of occasions. Such reluctance appeared to stem from a number of her life experiences when, as a child and young adult, she was encouraged to be "seen and not heard", not encouraged to speak her mind and was rarely asked for an opinion. During the training sessions she reported this reluctance to be caused by a lack of assertiveness, her feelings of insecurity and a doubt about the relevance of her contributions.

She was able, however, to obviate these feelings of fear of failure when she had the opportunity to prepare thoroughly for an event. She reported on a number of occasions a lack of concern about her performance because she had prepared her topic well. This pervasive fear of failure is inextricably linked to her fluctuating self-perception of her own ability and a driving sense of self-motivation.

Self-perception of ability.

Gail's opinions of her own ability were formed during her early school years. She craved a "pat on the back" and some acknowledgment that what she was doing was acceptable, even exceptional. Although she was achieving reasonable grades in school she was studying secretarial subjects simply because that was what girls studied. The underlying assumption by those advising her was that was where her future lay, as it was for most girls at that time. She was implicitly being encouraged to underachieve and before she could finish high school she was told to get a job. On reflection, this became a big disappointment for her as she was at the time enjoying some excellent learning experiences at school.

On numerous occasions Gail described her ability as average. Such self-assessment started in school and continued throughout her early tertiary studies. In the latter phase this sense of being average was more the result of competing pressures, such as job, family, illness and a social life, than ability. It appears that once she had settled into the course coping was no longer a surprise. Her fear of failure and her self-perception of having average ability tended to retreat with the growing confidence that she was a survivor. This grittiness to survive was a defence mechanism against increasing the stressors in her life. She would complete a unit and ponder it no more – to do so meant unnecessary stress. Her enjoyment during learning appeared to accelerate when she had prepared and when she felt she had something intelligent to say.

Approach to learning and underlying motivation.

Gail's love of learning was formed at school when she was taught by an inspirational teacher. During her early career there were a number of instances where

she initiated a desire to learn more about a situation in which she found herself. As a nursing mother she decided to become a counsellor in that field so she sought out programs that would help her to achieve that aim. Having an asthmatic son encouraged her to discover more about the affliction so she joined a local support group. As a waitress she gravitated towards instructing others and initially she learned about the skills and knowledge required on the job. This was not satisfactory so she enrolled in a TAFE college driven by the motivation to be excellent in her job. It was at TAFE that her powerful drive to succeed manifested itself. She felt that she only had one chance at learning at this level because it required significant investments of time and money. This realisation is a key component in the difference between children's learning and even the learning of post-school undergraduates. The older adult has so much invested in their learning that failure is too costly a consequence. For younger learners there is time for other options.

Such a drive meant that she and her mature-aged colleagues at TAFE were unhappy with grades less than at the top of the scale. They motivated each other, supported each other and mixed frequently with the teachers to discuss the course content. The overriding motivation was the outcome – a sense of completion and a job well done at the end.

At university such intrinsic motivation drove Gail to continue even when her resolve to finish wavered. Her illness often caused her to doubt her ability to persist. She sometimes became frustrated with the fact that best practices as detailed in her learning could never, for a variety of reasons, be implemented at her own workplace. She constantly asked herself that there is a reason for all of the hard work and the accompanying stressors. The reason appeared to be her tremendous desire to have a sense of accomplishment when it was all over. The investment in herself was too great just to throw it all away before graduation.

Gail demonstrated a proclivity towards deep learning over surface learning. While this was reflected in her SPQ score it was also demonstrated by frequent references to her need to read for meaning and understanding rather than facts. There were constant frustrations at the facilitator's request for speed-reading when she was more interested in a slower approach. This deep approach also manifested itself in her

careful assignment preparation where she made constant reference to the need to relate the content to her own workplace.

Perceptions of other students.

Gail, on first entering university, believed that, as an average performer herself, other students would easily outperform her. She became exasperated with many of her fellow student's readiness to "grandstand", to allow their egos to dominate any class discussion. Above all, she felt that often what was being said was not related to the subject. This was a source of exasperation and annoyance particularly as, in her view, the facilitator did nothing to keep discussions on the subject. On one occasion, her emotional threshold for this type of behaviour was almost breached and she nearly left the training class early to escape the frustration. While this negative perception of other students was not dominant in Gail's ideas and beliefs it supports her inner drive to succeed in the course. These antics by her peers were a minor distraction to her own desire to satisfactorily complete the unit and move on to the next.

External pressures.

Gail faced various external pressures that could have militated against her learning. During the period of this research she suffered a debilitating illness which deprived her of certain physical and mental energy. Often she would forget simple things and this would cause her great anxiety. She was unable to concentrate for long periods during the sessions and while she was preparing assignments. She worked fifty hours per week, looked after her family and tried to conduct an enjoyable social life. Gail questioned her desire to finish the course many times and often lamented her fundamental reasons for starting in the first place. The biggest stress appeared to be meeting deadlines for assignment submission, and it was the external pressures, rather than any difficulty with the assignments, that caused this stress. The fact she was able to overcome these distracting external pressures was perhaps the one single indicator that determined the strength of her belief.

Perceptions of facilitator's moves.

As a trainer herself Gail was aware of many instructional moves by the facilitator. She agreed with his emphasis upon small group discussions though she did prefer paired discussion where she felt that she had more opportunity to say something. She objected strongly to the requirement for speed-reading as this offended her desire for deeper analysis. She was highly critical of the facilitator's failure to keep many students on task during discussions. She sometimes remarked, as well, that she did not believe that facilitators were aware of the stress that studies at this level caused for the adult learner.

Subject matter and relationship to workplace.

Gail was generally accepting that the vast majority of the content was relevant to her own workplace and indicated that other students felt the same way. She frequently indicated she felt the need to link the subject matter under discussion with her workplace. This need for relevance often underpinned her desire for task mastery. Without the relevance learning did not occur. Learning was stronger when these links were made by her own conscious cognitive processes rather than by imposed statements by the facilitator.

Summary of Gail's Study

A triangulation of data from five interviews, a self-reporting journal and the ASQ and SPQ has enabled a reasonably clear and consistent analysis of the ideas, beliefs and implicit theories that Gail holds regarding her learning experiences as an adult in a tertiary institution.

While her motivation to succeed was moderate her 'completion' motivation was high. Outstanding grades were not elevated on her list of desires but a need to successfully complete the course was high. That is, despite a raft of insecurities, illness, family and a social life Gail firmly resolved to complete the course. The underlying reason for this desire was a sense that this was a one-off opportunity – time and a lack of other resources would not have allowed a second chance.

A feeling of loss influenced Gail's completion motivation when high school learning was prematurely terminated. A sense of fulfilment was missing and the studies later in life went some way in assuaging that feeling of incompleteness. School also set up her sense of insecurity, fear of failure, avoidance of failure and her feeling of being average. However, her ASQ did indicate that despite some fluctuations between optimism and pessimism the trend in her life was one of hopefulness and a belief in her fundamental strengths as a person. Such pervading optimism appears to influence Gail's ideas, beliefs and implicit theories regarding her learning as an adult.

<div align="center">Sam</div>

First Sequence

The first sequence of the research design contained the initial interview with Sam, during which he reported his background, and his completion of the ASQ and SPQ.

Biography.

Sam was in his early 40's and after a career in the Royal Australian Air Force became an aircraft maintenance engineer with a private company. He was a top achiever during the first three years of high school but a change into a school with a technical emphasis resulted in lower grades for a few years. He did not do well at English and viewed this fact as a reason for "one of the problems at university"; that is, "I can interpret technical stuff, but I have problems with the written stuff because English was my worst subject. I was fairly good at maths, chemistry and physics."

Early motivation.

Sam was involved in training in the Air Force and, following a four week holiday in Western Australia, decided to move to Western Australia from his job and home in another state. He joined a small organisation that was responsible for non-destructive inspections of aircraft, that is a metallurgical analysis of aircraft components. He held down a second job and at the time he entered university for the

first time he was also building his own house, "Basically, I fit my study in when I can - like some nights till 5am." Both jobs had a small requirement for Sam to train others but his love of training started in the Air Force, "I got satisfaction from passing on information." He enrolled in the university course because of a desire to "top up my training skills and just to do it for my own satisfaction. My wife says I'm a perpetual student - I'm always studying something."

However, his first experience on entering university was "a bit of a shock to start with." He viewed the experience as:

I felt like the other students were higher educated than myself. A lot of them already had tertiary qualifications and they were TAFE teachers so I classified them at a higher level than what I am. So it was a bit scary to start with and I thought maybe I've bitten off more than I can chew.

Once the course had started Sam felt:

I was doing all right but my grades aren't reflecting what I think I'm capable of. I want to be a high achiever but I don't have the time to put into the work - that bothers me a bit - because I'm working two jobs and working around the house.

On using the library, he stated, "I try to use the local library because I can't get to the university library when it's open."

Sam reported that his writing experience in the defence forces militated against the culture of the academic style of writing:

I take notes in my own style of shorthand -it's short and abrupt which is the defence forces way - there's no verbosity. That's the problem I've had with writing my assignments - I tend to write short, sharp answers which is not what the facilitators are looking for.

Sam indicated his method of processing the handouts from the sessions:

In the handouts I highlight areas of interest to me. When I go home I've got them to look at. When it comes to doing the assignment, if I've got my own books on the subject, I'll translate what I've learned in class and go through the books and highlight the main points so I've got something to relate to. I relate it all back to things I have already learned or things that have occurred when I have been instructing. I can relate new information back to something. Maybe I've covered that subject before but not in as much detail so you may pick up a couple of more points to add to that information you've had before.

Sam commented upon the fact that the course was conducted on Saturdays rather than the more traditional one evening per week:

I think it's an advantage not to come one evening every week because having to travel here and then home is more time consuming than just the four Saturdays. I find the intensity of the information varies from week to week. If the information is spread over the whole day it isn't a chore. But there are other days when you've got a lot of information - especially if it's new information - when it is a chore. But we do get a lot of breaks.

The emphasis on small groups also appealed to Sam:

It depends upon the material being taught. You do hear your group's ideas and then you hear other group's ideas. But it does get quite intense at times with groups having strong conflicting opinions. It's good that there are people from different situations - you can really learn from them.

Sam reported that he had been enjoying the course thus far:

I was still apprehensive about having bitten off more than I can chew. It was always the thing when I left school that I was going to university but it never eventuated. It was a shock not having any idea of the requirements - as to how present assignments and having no background in that sort of tertiary stuff.

ASQ score discussion.

Sam's score on the ASQ, which is a measure of his explanatory style for selecting certain causal explanations for good or bad events, is tabled below:

Table 10

Sam's Attribution Style Questionnaire (ASQ) Negative Score

Dimension	Score	Possible Range
Internal Negative	4.2	1 – 7
Stable Negative	3.5	1 – 7
Global Negative	3.3	1 – 7
Hopelessness	6.0	2 –14

In the above table the lower the score the stronger the tendency to adopt that dimension.

Table 11

Sam's Attribution Style Questionnaire (ASQ) Positive Score

Dimension	Score	Possible Range
Internal Positive	5.5	1 – 7
Stable Positive	5.2	1 –7
Global Positive	4.6	1 – 7
Hopefulness	9.9	2 –14

In the above table the higher the score the stronger the tendency to adopt that dimension.

Sam displays a high level of optimism (9.9 on a 2-14 point scale) which can be explained by his high scores on the Internal Positive (5.5), Stable Positive (5.2), and to a lesser extent, the Global Positive (4.6) dimensions.

Sam's locus, or personalisation, score (5.5) is high. He believes the good things that happen to him are the result of his own best efforts rather than something outside of his control. These events are stable, or permanent (5.2), and will last in his life, but he only marginally attributes (4.6 compared with 3.3) these events to more specific causes rather than global causes that influence many aspects of his life. Generally, Sam's scores indicate a positive attributional style but there will be times in his life when this gravitates towards a less optimistic outlook.

SPQ score discussion.

Sam completed the SPQ in order to indicate the process factors with which he learns. Sam's profile (0+/00/++) indicated a predominantly, though not exclusively, achieving learning style. Such a profile indicates a student who is mainly interested in gaining good marks. The student achieves this by deliberate, careful planning that reflects a high academic self-concept coupled with ambition.

The validity of the Sam's SPQ profile was supported by his comments from his first interview. He indicated that he was a high achiever during the early years of high school and that a tertiary education was always a goal. When at university he expressed disappointment that his grades were not reflecting his capability – that there were moderating factors that prevented him performing to his own high level.

Summary of the First Sequence

The first sequence characterises Sam with a strong set of beliefs and actions about learning that anchors him within his real world of work. His belief structure for learning is Kasworm's (1999) "outside voice". Sam enrolled in university for his own satisfaction and saw it as a necessary involvement in his future. However, while academic knowledge is valuable, it is only valuable so long as it is anchored in his own world and reflective of his meaning making of life and lived experiences. He was a

high achiever at school and came to university with a similar expectation. Only time and a perceived lack of academic writing ability appeared to be a possible hurdle. Sam did not view the hurdle as insurmountable but academic writing was viewed as one of those requirements that needed to be endured so long as the academic world reinforced his own knowledge, further illuminated current knowledge and validated his expertise.

Second Sequence

During the semester break Sam reported that he had not thought much about his studies. He did indicate that he received 75 out of 100 for his last assignment:

> I wasn't really happy with it. I expected to do better because I thought I put a fair bit of effort into it. Obviously there were a couple of deficiencies. I must have misinterpreted what the lecturer wanted.

Regarding his expectations of his own performance Sam indicated, "Maybe I have to set my standards a bit lower - I'm expecting higher grades." Such a comment may be a reflection of the mastery grading he was used to in the Airforce. However, he did indicate a certain satisfaction with the grade he received overall, "I got around 75 for the whole unit and I guess that was pretty good after I thought about it."

This indication of achievement orientation also validates Sam's SPQ profile reported above. Sam's approach to assignment preparation appeared to be conventional:

> I sort of break the task into headings and pick out the main words. I'll then look for information during the teaching sessions on those particular topics whether it's in class or from reference books. I'll go to the library and punch that (the key words) into the computer and see what comes up. I'll just note take - like I'll sit down and write notes and then put it all onto the computer at home. After that I'll just try to expand it.

When asked about his thoughts on the whole course to date Sam indicated:

I think it's a good course overall. I've been in training before but not at the moment so I'm finding it a little harder to do the practical side of things. I had difficulty getting my employer to put my assignment on training needs analysis into practice - they are not proactive, only reactive. They wouldn't listen so because of this and some personality differences I decided to quit. My part time job is now my full time one.

Later he indicated:

I'm really enjoying it even though I'm putting pressure on myself for higher marks. I'm enjoying the interaction (with other students) and meeting people with a different focus away from home and work. Good to hear about what problems they're having.

Sam's commitment to his new full time position appeared to provide some important motivation:

In my new job I've got to set up a training program so what I am going to learn (this semester) will be good for that. This management is quite interested in what I'm doing. It is important to apply what I learn at university. You get feedback on what you are doing at uni and it puts meaning into doing the course. I'm basically doing it for my own self satisfaction but having some meaning at the end does help to motivate me.

Sam expanded upon his view of motivation:

Motivation is important because otherwise you will just sit there (in class) and you are not going to achieve anything and get the marks you want.

When asked about how he viewed himself in relation to the other students he indicated:

They always seem more knowledgeable than I am. They are pretty switched on people and my marks haven't changed my perception (of that). They seem to

have a lot more answers than I do. I enjoy doing the practical side more than the theory as I find it hard to put things into words. That is my major concern. I don't mind standing up in front of them all - it's just the writing bit.

Sam's Profile from the Interviews

Sam consistently reported an achievement orientation towards his learning that confirms his SPQ profile. On a number of occasions he indicated a preoccupation with the grades he expected and those he achieved. He expressed mild disappointment at his actual achievement levels while never laying the blame for his grades against his hectic work and personal schedule. These attributions confirm his ASQ profile when he indicated a high internal positive dimension.

His trade background appeared to militate against the university requirement for "academic English" but while this concerned him it did not appear to feature as pervasive. He expressed enjoyment with the small group approach to learning but did express an expectation that other group members were more knowledgable.

He adopted a fairly conventional approach to assignment preparation though the effort to discover key words and then to search databases with them indicated certain research maturity.

Sam demonstrated incredible resilience by combining an attendance and study regime with two jobs, building a home and a family life. Amazingly, he never saw any of these as a serious detractor from his achievement on the course. Such a viewpoint indicates a strong set of beliefs that can be termed the "outside voice" (Kasworm,1999). University for Sam was a culturally unique place with only fragmentary connection to his life, family and work. While perhaps fragmentary Sam recognised that a credential was necessary and graduation was important even though the classroom was somewhat distant and detached from his real world. He appeared to be most satisfied when he was able to generate meaning from the course content, thus satisfying one of Wlodowski's (1999) conditions for adult learner motivation.

Third Sequence- Quantitative Analysis of Covert Behaviour

During this sequence Sam was observed over three 3 hour learning sessions and he also completed a self-report journal. Data from the observations and report were treated quantitatively and qualitatively.

Sam's reported covert behaviour during the three sessions was divided into interactive and non-interactive thoughts and feelings. Only the interactive thoughts and feelings, that is those thoughts and feelings actually experienced during the sessions, were quantified. The modified version of the content analysis system of student interactive thoughts, CASSIT (King, 1979), was used for this purpose. The number of interactive thought units in each of the ten categories for each session was expressed as a percentage of the total number of thoughts identified. See Table 12.

The greatest percentage of thoughts reported by Sam fell within the Behavioural Moves-Student category (nearly 23%) which were closely followed by Cognitive Processes (nearly 20%), Self Performance-Thoughts (17%) and Self Performance-Feelings (16.5%). Subject Matter thoughts, Feelings-Positive and Behavioural Moves-Self were lowly ranked. There was also some evidence of Non-task Related thoughts in Session 1.

Table 12

Percentage Distribution of Student Thoughts over CASSIT Categories for Each Session: Sam

Categories of Student Covert Behaviour	Session 1	Session 2	Session 3	Percentage of Total
Subject Matter	14.0	4.8	1.9	6.3
Cognitive Processes	25.6	11.3	24.5	19.6
Behavioural Moves -Self	2.3	1.6	-	1.2
Behavioural Moves – Student	14.0	12.9	41.5	22.8
Behavioural Moves – Facilitator	11.6	16.1	1.9	10.1
Self Performance - Thoughts	11.6	17.7	20.8	17.1
Self Performance – Feelings	16.3	22.6	9.4	16.5
Feelings – Positive	-	12.9	-	5.1
Feelings - Negative	-	-	-	-
Non -Task Related	4.7	-	-	1.3

Interactive thoughts in five categories were further analysed according to those thoughts and feelings that constituted those categories. These are tabulated in Table 13.

Table 13

Within Category Percentage Distributions of Sub-Categories of Selected Student

Thought Categories: Sam

Categories		Within Percentage	Percentage of Total
Behavioural Moves – Self			
Seek public participation		-	-
Avoid public participation		-	-
Attending-listening		50.0	0.6
Not attending-listening		-	-
Motive to attend		50.0	0.6
	Total	100	1.2
Behavioural Moves – Student			
Perceptions of other student's performances		31.0	7.0
Inferences of other student's thoughts		16.7	3.8
Interaction – positive		27.8	6.3
Interaction – negative		-	-
Perceptions of other students' behaviour		25.0	5.7
	Total	100	22.8
Behavioural Moves – Facilitator			
Perceptions of facilitator's instructional moves		93.7	9.5
Perceptions of facilitator's reactions		-	-
Interactions		-	-
Perceptions of facilitator's overt behaviour		6.3	0.6
	Total	100	10.1
Self Performance – Thoughts			
Self assessment – success		29.6	5.1
Self assessment – failure		3.7	0.6
Perceptions of task difficulty		11.1	1.9
Perceptions of task structure		11.1	1.9
Self attributions		22.2	3.8
Self expectations		22.2	3.8
	Total	100	17.1
Self Performance – Feelings			
Anxiety		42.3	7.0
Morally neutral – positive		53.8	8.9
Morally neutral – negative		3.8	0.6
Morally unneutral – positive		-	-
Morally unneutral – negative		-	-
	Total	100	16.5

An examination of significant categories using information from Table 12 and Table 13 combined follows.

Behavioural moves – student.

Sam reported more thoughts and feelings about other students' performances than other categories. This finding supported his references to his perception of other students' level of ability reported in his pre-treatment interviews. When he interacted with other students these interactions were decidedly positive and never negative, which again supported his liking for group work indicated previously.

The quantities of these thoughts and feelings dropped off during the Session 2 but almost trebled for Session 3. In Session 3 this category was dominant. One reason for this increase in this Session may have been the high level of opportunity for individual students to demonstrate their knowledge publicly.

Cognitive processes.

Sam reported a large number of thoughts that were concerned with learning the subject matter of the sessions. Quantities of these thoughts were consistent in Sessions 1 and 3 but halved for Session 2. Many of these thoughts were about what the facilitator was saying and how his words supported Sam's own notes and his own views of the world. Sam reported a large number of occasions where he was tuning his understanding with what was being presented.

Self performance – thoughts.

Sam's thoughts about his own performance steadily increased over the three sessions, from 11.6 % to 20.8%. He reported becoming increasingly contemplative about his achievements during the unit and how he perceived his performance during the sessions. The closer in time the first assignment was due the more he reflected upon his current progress and anticipated outcomes. These thoughts were mostly of success

and any thoughts of failure were minimal. This illustrated his level of motivation revealed in the pre-treatment interviews.

Self performance – feelings.

Many of these thoughts were accompanied by a variety of feelings that vacillated between feelings of joy and a lack of concern to periods of worry and concern. The quantity dropped off markedly in Session 3 and it is interesting to note that this introspection was subsumed by the huge increase in thoughts and feelings about other students. There appeared to be a remarkable shift away from self-reflection to an external focus in that Session. For instance, on one occasion in Session 3, Sam indicated that he was so involved in an activity that he was surprised at how quickly the time had gone.

Other categories.

Sam indicated few thoughts and feelings about the facilitator and when he did the majority concerned the facilitator's instructional moves. Sam's own experience as a trainer probably meant that he was interested in how another facilitator conducted the learning situation. For example in Session 2, he indicated that he thought the facilitator had used a particular activity because he wanted to stimulate the learners' thoughts.

Session 1 revealed a significant number of non-task-related thoughts and feelings. These did not occur again. All of Sam's thoughts and feelings concerned the hospitalisation of his wife during the timeframe around the session, and it was these thoughts and feelings that distracted him from the experiences of the session.

Summary of Quantitative Analysis of Covert Behaviour

The quantitative analysis of Sam's covert behaviour in the three sessions provided some insight into that behaviour during learning. There was some anxiety associated with external work pressures and the sickness of his wife, but generally Sam reported positive thoughts and feelings. A majority of these thoughts and feelings were about other students, either self-comparisons with perceived intellectual strengths, or the

simple joy of interacting with others in group work. As an example, in Session 1 he
stated that he perceived the others to "be more knowledgeable so I try to pick up what I
can from them". There were frequent references to conscious cognitive linkages with
what was being discussed and Sam's experiences and view of the world – his "outside
voice" (Kasworm, 1999). In Session 1, he spoke of responding to the facilitator: "I'm
trying to picture the thoughts he's (the facilitator) asking for and relate them to my own
experiences". Self-reflection was also prominent with frequent allusions to mostly
positive thoughts and feelings about self-performance. For example, in response to
receiving a good grade for an assignment, Sam said: "That's made me feel more relaxed
about the second assignment I guess – um – hopefully I'll do as well in that".

Third Sequence-Qualitative Attributional Analysis of Self-performance Covert
Behaviour

Much of Sam's mental activity during the three sessions pertains to his thoughts
and feelings about the behavioural moves of other students, cognitive processes and
self-performance thoughts and feelings. A qualitative analysis of the causal
explanations of these thoughts and feelings reveals some of his underlying beliefs,
ideas, views, emotions and lines of reasoning which are presented below.

Causal explanations of Sam's behaviour.

The transcripts of the interviews with Sam contained several chains of comment
that included causal explanations and perceptions of his own behaviour and that of other
students. He reported an initial cognition that was often followed by a causal
explanation and an emotional consequence. For example, on one occasion the
facilitator was discussing the requirements for all students to ensure the conventions of
referencing in papers was adhered to, and Sam reported:

> I think this is an important part of the lesson (cognitive statement) because I can
> see that others are having problems (causal explanation) and, as I am having the
> same problems, that makes me feel that I am not the only one not coping
> (emotional consequence). (Session 3)

As with Gail, the conjunction "because" (either explicit or implicit) was sought in the transcripts to identify possible causal chains of comment. An examination of these linked comments revealed that they could be clustered into public participation, approach to learning and self-performance.

Public participation.

Sam consistently reported positive thoughts and feelings about his perceptions of being part of a small learning group. For example:

> I enjoy being with this group because they have strong opinions and I find that encouraging when I want to learn something. I like to hear their ideas. (Session 3)

This is a good case of the need for adults to learn from each other and is indicative of Sam's attitude towards the small group learning that characterised these sessions:

> I made sure I got the referencing exactly as it is in the guide and the other students are concerned about this too. This makes me feel part of the group because everyone else has the same problems (with referencing). (Session 3)

On another occasion he related similar thoughts:

> You feel that you are the only one who feels this way – but realistically there are probably others who feel the same. I like to hear what others have to say because I feel they are more knowledgeable and better educated. I try to pick up what I can from them. I take notes from what they say so that I can use them later. (Session 1)

Sam's motivation and confidence appeared to be connected to his view of the group:

> I like to be involved in the group from the start and contribute if I can. I didn't feel confident today but I felt I had to contribute something to this group so I was

lucky I read enough to contribute. Someone said to me they felt they weren't as well educated as the others, which was interesting because that's how I felt. That statement made me feel more relaxed because I realised there were others who felt like me. (Session 1)

On another occasion he stated:

I don't expect to perform well today. My wife is in hospital and I have had no time to devote to the assignment but I want to contribute. (Session 2)

By the end of the session, however, Sam indicated:

I've had a lot more input today and am more relaxed. I'm performing quite well. OK, I'm busy. My wife's in hospital but I'm still here and I want to learn so I think I have adopted a different attitude and that's helped. I'm not one of the top students but I am holding my head above water. (Session 2)

A successful session for Sam appeared to be measured by the amount of involvement with other students:

This was a good session because there was involvement from everyone. The session went quickly because all the group work made it stimulating. (Session 1)

Summary of characterisation – public participation.

Inclusion results when adult learners feel that they are part of an environment in which they are respected and connected to one another. Inclusion is an important motivator for the adult learner. Sam demonstrated a strong sense of inclusion by frequent references to his enjoyment of the opinions of his peers, his identification with like individuals and a sense of feeling part of the group. While such inclusion assisted Sam cognitively, perhaps more importantly, the sense of inclusion generated a pervading feeling of happiness and enjoyment. He could enjoy the often opposing and different perspectives, but at the same time the mutually accepted, common culture encouraged him to feel safe, capable and accepted.

Approach to learning.

Sam often referred to his practical hands-on background as opposed to a theoretical background. When he perceived the content to be "too theoretical" it became difficult because his experience was practically oriented. This technical approach appeared to affect his approach to note taking, reading and writing:

> I have learned a lot. I've got lots of resources to look at. I've been highlighting main points. I use dot points because of my technical background. I go home and rewrite the points in my own way and then reinforce my learning by re-reading them. (Session 2)

On another occasion:

> I'm a slow reader because of my previous poor performance in English. I note just the main points – say 5 or 6. I'll note them into say 3 or 4 points and try to reflect back and relate them to something else in the course or the workplace. (Session 2)

When commenting upon a silent reading exercise, he said:

> I found it easier this time because there was less information to comprehend. I highlighted the main points and used these to answer the questions. As I read in detail I found I disagreed with some of the points because it wasn't what happened in my work. (Session 3)

His comment upon his own writing again reflected his experience with the terser demands of technical writing:

> I find it hard to produce the quantity of words he (the facilitator) wants in assignments because of the way I write from my background experiences. (Session 3)

Sam was required to prepare an assignment based upon a selection of three articles that were given to the group by the facilitator. He described his preparation for the assignment:

> I just picked one article and made notes on it. I didn't want to be confused by reading all three as it was no good discovering one was harder so I would waste time. I went to the library to find some related material and took notes. I entered the notes into my computer; however, mostly I write them down – putting them into the computer doesn't seem the same. (Session 2)

On another occasion he described the way he prepared for a three hour open book examination:

> I'll research the article he (the facilitator) has given us and look at some of the literature I have at home. I look at how I see the questions he has asked reflect my point of view and I'll just start jotting down information and hopefully be able to compile it all together by the end of the week. I find these three-hour exams fairly difficult because I'm not a fast writer. I'm a slow writer and I haven't got the time to sit in class and actually write down and research in that three-hour period. So I've got to research it all and have it all typed up so I can write it down word for word off the typed sheet. Even though it's called an open book exam it's basically all prepared beforehand and just written out from a typed sheet word for word.
> (Session 3)

Both of these examples appear consistent with Sam's SPQ achieving profile. He uses economy of effort by concentrating on what he perceives the facilitator requires and simply regurgitates that. This approach worked for him:

> Last time I did it – it took me exactly three hours to write what I had (previously) written down – I got a reasonable mark from that so I'm going to do the same this time. (Session 3)

Sam was clearly focused upon the product. In this case, the focus was upon the mark that was generated by a process that had been successful last time. While this achieving strategy was used to maximise grades it may have meant deep engagement with the task, but this engagement appears to be more a means than an end.

Summary of characterisation – approach to learning.

Sam's approach to learning typifies his "outside voice" belief structures about university. He viewed the classroom as an academic game of memorising and acting on short-term recall to achieve acceptable grades. He demonstrated highly selective actions and a set of judgements that were related to deeper approaches to learning. Such judgements were rooted in his beliefs about his current expertise and his very practical world. The assessment process was one that had to be endured, and given a choice, Sam would probably have preferred an assessment procedure more connected to the world of work.

Self-performance.

On a number of occasions Sam reported difficulty remaining focused during the sessions. His wife was in hospital, he was building his house and working at two jobs:

> My mind was not on the task because I was thinking of my wife. Being like this is unusual for me – to be 75% on task and 25% off task. It's been hard – my mind is not on it so I haven't participated properly and that disappoints me. (Session 1)

The pressures were such that:

> I did ring him (the facilitator) about it earlier in the week to ask for an assignment extension. (Session 1)

Regarding his expectations for one of the sessions, he reported:

I had a busy week and hadn't thought about it (the session) but I am enthusiastic as it is the last session. However, I didn't prepare – I didn't even look at what was on the agenda. (Session 3)

The pressures did, however, seem to ease as the sessions progressed:

I feel more relaxed because I decided there was no point in putting more pressure on myself. I'd get better results by being more relaxed. It was a conscious effort to relax – I had a different attitude today. Today I'm 90% on task and 10% off. I feel more relaxed today as I have Sunday off tomorrow and that adds to the relaxed feeling even though I have to work tonight. (Session 2)

Sam commented a number of times about the activities in the sessions and his perceptions of his self-performance. For instance, he reported anxiety when the facilitator introduced a role-play:

I'm fearful because I don't know who I'm going to be. It's difficult for me to put myself into somebody else's shoes. (Session 1)

Again there was anxiety when he was asked to contribute to a group discussion:

It was a bit of a shock to start with – I felt nervous. It was not like being an instructor but I felt pretty good at the end. (Session 2)

He did report positive feelings about paired learning groups:

These avoid one person dominating as there are more chances for sharing. It worked quite well because we both got each other's ideas and we worked as team. (Session 2)

On one occasion the facilitator showed a video:

This was funny – mostly people nod off like in a lot of technical videos. We had a sheet with answers to fill in but this was difficult with the lights off. An interesting discussion followed and I liked it when our group discussed most of the main points. (Session 2)

He reported positive experiences with small group discussions:

They stimulate your own ideas and you find out about others'. I find it interesting that other's ideas can be so different. I try to relate what others are saying to my own experiences. (Session 1)

Sam's achievement orientation was also demonstrated when he reported thinking about assignment grades:

I will be lucky to get 50%. That doesn't make me feel good. It (the assignment) was more literature-based than practical. If I'm lucky enough to get a higher mark I'd be really happy – I'm not expecting it though. (Session 2)

In fact, the result was better than expected:

I scored 14 out of 20 which was greater than I expected. I am happy about it even though it's not as good as others got. I'd be happy though, to get this on the next assignment. (Session 3)

Summary of characterisation – self-performance.

Sam's achievement orientation is demonstrated clearly in this section. He feels frustrated when for external reasons he cannot participate fully in group work. From experience he is aware that he will achieve more once he is relaxed. However, trepidation about role-plays and being a major contributor to group work, along with external pressures, was a source of frustration to his achievement orientation. When the requirement for "literature-based assignments" was added to his frustration level he felt the pressure of the "academic gameplaying".

Analysis of Journal

Sam's Journal jottings were sparse but more interesting to the researcher for what was not included than what was. He started by commenting upon his disappointment with an assignment result and his final entry was:

> A little disappointed overall. Will need to increase effort next year to improve my marks. Feel that I could have done better. Having no benchmark (course average) to compare against means no possibility of judging my effort. Passing all subjects is a bonus but would like to have passed higher than just above passing point.

These final comments demonstrate Sam's tendency towards an achieving learning profile. Though, while such a profile " involves a high degree of metalearning, relating both to context (awareness of self, task and context, with deliberate planning of time and resource allocation) and to content (optimal task engagement)" (Biggs & Moore, 1993, p. 314), Sam appears to be indicating that more effort will result in more learning. His journal comments appear to support that view. As well, his reference to a benchmark reinforces his perception that it is important to be aware of a standard so that one can strive to achieve it.

Perhaps more telling was the statement:

> (Researcher's name), apologies for the lack of information during the time of the sessions. I have trouble putting feelings into words.

This comment was entirely consistent with Sam's reported comments about his technical training and its difference from the narrative, academic style that he perceived was required at a tertiary level. As well, an examination of his transcripts indicated that he did not have trouble reporting his feelings orally.

A Characterisation of Sam's Perception of Self-performance

The results of an attributional analysis of Sam's behaviour, together with the findings of the quantitative data and interpretations from his interviews and journal, have enabled an interpretation to be made of how Sam might have perceived himself during the training sessions. The analysis goes some way into discovering his underlying ideas, beliefs and implicit theories about learning as an adult.

Achievement motivation and approach to learning.

Sam reported achieving high grades in early high school. Throughout the transcripts he reported a preoccupation with achieving high grades at university, though there were practical reasons why this was not always realised. His motives were to achieve success, rather than avoiding failure, for himself and perhaps to prove to fellow students that he could perform at a high level. These motives are borne out by Sam's organising strategy: his note-taking regime followed up by further library research; his need to condense any reading into major learnable points and his technical writing background that determined any writing should be clear, succinct and concise. His open book examination preparation strategy, whereby he wrote out word for word the answers he would regurgitate in the exam, was a clear illustration of this need for success.

Sam frequently referred to his need to relate session notes back to his own experience thus adding to his current level of knowledge. He would break down a task for an assignment, find additional information on each of the sub-headings and then expand those sub-headings back to form a complete assignment. His view of learning is therefore constructivist, whereby he makes meaning that is dependent upon his previous and current knowledge structure.

Perceptions of other students.

Other students loomed large in Sam's thoughts and feelings. Initially, his perception of his own ability ranked below his perception of that of his fellow students. His perceived lack of ability in English, his trade background and lack of formal

educational qualifications put him at apparent odds with others - all of which made him apprehensive about his leap into tertiary learning. Once the course was underway he made constant reference to learning a good deal from other students. At times he appeared almost in awe of the knowledge they demonstrated. At all times he reported his interactions with others as positive, never negative. He was the acolyte learning at the feet of the educationally accomplished. Yet his belief in his own ability enabled him to feel comfortable in such company and this belief motivated him to achieve.

He showed a positive disposition towards group work and enjoyed the interaction with other students. He felt especially comfortable when he ascertained that others were feeling the same as he was – he was not alone.

Perception of writing ability.

Sam often remarked upon the difference he perceived in his technical writing style and the academic writing style that was required at university level. He believed this was a problem because his lack of experience in tertiary studies meant that he had no idea of the requirements at the higher academic level. This belief was a concern to him and he was probably aware that his writing style cost him some marks in assignments.

External pressures.

Sam studied under incredible difficulties. For some time his wife was hospitalised and this clearly affected his focus. He was working at two jobs that meant he often had to attend learning sessions with minimal sleep, or had to work a shift on completion of an eight hour classroom session. He was also building his house and had the normal duties of husband and father. However, his desire to achieve and pride in himself would not allow him to give in to these pressures, or more positively, allowed him to adjust his routines to fit his learning commitment.

Summary of Sam's Study

A triangulation of data from five interviews, a self-reporting journal and the ASQ and SPQ has enabled a clear analysis of the ideas, beliefs and implicit theories that Sam holds regarding his learning experiences as an adult in a tertiary institution.

As a top achiever in his early years at high school Sam approached university with the confidence that he could do well. Nevertheless, there was some apprehension expressed as to the expectations of the course and the academic achievement of other students in the group. English was a problem area at school and, coupled with a technical and practical orientation, Sam expected to have concern with the level of academic writing that would be required. He was highly motivated which seemed to be triggered by a confidence generated from a reasonably successful secondary education, experience on other courses and a desire to gather knowledge to further his training career. Unfortunately, external pressures prevented any high achievement but he never considered giving in to these pressures. He was able to place them into context and get on with the task of learning.

Sam adopted a conventional approach to acquiring information – highlighting major points from textual material and measuring that new knowledge with current experiences. He often referred to what might be termed a constructivist approach to learning whereby he envisioned that any new learning could be successfully added to his store of current knowledge.

Sam demonstrated a high level of optimism, not only as indicated by his ASQ score, but on numerous occasions in the transcripts. For example, despite considerable external pressures he rarely wavered from his goals. He also demonstrated a classical achieving orientation in his view of learning. Sam frequently referred to his desire to achieve high grades and his disappointment if he did not. He was aware of what the facilitator wanted and set out to deliver exactly that. This achieving profile was underpinned by a deep-level strategy as demonstrated by repeated references to his own cognitive processing and his constant desire to relate new learning to his own view of the world. Such a strategy demonstrated his "outside voice" belief system.

Sam enjoyed being part of the student group, and a measure of a successful session was the amount of involvement of everyone, including himself. His technical background, however, was always a source of doubt as to his own ability with regard to his perception of the abilities of his fellow students.

CHAPTER 6

Dee and Pat

Introduction

The studies of Dee and Pat proceed in a similar way to those of Gail and Sam in Chapter 5 . The profiles on each student are presented by following the research design sequence of first interview, between semester interview and a quantitative and qualitative analysis of covert behaviour over three, three hour classroom sessions. During the first sequence, the researcher interviewed each student prior to the research treatment in order to establish each student's background, motivation and expectations for learning at tertiary level. The students also completed the Attribution Style Questionnaire (ASQ) and the Study Process Questionnaire (SPQ). These events occurred part way through their first semester at university.

During the second sequence of the design both students were interviewed again in the mid-semester break to discover their thoughts and feelings about their first semester experiences.

In the third sequence, both students were observed in the morning for three hours over three sessions in second semester. Each session was at least one week apart. They were interviewed during the lunch break on each occasion in order to discover reported thoughts and feelings about the morning's learning situations. Dee kept a self-report journal (Pat declined to do this) in which she recorded thoughts and feelings as they occurred about the learning situation. Many of these entries occurred outside classroom hours. These combined data sources provided an opportunity for analysis of both students' covert behaviour during the sessions.

The causal perceptions and explanations of student behaviour, as reported by the student, were also examined in order to ascertain a characterisation of each student's conception of self-performance.

Dee

First Sequence

The first sequence of the research design contained the initial interview with Dee, during which she reported her background, and her completion of the ASQ and SPQ.

Dee was in her middle 40's. She did not enjoy her school days because she found school largely "irrelevant to anything I really had ideas about." Besides "girls weren't expected to do very well – they were groomed to get married." Dee stated she was not a brilliant student but her brothers and sisters were. She wanted to be a hairdresser but "my parents didn't want that so I was streamed into the professional course at high school." High school was not difficult but "I didn't like it. I was not motivated so I left school at 15 and did some secretarial work which I hated."

Dee was married at 18, had two children and re-entered the work force at 24 with "an interesting job in the Bureau of Statistics." Her marriage broke up and she went into a job selling power tools that she "quite enjoyed." This led her to a position with a hire firm that specialised in hiring power tools and equipment to individuals and businesses. She rapidly advanced to become the credit manager but only after a period that involved a "lot of hard knocks – there was no training, just learning by experience." Her new position was "a little frightening because I had never seen an invoice." To overcome this she attended a TAFE course and undertook "a very relevant credit management course." The TAFE course was of assistance in her job, but more importantly, she said:

> It enabled me to grow my intelligence. The adult learning experience is highly satisfactory for me. I do as many courses and seminars that I can. I find the experience of being in a group of people and talking about things important so long as it is relevant to my job. Part of the course was about economics and that was irrelevant to credit management. Relevance is very important to my own motivation and assignments need to be pertinent.

Dee was thrilled to be accepted into the degree program at university but did not expect it. She stated:

> I'm not a university-type person. I haven't had a lot of formal prior learning. I have done a lot though and reached executive status which is fairly difficult for a woman, but I still didn't expect to be accepted. I was excited about it – it was special for me to go to university. I had never thought about it – it was never an expectation put on me. My son went and I thought that was terribly exciting.

Dee's interest in training emerged at the time her son graduated from university to become a teacher. She attended a five-day train the trainer course:

> I thought it was wonderful and I did quite well – that made me feel good about it. However, I panicked when I was asked to teach a group of peers. I got the faints and went weak in the knees. However, there were lots of people like me and that made it easier.

When accepted into university, Dee said:

> I kept asking myself all the time – what's it going to be about? What will be expected? We weren't told a lot. I was terrified of the library – it was foreign, so alien. I was scared and at 46 that is absolutely ridiculous.

Dee had received an assignment result prior to this interview and she expressed extreme disappointment with her result:

> I would like to have known my position in class – as most adults do. They (the facilitators) expect you to spend hours and hours researching – that's not how I learn. I only learn from relevance. I don't go through books *ad nauseum* which a lot of people in the class do. I got the two main books that the facilitator said to get. I was a very lucky girl because a lot of people couldn't. I felt guilty though because I wasn't going to look at the 50 or 60 on the reference list. I did

my assignment on a training needs analysis that we at work need very badly – it was extremely interesting to me.

When asked about feeling guilty about not reading through the large reference list, Dee explained that her perception of a tertiary student was that of a learned person who is reading all the time. She did not have the inclination or the time:

I work 9-10 hours per day and go to university on Saturdays. I suppose if I were a full time learner my idea of learning might change – I don't know, I never had the luxury. It's not the biggest part of my life. I am aiming to become a useful human resources person and I hope this course will assist me to do that.

Dee indicated her viewpoint on learning:

I don't learn for the sake of gaining knowledge *per se*. I like to focus on something. I can always go to a book and expand it – the book must fit my idea, not vice versa. Learning always comes back to something I can relate to. In either my life or workplace or feelings I have about myself or other people or any of those things. If that relationship is not there I don't know what happens to the information. I'm constantly relating back to situations in my own consciousness, I suppose. Relevance is my most powerful motivator.

ASQ score discussion.

Dee's score on the ASQ, which is a measure of her explanatory style for selecting certain causal explanations for good and bad events, is in Table 14 below:

Table 14

Dee's Attributional Style Questionnaire (ASQ) Negative Score

Dimension	Score	Possible Range
Internal Negative	4.5	1 – 7
Stable Negative	3.8	1 – 7
Global Negative	4.8	1 – 7
Hopelessness	9.2	2 –14

In the above table the lower the score the stronger the tendency to adopt that dimension.

Table 15

Dee's Attributional Style Questionnaire (ASQ) Positive Score

Dimension	Score	Possible Range
Internal Positive	4.0	1 - 7
Stable Positive	4.5	1 - 7
Global Positive	5.0	1 –7
Hopefulness	9.5	2 –14

In the above table the higher the score the stronger the tendency to adopt that dimension.

The scores indicate no tendency towards either hopefulness or hopelessness. Positive and negative scores are marginally above mid range and tend to negate each other. Dee's personalisation, or locus, dimension indicates that she perceives events occurring to her almost equally as a result of external influences as well as internal influences. Her stability, or permanence, score indicates a marginal perception that good events in her life will last. Her global, or pervasiveness, score is also equally distributed indicating a vacillation between a perception that causes of events will affect

many aspects of her life and some particular experiences. Dee's scores show no indication either towards an optimistic or a pessimistic view about what happens to her in her life. The ASQ is largely inconclusive.

SPQ score discussion.

Dee's score on the SPQ indicates a profile (++0++-) that is surface predominant. A person with this profile tends to have a poor academic self-concept and is often an early school leaver. They underestimate their own performance relative to peers and are dissatisfied with their own performance. Where rote learning is appropriate surface learners will adopt this as a strategy at the expense of structural complexity and depth of learning. The surface approach can be imposed upon learners when they are subject to time pressures that prevent them from spending time in exploration of concepts. However, often any corner cutting that occurs due to external pressures does not unduly concern the surface learner.

Summary of the first sequence.

While there was a certain amount of awe for Dee on entering university for the first time she seems to have skipped the "apprenticeship" role almost entirely. In this respect she seems to be supporting Kasworm's (1999) findings with students of a similar disposition. There are few indications that Dee immersed herself in the rituals and routines of classroom learning, but instead adopted a learning world in which she actively sought connections and potential utility of the learning experience to her context beyond the classroom. Her frequent allusions to relevance support this contention. Indeed, the need for relevance appeared to be an important motivator for her.

Dee's surface predominant learning strategy appears consistent with her "outside voice" (Kasworm,1999) belief structures. Her no nonsense approach demonstrates a strong set of beliefs and actions anchoring her in the real world of work. For Dee academic knowledge is valuable provided it is anchored in her own world and reflected in her perspective of her life experiences.

Second Sequence

The second sequence of the research design contained an interview with Dee after her first six months at university. Dee indicated that she was pleased with her grade in the unit just completed – "it wasn't terribly difficult but could have more relevant if there had been more practical exercises – there was too much theory. If I were doing it again I would try to influence the content – I think a lot of people have expressed that." Her thoughts about a second unit that she completed were ambivalent. She reported:

> It was shocking – we had six weeks to do an enormous assignment, to develop a training plan. I spent a lot of time crying rather than writing because it was so huge – it was incredible. I had never done anything like that before. But the experience was excellent and I was extremely pleased he (the facilitator) made us do it.

Dee indicated that the assignment caused a lot of angst amongst the group when it was first received, but she stated:

> Now I've got it back I've put it to my management. I was too frightened to before in case it was a load of rubbish.

When asked about the grade she achieved, she said:

> I got a distinction and that felt excellent. However, I'm not sure though whether the training plan would actually work because of the geographic spread of my operations. In any case, I felt pleased and over the moon about my final mark of 89 out of 100. The other unit was graded Pass/Fail and it wasn't terribly pleasing to get just a pass. I prefer a rating.

This latter comment is interesting as it supports Dee's SPQ surface predominant profile – a rating would enable her to compare herself with her peers and satisfy her need to rank herself with them.

For Dee, the training plan assignment loomed large in her thinking:

> It started badly. I was on holiday just before the first session and I'm not sure it was explained properly as to what we had to do. Everyone raised objections to it because it was so large.

This is an interesting comment because, again in the light of her SPQ profile, Dee appears to be constantly seeking high structure in the allocated tasks. As well, the assignment seemed to take up an inordinate amount of time:

> I think it took about 80 hours. I feel this was typical of the group. It was probably more like 100 hours if you are counting staying awake at night worrying about it. I could do some of it at work though. I got my manager's permission because it was relevant to my work anyway. The facilitator was under tremendous amount of pressure to change the unit but he stuck to his guns. In the end it turned out all right – it was a valuable thing to do.

Interestingly, this depth of concern does not fit Dee's surface predominant SPQ profile, but it can be surmised that it may have been the lack of structure supporting the assignment that caused her anxiety, rather than a desire to delve deeply into dealing with the subject matter.

The ambivalent experience of her first semester established her expectations for the second semester:

> Anything I do after that (first semester) has got to be easy, so I'm quite looking forward to doing the next unit. It will probably be a little bit of light relief – a 'nice to know' rather than a 'need to know'. I'm looking forward to the next unit on competency-based training because we are really into that at work. I don't think anyone understands it here so it should be good.

Dee's Profile from the Interviews

Dee found her school experiences to be largely irrelevant – an irrelevance that was probably aggravated by the societal pressures of the time that girls were expected to marry rather than get an education. For Dee the matter of relevance loomed large in her thinking about adult learning. The more relevant a topic or experience the more satisfying it became for her. It was perhaps her early experiences at school and work that influenced her low expectations of entering university and her fear of the unknown when she was accepted into her course. Once into the course her ambivalence about the entire experience is evident. At times she was frustrated, at others immensely pleased. For instance, she was pleased with her grades but was concerned that she could not compare her scores with her peers. Dee showed preference for highly structured experiences and stated aversion to what she termed "academic learning", or learning that was more research oriented rather than experiential. Such a preference entrenches her belief system very much in the "outside voice" belief structure for learning action.

Third Sequence- Quantitative Analysis of Covert Behaviour

During this sequence Dee was observed over three, 3 hour learning sessions and she also completed a self-report journal. Data from the observations were treated quantitatively and qualitatively.

Dee's covert behaviour during the three sessions was divided into interactive and non-interactive thoughts and feelings. Only the interactive thoughts and feelings, that is those thoughts and feelings actually experienced during the sessions, were quantified. The modified version of the content analysis system of student interactive thoughts, CASSIT (King, 1979), was used for this purpose. The number of interactive thought units in each of the ten categories for each session was expressed as a percentage of the total number of thoughts identified. See Table 16.

Table 16

Percentage Distribution of Student Thoughts over CASSIT Categories for Each Session: Dee

Categories of Student Covert Behaviour	Session 1	Session 2	Session 3	Percentage of Total
Subject Matter	2.7	9.4	2.9	4.6
Cognitive Processes	10.7	17.0	11.8	12.8
Behavioural Moves - Self	10.7	1.9	2.9	5.6
Behavioural Moves – Student	25.3	7.5	35.3	24.0
Behavioural Moves – Facilitator	13.3	9.4	10.3	11.2
Self Performance - Thoughts	18.7	35.8	10.3	20.4
Self Performance – Feelings	18.7	18.8	23.5	19.9
Feelings – Positive	-	-	-	-
Feelings - Negative	-	-	4.4	1.5
Non Task Related	-	-	-	-

From the above table it can be seen that the largest proportion of Dee's covert behaviour was contained in the category behavioural moves-student (24%) followed by self performance-thoughts (20.4%) and self performance-feelings (19.9%). Cognitive processes (12.8%) and behavioural moves-facilitator (11.2%) were moderately represented while behavioural moves-self (5.6%) and subject matter (4.6%) were not well represented. There were some negative feelings but no positive feelings or non-task related processes were found.

For Dee, the interactive thoughts in five categories were further analysed according to sub-categories of what the thoughts were about. This more intensive analysis enabled a clearer understanding of Dee's thoughts and feelings during the sessions. The information is contained in Table 17.

An examination of significant categories using information from Table 16 and Table 17 combined follows.

Behavioural moves – student.

Dee, in Session 1, reported a high percentage of thought units dealing with her perceptions of other students. Most of these were concerned with perceptions of other students' behaviour, their performances and inferences about their thoughts. For example, at one stage she was bemoaning the fact that, because of a lack of time, she was unable to ask more questions in the session and she thought a lot of other people felt the same. Such a feeling is understandable considering that when entering any new situation people show a lot of interest in those around them. Dee had also previously made frequent reference to her interactions with the other students about certain aspects of the first semester assignments. She was demonstrating a continuance of the trait during the treatment sessions. While this concern dropped away in Session 2, it dominated Session 3. In this latter session, Dee reported her continuing intention of being part of the group rather than outside it.

Table 17

Within Category Percentage Distributions of Sub-Categories of Selected Student

Thought Categories: Dee

Categories		Within Percentage	Percentage of Total
Behavioural Moves - Self			
Seek public participation		54.5	3.1
Avoid public participation		-	-
Attending-listening		27.3	1.5
Not attending-listening		-	-
Motive to attend		18.2	1.0
	Total	100	5.6
Behavioural Moves – Student			
Perceptions of other student's performances		23.4	5.6
Inferences of other student's thoughts		23.4	5.6
Interaction – positive		17.0	4.1
Interaction – negative		-	-
Perceptions of other students' behaviour		36.2	8.7
	Total	100	24.0
Behavioural Moves - Facilitator			
Perceptions of facilitator's instructional moves		58.9	6.6
Perceptions of facilitator's reactions		8.9	1.0
Interactions		8.9	1.0
Perceptions of facilitator's overt behaviour		23.3	2.6
	Total	100	11.2
Self Performance - Thoughts			
Self assessment - success		7.5	1.5
Self assessment - failure		5.0	1.0
Perceptions of task difficulty		20.0	4.1
Perceptions of task structure		5.0	1.0
Self attributions		22.5	4.6
Self expectations		40.0	8.2
	Total	100	20.4
Self Performance - Feelings			
Anxiety		18.0	3.6
Morally neutral - positive		56.4	11.2
Morally neutral - negative		25.6	5.1
Morally unneutral - positive		-	-
Morally unneutral - negative		-	-
	Total	100	19.9

Self-performance – thoughts and feelings.

Thoughts about self-performance ranked highly in the first session and dominated the second session. Most thoughts concerned contemplating her expectancies of future behaviours and outcomes and her perceptions of causal explanations of self-performance behaviours and outcomes. As an example, part way through the sessions she felt the class was not progressing effectively and she was concerned she was going to become bored if the learning process foundered. On another occasion, she indicated that work time had interfered with her preparation for a session and that caused her consternation. Dee also reported a large number of thoughts concerning her perception of how difficult tasks were.

Emotions pertaining to Dee's performance were essentially of happiness and joy and these remained consistent over the first two sessions with a significant increase in the last. For instance, she indicated particular enjoyment when the facilitator indicated a role play activity. There were, however, more feelings that dealt with feelings of opposite emotions with some concern, worry and fear, particularly concerning assignment preparation, and on one occasion, irritation with her inability to draw required information from her work group. Dee reported no feelings pertaining to pride, embarrassment and shame.

Behavioural moves – facilitator.

Dee reported fairly consistent thoughts and feelings about the behaviour of the facilitator over the three sessions. These were mostly concerned with his instructional moves, which was not surprising, considering that as a trainer herself, she was always aware of the learning environment being created by the facilitator and the consequent success, or otherwise, of that environment. For example, while she enjoyed group discussion she frequently referred to her frustration with the facilitator's premature closing of discussion time.

Cognitive processes and subject matter.

Dee reported a significant number of thoughts involving learning the subject matter (12.8%) though minimal thoughts about the content of the sessions (4.6%). Interestingly, thought quantities in these two categories mirrored each other – reasonably significant in the first session followed by a large increase in the middle session dropping to a similar preoccupation in the third in line with the first session. Interestingly, Dee's surface approach is reflected in her reporting of her cognitive processing. For example, she spoke at length about her cognitive approach to the required reading of articles. She indicated she did not like reading and instead sought the main points that were then highlighted and memorised.

Summary of quantitative analysis of covert behaviour.

Dee reported more thoughts about other students than any other category (24%), though when self-oriented thoughts and feelings were aggregated, these comprised nearly half of her covert behaviour. She reported no feelings at all concerning emotions other than those experienced in association with self-performance that were positive or non-task related, and only 1.5% of these emotions were in the form of annoyance, frustration and anxiety.

Third Sequence-Qualitative Attributional Analysis of Self-performance Covert Behaviour

A qualitative examination of Dee's thoughts and feelings, particularly those concerned with her own self-performance reveals some of her underlying beliefs, ideas, views, emotions and lines of reasoning.

Causal explanations of Dee's behaviour.

The transcripts of the interviews with Dee contained several chains of comment that included causal explanations and perceptions of her own behaviour particularly within the context of group work. She reported an initial cognition that was often followed by a causal explanation and an emotional consequence. For example, when

asked about any thoughts she had between training sessions she replied: "It (the previous session) was more thought provoking (cognitive statement) because I wasn't expecting much (causal explanation) but I came away quite pleased with the day (emotional consequence)." (Session 2). Such chains of comment revealed they could be clustered into expectations, group work, learning processes and self worth and self-performance.

Expectations.

When asked about expectations for the course as a whole Dee's response was interesting:

> I've set aside a period in my life for two years (the duration of the course) which I expect to be dull – a lot of work where nothing exciting happens. (Session 1)

Her greatest concern would be boredom about what she was going to experience in the sessions:

> However, this wasn't the case because of the opportunity to work in groups. (Session 1)

On one occasion though, she had only minimal expectations:

> I didn't want to get up in front of the whole class and deliver an unprepared session. Other than that I have no expectations – I haven't had time to think about it because I worked until 8pm last night. My expectations were not high for the last session but I was quite pleased with it and I am looking forward to today. I spent a lot of time at a dinner party talking about the session. (Session 1)

At the beginning of the third session she stated:

> I'm tired and I didn't need to do any of this. I felt I didn't need to be there. (Session 3)

When asked about her expectations regarding completing assignments for grading, she said:

> The next assignment is going to be much more interesting because we are allowed to relate it directly to our industry and I know that inside out. I'll be able to apply myself better. I never think about what mark I'll get – I never expect to get high marks. I do my best and I think that I do enough to just pass. I won't fail. (Session 2)

She continues this theme later:

> I'm not expecting much for this assignment because I hadn't the time or the interest. I found this particular assignment very difficult to apply myself to because I was coming to the end of a very tiring year – at least that's the excuse I made myself. (Session 3)

Summary of characterisation – expectations.

Overall, Dee appears to have decided almost reluctantly to set aside a period of time in her life to gain an academic qualification – a time in which she expected to receive little stimulation. There are elements of the "critical voice" in Dee's comments. She appears to show conformation outwardly to the external boundaries and expectations of the formal classroom while maintaining a psychological distance. She apportions a lack of time and relevance for her expectations of poor performance, all of which seems to indicate a lack of connection with what an academic would perceive as the learning and assessment environment.

Public participation.

Dee's comments about group work reveal a good deal about how accommodating she was about the concept of cooperative learning. For example:

I enjoy presenting to a small group because it's much more intimate and not so stressful. It's extremely interesting because people think so differently – it's all relative to what they are doing. Where I think one thing is important they think something else is important and persuasively argue about that, which makes it clearer to me. I look forward to these discussions and I hope the group will share their thoughts. They are all confident people who don't have a problem with giving up their knowledge. They're not insecure about their ideas. It is interesting to get perspectives from everyone else – finding out their ideas on how the report (the subject of the discussion) impacts upon their business. I was disappointed this time that I didn't have input because it was about what my company was doing in this state. We (the group) have been able to throw around ideas which has been excellent. There are a number of people with a tremendous number of divergent ideas. (Session 1)

On another occasion, Dee says:

I wish we had more group discussion – more time to talk to people about what they are doing. I'm disappointed that we can't have more people who want to have an input. (Session 1)

In regard to her own role in groups, Dee was quite expansive:

I try very hard not to be overwhelmingly the leader because in the first unit one of the women stood up and said there was a person who is dominating and I knew it was me. She didn't sit in my group again. I get irritated trying to extract information from the group. I like to guide the group without dominating – I say 'let's write down what we have'. I guess I'm task oriented. I control the group as much as I can because I have a strong sense of trying to be part of the group rather than outside it. In some cases we didn't get the information required of us by the facilitator and I felt bad about that – it was all waffle. (Session 1)

On occasions Dee reported a dislike for fellow students who would not volunteer to be the group's spokespersons:

There are some in the group who won't get up and deliver our information – it's off putting. Everyone should want to get up and be part of the session. I don't volunteer any more because of this. (Session 1)

Summary of characterisation – public participation.

With group work Dee appears to demonstrate a certain amount of ambivalence – stimulated when differing ideas are flowing yet frustrated with a perceived lack of task orientation. Such an approach-avoidance orientation is typical of the adult student who portrays the "critical voice" belief system. The belief system may be further supported by the elements of passive resistance evident in withdrawal from the leadership role in group discussions.

Learning processes.

Dee's attitude towards learning was stated a number of times throughout the interviews. For example:

I learned more from those sessions where I had to deliver because I had to prepare more. You have to be sure in your own mind what you are talking about and to be able to share this with others in the group is great. You get a variety of feedback and therefore a different perspective on what's happening. I don't like reading widely. I'm not a researcher – I can't put the ideas together. I'm task oriented. When I do critiques I don't research 5000 articles – I critique it from my own experience. I like it best when the assignment asks for your own experience. I can't gather facts out of the air any more – I could when I was younger. I have taken a few ideas we've discussed in class and will implement them at work and I feel good about that. (Session 1)

These comments are interesting in the light of those theorists who postulate the importance of prior experience in adult learning. Dee relies almost entirely on that experience, and in fact there are elements of disdain, above, in her perception of academic research. Such a private cynical stance is further evidence of her "critical voice" belief system.

This theme is continued on further occasions:

I read articles and highlight things that I believe are relevant and relevant to the assignment. I don't like wide reading and researching and all that stuff. If I've got three or four things that I must do to get the assignment done then I do that quite easily because it's all input to what I am going to do. I add anything else I can remember. I find interesting arguments that are for and against some of the things that are going on in the workplace. I just read and re-read one report for the assignment. I selected two further topics because I had knowledge of one of them and an interest in the other. I then went to my trusty (a popular digest) and read up on them. (Session 2)

As a learning process Dee made the following comment about speed reading:

I don't like speed reading – I like to get the paper and just skim it because if you are going to put dot points down you want to know what you are looking for first. I was prompted by the questionnaire – I just looked for those points that were required. (Session 3)

These comments are interesting as they support Dee's predilection for a surface learning strategy. She appears to have a very pragmatic, instrumental approach. She relies upon a limited number of articles, and the one text she consults is itself a digest of content, and skimming is preferable to reading for meaning.

Dee's dominant interest - that of the group - surfaced next:

The exercise (speed reading) finished with a large amount of off-task time. It was started by a student then the facilitator came over and joined in. I felt cheated that we didn't get to discuss it – the whole group just took their eye off the task. Other groups reported some interesting points that I jotted down so I could refer to them later. One student gave his own personal opinion instead of the group's when he was supposed to be representing the group. I didn't think much of that kind of domination. (Session 3)

As a learning activity Dee thought that paired discussions would only work if she paired with someone with very different views:

> Who to partner with is a big thing in my mind. I wanted to partner with (name) because we have different views on a lot of things. (Session 3)

In these comments, Dee reinforces her dislike of off-task behaviour and her desire to receive information from her fellow students again demonstrating an instrumental approach.

Her attitude to role plays was also positive:

> The idea of a role play is to look at something from a different perspective. I like them because they give you a chance to step outside of the type of personality you are. However, this exercise wasn't as fulfilling as it should have been. (Session 1)

Again she had a positive attitude to summarising as a learning process:

> I don't find summarising difficult because I have to do that every day at work. I just put it into words that people understand. The facilitator made us do this because people tend to use too many words to explain simple ideas – I do it myself. (Session 3)

Summary of characterisation – learning processes.

Dee's statements about her learning processes are revealing in the light of literature concerning the adult's use of experience (both their own and others') in learning. In Dee's case such experience appears to hold more validity than that experience gained through formal academic means. As well, Dee's surface learning strategy is well supported by her comments.

Self-performance and self-worth.

The underlying ideas of self-performance and self-worth concern the student's view of themselves, or their self-concept. Essentially, how a student sees their chances of success depends to a large extent on how they see themselves. If they believe they can do a task they are more likely to attempt it than if they believe they cannot. A student's expectations may derive from a variety of sources: how well the task was performed previously; what attributions are seen for that performance; their perception of how the facilitator and fellow students think they will perform and how difficult they view a task. Dee's comments below are illustrative of these aspects of her self-concept.

Dee's thoughts and feelings are less about her own self- performance than the performance of other students in her class. When she does speak of herself it is often in relation to others:

> When compared with others, I would rate in the lower area because I perceive most of these people (other students) are probably better qualified for this particular course. Most of them are probably better schooled and more academic than I am. I've never rated myself very highly in my life. I am an insecure person. Sometimes I achieve things that I get surprised about. I was thrilled when I got 89 out of 100. I had a party! I was extremely flattered that (the facilitator), who I respect a lot as an academic, gave me that mark. (Session 2)

Later she stated:

> At the beginning of the day I wanted to shoot myself – I don't want to so much now because there has been a bit of humour. I was amazed to get 16 out of 20 for the assignment. My effort was pretty good – I do devalue a lot of what I do. I thought my work was rubbish though it did come from the heart. I often say that about my stuff but I didn't think (the facilitator) would value it at 16. There's obviously a bit of a discrepancy between my perception of me and his perception of me. (Session 3)

The above two comments illustrate how Dee's self-concept is modified by her fellow students and her perceptions of how the facilitator views her. While there are indications of low academic self-esteem her view of her own performance received a big fillip when she scored highly in the assessments.

Dee perceived preparation to be important for her own self-performance:

I didn't prepare for this session and this concerned me very much. I couldn't have adlibbed because I prefer to be prepared. I don't have a problem if I am prepared. (Session 1)

At one stage, she was preparing for an open book examination:

To answer each question I type it out beforehand and then write it out in long hand in the exam. I think this is the most useless, worthless waste that I have ever known in my life. (Session 3)

Such a strong comment is again indicative of her "critical voice" belief system.

Summary of characterisation – self-performance and self-worth.

Dee's analysis of her self-performance and self-worth are well demonstrated in the above reported comments. A history of "irrelevant" formal schooling, a sense of amazement at her career progression, perhaps a failed marriage, and a feeling that university was beyond her abilities are both possible causes and illustrations of a low self-concept. However, the assessments at the top end of the scale were received with ecstatic relief and consequent improvement in her view of herself. These views are further expressed in her journal jottings below.

Analysis of Journal

Dee completed a journal in which she recorded her thoughts and feelings as they occurred to her pertaining to the experiences during the three sessions. Her thoughts and feelings were quite dichotomous ranging from delight to anger over the six months

period of the journal. For instance, she reported happiness at a coming break from study and alarm at the experience of the other students who fuelled her insecurity. With some results she was disappointed and with others she was pleased with the feedback given by the facilitator. In her words:

> Very pleased to pass this unit. It was a good result after the agony suffered. I really earned my holiday. 140 hours of suffering resulting in a very good mark.

Perhaps her most telling comments come at the end of the journal after the open book examination:

> Having not felt very good about the 'exam' (in fact 'angry' would explain my feelings more accurately) I did not perform well at all and therefore was praying for a pass. When I received the envelope (of results) I couldn't open it for several hours. Anxiety was enormous. The relief I felt when it was a pass was huge.

A Characterisation of Dee's Perception of Self-performance

The results of an attributional analysis of Dee's behaviour, together with the relevant findings of the quantitative data and interpretations from her interviews and journal, have enabled an interpretation to be made of how Dee might have perceived herself and her self-performance during the training sessions. The analysis goes some way into discovering her underlying ideas, beliefs and implicit theories about learning as an adult.

Approach to learning and underlying motivation.

Dee had a reasonably unsatisfactory high school experience essentially because of her lack of motivation. She was placed into a stream that did not suit her interests and was therefore demotivated enough to leave school as soon as she reached the legal leaving age. Once in the workplace she found that early on most of her learning was on the job, but later exposure to formal study became something that satisfied her greatly. This satisfaction came about only when the content of this formal study was perceived

to be relevant to her job. Perceived peripheral subjects that constituted the formal award were seen as a burden to endure if they were not perceived as having direct job relevance.

Acceptance at university came as a delightful surprise but it came with attendant fear and trepidation. Hitherto she had not aspired to a tertiary education simply because her experiences up to that point did not focus her in that direction. Her perception of university learning was that it was academic or research-based and she often reiterated her reluctance, and perhaps inability, to become a researcher. Being a "researcher" seemed to mean for Dee that content generated by this means could be irrelevant to the workplace, and it was this relevance which clearly drove her motivation to learn. If the content was relevant and transferable to the workplace then it was worth learning. If it were none of these then learning it was simply a waste of time.

This aspect of relevance appeared to drive almost everything she did. Books were only read if they were congruent with her own ideas and assignments were tackled with more enthusiasm if her own experiences could be related. As well, books that were read were of the digest type that had already done the hard work of synthesising content and ideas from a variety of authors.

Dee's SPQ profile was designated as Surface Predominant and an analysis of her reported comments supports this profile remarkably well. Dee's motivation appears to be extrinsic - to gain a paper qualification. Whereas the true surface learner is unwilling to put in a big effort this is not entirely true with Dee. She reported on a number of occasions how she spent a good deal of thinking and worry time over assignments. However, her reluctance to explore much beyond the strict confines of the topics and a strong resistance to what she termed "research" certainly supports a surface profile. Her determination to set aside a certain time in her life and then to complete her qualification quickly indicates a surface approach. This learning pathology does not really engage the task and probably is contrary to the beliefs underpinning a university education that would hope to encourage a more qualitative and scholarly approach to learning. However, in Dee's case, her efforts at assignment work were well rewarded which may indicate the facilitator's acceptance of minimal requirements. Such a surface approach also seeks high structure and clearly specified objectives. Dee often

commented that she felt more at ease when the assignments were structured and she could draw on her own experience rather than laboriously researching a series of readings. A typical comment was: "I've got to evaluate myself on this assignment which is a bit difficult – I need more structure, direction."

Dee's approach to the entire tertiary experience was interesting to the researcher. She decided to set aside two years of her life whereby she was prepared to devote that time to gaining a qualification. It was like she opened a window in her experiences for the duration only to close it again on completion. This she did, and where many other students continued their studies beyond the two years, Dee chose not to follow this trend. While other interests, particularly job interests were important to her, perhaps her perception that university was a place for academics was not at all altered by her learning experience. In the researcher's experience, many other students in the same situation have been motivated by the new exposure to tertiary learning and have gleefully immersed themselves in extending those experiences. Perhaps then, Dee's low academic self-concept did not alter much throughout the learning experience. Even at the end of that experience her high achievement still came as a great surprise to her.

Summary of Dee's Study

A triangulation of data from five interviews, a self-reporting journal and the ASQ and SPQ has enabled a clear picture of the ideas, beliefs and implicit theories that Dee holds regarding her learning experiences as an adult in a tertiary institution.

Dee approached her learning experience somewhat fearfully that she would not measure up to the demands of the program and the abilities of other students. She acquired a lot of knowledge from other students and she learned from the content providing that content was relevant to her workplace. However, her low perception of her ability and her engagement strategies of tasks did not appear appreciably to alter as a result of the learning experience.

While her ASQ was largely inconclusive in that it showed a tendency to vacillate between optimism and pessimism with neither predominating, her SPQ score appeared to be well supported by her reported comments. Particularly, as an early

school leaver her academic self-concept was underdeveloped which led to her underestimating her performance relative to her peers and the facilitator. Perhaps her predilection for a surface approach to learning was more as the result of time constraints ("I have set aside a period in my life for two years which I expect to be dull." (Session 1)) rather than a genuine desire to cut corners and avoid deep learning.

<div align="center">Pat</div>

First Sequence

The first sequence of the research design contained the initial interview with Pat, during which he reported his background, and his completion of the ASQ and SPQ.

Pat was in his middle 50's and left school at 14. His school was an all boys' school and Pat indicated that "he was never interested as it was boring and degrading and he hated it." After leaving school he attained a six-year apprenticeship in optics and was trained on the job. There was no attendance at technical college as part of his learning. He was assessed as competent once a year by the union and by the Arbitration Commission. For Pat "learning should be applied" and he detested school because:

> I would go into a geography class and this guy (the teacher) had never been anywhere – all his learning was out of books – he didn't have a feeling for the subject and he was supposed to be the geography teacher. I used to get angry that this guy really didn't know what the hell he was on about, whereas I had been to Ceylon and Morocco. It seemed cruel to subject kids to just facts and figures when geography is alive.

Pat's apprenticeship was repetitious and he spent a lot of time cleaning up and getting the lunches and teas. His aim was to eventually run the company to which he was apprenticed. He progressed from leading hand to foreman to manager, a process that took 19 years – "which is crazy in retrospect." His job was "the centre of the world." He did courses in supervision, management and advertising, but:

I always felt I wasn't an academic. I would enrol in a course, get all the good guts out of it, but I wouldn't even bother with the exam because I thought I would fail. So I did a few courses but got no paper qualifications. I got job offers from the Eastern States but my wife wouldn't move. It was at this time my marriage broke up. I quit the job and wandered from job to job on the East Coast and Papua New Guinea. I later took over Australian production for a large company and I was the only non-academic on the board – they had everything from PhD's downwards. The accountant was a Rhodes Scholar but as I was in production an education wasn't required. Because of that I enjoyed beating them at whatever was required – that was my competitive streak.

Pat recalled that he felt:

The academics didn't have their feet on the ground, so instead of learning to respect them for their knowledge, I became a little disdainful and resentful that I couldn't go any further in the company. This was because I didn't have the education on the one hand, and on the other, I was doing all right.

Pat, as part of his job, was sent to the USA where:

I met lots of people. I learned more about myself and other people in the world and life in that time that I think I had ever learned before. Ironically, all of the people I met were very well educated and all had university degrees. I developed this enormous love for smart women – you could talk with them as they were bright and didn't talk babies or washing machines. That when I met my second wife – a psychologist. We moved to back to Perth and had three children. I learned more from her than from any other individual.

Back home Pat opened five branches of his company, built a large house on a 22 acre lot:

I felt I'd achieved what I wanted to achieve in seven years which was more than most people do in twenty. However, I had a big scare. I thought I had testicular cancer with perhaps six weeks to live. I thought I would be petrified of dying but I

found I wasn't – a great calmness. Anyway I got the all clear and out of that I realised I didn't want to die sitting in a shop and selling spectacles to little old ladies.

This was another turning point in Pat's life when he realised that "there must be something different out there." He applied for and received an optical lectureship at TAFE:

I was surprised at getting the position. I was handed the syllabus and told to go for it. It contained lots of Maths that I didn't know so I would get up at 2am and study for an hour. I had to wing it on a day to day basis. I was exhausted for the first six months but I was determined to keep going.

While at the College Pat received information on the Training and Development program at the university and he took it home to discuss it with his wife who asked him how he felt about it – "a typical psychologist! So I said I wouldn't mind having a go."

Pat was accepted into the program and he stated:

The first thing that hit me was the professionalism and organisation. I had an expectation that the course would introduce me to new learning and my dream was to teach small business classes, so I saw this as an opportunity to learn how to conduct them. I had a feeling of trepidation because I had never been to uni – the worse part was not knowing what the expectations were. The first assignment was in a terminology I didn't understand. I got a good mark – 18 out of 20. The second one was harder and I kept putting it off. I finally decided to attempt it and to fail rather than to fail from not attempting it. I got a 57 out of 100 and thought, well, it's a pass.

Pat soon realised the university experience was different from anything else he had encountered:

My experience is working with instinct and planning on my feet. I have a problem with all this analytical way of looking at readings – I find this confusing.

My biggest problem as an adult learner is that I work three nights a week at College and it's a one-man show. I tend to focus on my students' needs rather than my own. I don't want them to drop out and this affects my own concentration. I am the world's worst student. My biggest failing is procrastination and I should do a bit each day. I would be better if it was full time. I am one of those compulsive people who live and breathe things when I get into them. I can motivate myself but when it comes to assignments I say I will do them later.

ASQ score discussion.

Pat's score on the ASQ, which is a measure of his explanatory style for selecting certain causal explanations for good and bad events, is tabled below:

Table 18

Pat's Attributional Style Questionnaire (ASQ) Negative Score

Dimension	Score	Possible Range
Internal Negative	5.8	1-7
Stable Negative	3.8	1-7
Global Negative	4.5	1-7
Hopelessness	8.3	2-14

In the above table the lower the score the stronger the tendency to adopt that dimension.

Table 19

Pat's Attributional Style Questionnaire (ASQ) Positive Score

Dimension	Score	Possible Range
Internal Positive	5.8	1-7
Stable Positive	6.6	1-7
Global Positive	6.5	1-7
Hopefulness	11.5	2-14

In the above table the higher the score the stronger the tendency to adopt that dimension.

The scores indicate that Pat is a highly optimistic person (11.5 on a 2-14-point scale). His optimism can be explained by high scores on all Positive dimensions. His Internal score measures the locus, or personalisation, of his causal explanations. Pat's scores (5.8 in each case) indicate ambivalence on this dimension. He attributes events occurring equally because of something internal and external to his situation. His high Internal Negative score indicates a tendency to pessimism about events which occur while on the other hand he is able maintain steady self esteem about other events which occur. His low Stable Negative score and high Stable Positive Score indicate that he viewed the causes of bad events as temporary and the causes of good events as permanent. His high Global Positive score indicates that bad events that occur have a specific explanation, while good events that occur enhance everything. Together, these scores indicate a strong tendency of hopefulness, or optimism, over hopelessness, or pessimism.

SPQ score discussion.

Pat completed the SPQ in order to ascertain his motives for learning and the strategies he uses in going about that learning. His profile (-+/0+/++)is most like the

profile of an achieving predominant student. This means his focus is upon the product of learning but his orientation is based upon the satisfaction that comes from obtaining high grades rather than a deeper search for meaning. Essentially, he delivers what the facilitator requires and adopts a cost-effective use of time and effort. He has a tendency to plan well and to keep clear notes.

Summary of First Sequence

Pat's early school experiences appear to have been instrumental in forming his strong views about formal education and academic qualifications. He was disdainful of teachers who were book-oriented and not experienced in the real world. His disdain appeared to grow when he encountered people in his workplace who had academic qualifications but had little, in Pat's view, practical experience. Yet, while accepting that some formal learning was important, Pat avoided sitting examinations for fear of failure. Examinations were one area where his strong level of optimism and achievement dominant profile seemed to fail him. As well, he admitted that he learned a good deal from interacting with other people, many of whom were academically qualified – an interesting ambivalence.

A critical illness changed his values about work and life and he decided to share his wealth of knowledge about optometry with students. He applied himself to his new vocation as diligently has he had in previous positions and decided to join the academic world of which he was so previously disdainful.

Second Sequence

The second sequence in the research design contained an interview with Pat after six months of tertiary study and he made some interesting observations about his enjoyment and experiences of learning:

> I enjoyed the previous unit – it was fun. I think that was because of the
> facilitator's relaxed style – his assignment comments were warm and friendly. On
> the other unit I got 68 out of 100. I really worked hard on that one and was

disappointed with the result in one way but very happy that I got through at that level – that's what it is ultimately about.

This comment appears to support Pat's achievement orientation as determined by his SPQ score. However, this achievement orientation appeared to be contradicted when he made some telling observations about his assignment preparation:

I had to write a training plan for work so it was relevant but I got the flu and had to scramble it together. I had to rewrite it for a pass because it wasn't what the facilitator wanted which was rather pedantic I thought. I restarted it, got the flu again, had to go to Sydney for four days and then I got conjunctivitis, had two hours sleep for five nights. So if he fails me – too bad – I've reached overload. The hassle for me is that I am always in this conflict of having too much to do. I went to a Train the Trainer course and learned more in five days from the trainers there than six months at university. You get instant feedback and your mind is not cluttered because it's full time.

Pat continued with this line of thinking when, perhaps more than the three other subjects in this study, he focused a good deal upon his view of the philosophy of tertiary study and his own learning. He appeared quite reflective and metacognitive in comparison. He stated:

At university there is a clash between reality and theory. It's all aimed at getting a piece of paper – aimed at getting grades but it doesn't give you the necessary skills or application to do it. One student read a short section from a reference, used a sentence from it and then lists it in the paper. It was actually held up as a good example to us all and I know she shortcut the system. She knows the system – she's been to university before. I'm not knocking the lecturer – I'm only comparing the academic approach of looking for fault with the five days of total encouragement (in the Training course referred to previously). The subject material isn't hard at all for the mature person in industry – it's the assignment work and having to spend so much time typing up. I am not a typist and it amazes me how these women have the time for a busy life and assignments as well. I'm going to have to make time to do assignments and to learn to comply with the

requirements of the assignments. I tend to write for me, not the facilitator and that's my first mistake.

This last comment is quite telling because it indicates that while Pat's learning profile is achievement oriented, until this point in his tertiary career, he had not been practising it.

Towards the end of the interview he detailed some interesting views about his fellow students but the conversation, in the end, gravitated back to his own learning and experiences:

> University is a great experience for me – being in a group of switched on people appeals to me. It's a nice environment – a sort of comradeship between the students. They are all suffering in some way or other as mature-aged people. I mean gladly suffering. We've all got similar problems – time, spouses, kids, and work. I'm taking out of it as much as I can – I'm a slow learner. It's a learning experience but lack of time is the big killer for me. I am used to very practical situations – real live stuff and real machines. But this academic approach is not totally inappropriate for anything I'm likely to do in the future. I'm watching the presentation – how they do it. I'm betting though that I'll run into trouble on the next unit with old (facilitator) on the way that I do it. I am anticipating a problem because I've already covered the content but the facilitator wouldn't give me an exemption on the basis I would have only skimmed over it. I accepted that. I don't want to make like it's a negative thing at all. It's a very positive experience and I am learning. At my age I tend to question things more. But I still haven't got that academic bent – it's the assignment work that is the killer for me. I hate it because you get a piece of paper at the end saying you're an expert at something and not being able to use it.

Pat's profiles from the interviews.

Pat left school early because he had lost interest – it was boring, irrelevant, and in an all boys school, somewhat degrading. Perhaps these experiences caused him to realise that he was not "academic". Academia appeared to be anathema to him and, indeed, so were those work colleagues who held paper qualifications. He felt he learned

more from his travels than the classroom. Pat's wide work experiences became repetitive yet motivating enough for him to change his career direction into teaching. Interestingly, his distaste for academia was modified when he applied for university. He approached this new challenge with fear and trepidation – a fear that was rooted in unknown expectations. However, Pat's highly optimistic achieving predilection underscored his strong motivation to succeed at this level and, to his joy, he found people there who challenged his intellect. This entire positive attitude was constantly underpinned by his long held view that university was largely irrelevant to real world problems.

Pat appeared to demonstrate a "critical voice" belief structure that suggested he entered university from a private cynical stance. In this respect he has confirmed yet another of Kasworm's (1999) findings. He was focused on gaining a credential but viewed university as that theory versus reality situation he found so disdainful in earlier school experiences. He realised that he had to comply with the rules of the classroom but always held a psychological distance from the classroom experience.

Third Sequence-Quantitative Analysis of Covert Behaviour

During this sequence Pat was observed over three, 3 hour learning sessions. He declined to keep a self-report journal and, because he withdrew from his course immediately after data collection had finished, the researcher was unable to ascertain why that was the case. Data from the observations were treated quantitatively and qualitatively.

Pat's reported covert behaviour during the three sessions was divided into interactive and non-interactive thoughts and feelings. Only the interactive thoughts and feelings, that is those thoughts and feelings actually experienced during the sessions, were quantified. The number of interactive thought units in each of the ten categories of CASSIT (King, 1979) for each session was expressed as a percentage of the total number of thoughts and feelings identified. See Table 20.

Table 20

Percentage Distribution of Student Thoughts over CASSIT Categories for Each Session:
Pat

Categories of Student Covert Behaviour	Session 1	Session 2	Session 3	Percentage of Total
Subject Matter	36.1	1.25	2.6	13.3
Cognitive Processes	-	13.8	23.1	11.1
Behavioural Moves -Self	18.0	-	-	6.1
Behavioural Moves – Student	8.2	3.8	12.9	7.2
Behavioural Moves – Facilitator	14.8	-	2.6	5.6
Self Performance - Thoughts	6.6	3.8	2.6	4.4
Self Performance – Feelings	16.4	12.5	28.2	17.2
Feelings – Positive	-	37.5	28.2	22.8
Feelings – Negative	-	15.0	-	6.7
Non Task Related	-	12.5	-	5.6

Some 40% of the total thoughts and feelings generated by Pat over three
sessions concerned feelings about his own performance and feelings about other aspects
not associated with self-performance. This figure was supported by the large volume of
transcript dealing with these feelings in the early interviews. Ranked second (13.3%) in
quantity were thoughts about the subject matter – the content of the sessions. Pat
ranked this category much higher than any other of the subjects in this study. The third
largest quantity (11.1%) was concerned with cognitive processes – thoughts involving
the learning of the subject matter. Also ranked reasonably highly (7.2%) were thoughts
about the behavioural moves of other students, either about them as people or about

their behaviour. Pat premised this interest in his earlier interviews. All other categories ranked approximately equally and interestingly, there were few self-performance thoughts (4.4%) compared with the other informants. Pat appeared little interested in reflecting and monitoring his own performance or contemplating his expectancies of future behaviours. Non task-related behaviours were ranked quite highly but were restricted only to the second session.

Table 21 indicates a further analysis of the sub-categories, which refines the analysis in five key categories, and points to some interesting trends.

Table 21

Within Category Percentage Distributions of Sub-Categories of Selected Student

Thought Categories: Pat

Categories		Within Percentage	Percentage of Total
Behavioural Moves - Self			
Seek public participation		18.2	1.1
Avoid public participation		18.2	1.1
Attending-listening		27.3	1.7
Not attending-listening		-	-
Motive to attend		36.3	2.2
	Total	100	6.1
Behavioural Moves – Student			
Perceptions of other student's performances		15.4	1.1
Inferences of other student's thoughts		7.7	0.6
Interaction – positive		30.8	2.2
Interaction – negative		-	-
Perceptions of other students' behaviour		46.1	3.3
	Total	100	7.2
Behavioural Moves - Facilitator			
Perceptions of facilitator's instructional moves		50.0	2.8
Perceptions of facilitator's reactions		-	-
Interactions		-	-
Perceptions of facilitator's overt behaviour		50.0	2.8
	Total	100	5.6
Self Performance - Thoughts			
Self assessment - success		-	-
Self assessment - failure		-	-
Perceptions of task difficulty		12.5	0.6
Perceptions of task structure		25.0	1.1
Self attributions		-	-
Self expectations		62.5	2.7
	Total	100	4.5
Self Performance - Feelings			
Anxiety		6.5	1.1
Morally neutral - positive		80.6	13.9
Morally neutral - negative		12.9	2.2
Morally unneutral - positive		-	-
Morally unneutral - negative		-	-
	Total	100	17.2

An examination of significant categories using information from Table 20 and

Table 21 combined follows.

Feelings and self-performance feelings.

Pat reported a large quantity of feelings that were positively morally neutral, that is, feelings that were concerned with happiness and joy. For example, during a feedback session from other groups in the classroom he expressed enjoyment with comparing that feedback with his own thoughts about the topic. On reflecting upon his own performance he reported, on one occasion, to be feeling a little isolated from the group and trying hard to stay in tune with what was occurring but that he was enjoying the side comments. Such feelings swamped those that were concerned with sadness or anxiety. His optimism indication in the ASQ supports this carefree aspect of his personality.

Across the sessions this category was reasonably constant in the first two but increased significantly in the third when he was most concerned with other tasks that were competing for his time

Subject matter.

Pat reflected upon the subject matter almost constantly throughout the first session. He found himself thinking about linking the content under discussion with his knowledge and experiences in the real world. For example, during a discussion on the amount of training time available to employees, he took silent issue with the facilitator who did not refer to the huge difficulty of employees receiving training time in small businesses. For example, in Session 1, he said: "He (the facilitator) doesn't understand training or the needs of training – the essence of small business is survival". On another occasion, he seethed about the academic rhetoric that preached equality of opportunity when Pat believed that only the well educated would ever be successful:

"...the realities and the rhetoric – it doesn't matter whether you are a worker or a university student, it is all honourable. I mean this is old stuff. The reality is that the people with the higher education and the bits of paper are always going to be held in higher esteem because that's the way the elite system works. (Session 1).

Such rumination decreased over the next two sessions probably as the subject matter became of less interest to him.

Cognitive processes.

In contrast with the downward trend from Session 1 through to Session 3 in thoughts about subject matter, Pat's thoughts about his own cognitive processing increased the closer he got to the assignments at the end of the sequence. He found that when allowed a choice of topics he always selected those that had the best probability of being related to his work. Such a linkage assisted in organising his thoughts and his learning. One such topic he selected had a high relevance to his current situation and he was aware that it would be covered in more detail in a later unit. Such a utilitarian approach assisted him to not only prepare for each classroom session but also for the summative evaluations.

Behavioural moves-student.

Pat's interest in his fellow students was indicated by a dominant count (7.2%) of thoughts and feelings about other students' behaviour and positive interactions with them. For example, on one occasion he was reflecting upon the possible lack of confidence some of his peers were feeling about the topic of a discussion, and because he did feel confident he felt he could help them. There were no negative interactions recorded at all. He also reported interest in their performance and often compared it with his own performance. Such a comparison supports his achievement dominant SPQ profile where grades are important for ego reasons. Behavioural moves-student thoughts varied across the sessions with the middle session indicating a dip in these thoughts. Field notes indicate the dip may well be associated with a decreased reliance by the facilitator on group work.

Behavioural Moves-Self.

Thoughts and feelings dealing with self-motivation and attending to the processes of the sessions dominated this category. For instance, there are a number of occasions when he indicated that he was listening intently. Such listening was either

accompanied by ruminations or by mere listening. Pat reported no instances of non-attendance, and these together further support his previously reported interest in the tertiary experience. There were, however, a large number of occasions when he avoided publicly participating. The first session was the only session where these were reported and this was due to the fact that the unit of study was new and Pat's motivation was at a peak.

Behavioural moves-facilitator.

In the early interviews, Pat indicated an interest in observing the facilitators at work with the view to modelling his own presentations upon them. It was not surprising that all reported thoughts and feelings concerned perceptions of the facilitators' instructional moves and overt behaviour. Again it was during the first session that thoughts of this nature dominated and this was explained because of the newness of the facilitator and a lack of familiarity with his strategies.

Self performance-thoughts.

Pat reported a large number of thoughts about his future performance. For example, when reporting his expectations for a session about to start he indicated a wonderment about how boring and protracted it might be. Again, in the early interviews, he stated on a number of occasions that he expected something to occur at a later time that would affect his performance. These thoughts dominate the three sessions. Thoughts about the structure and difficulty of the tasks also ranked highly (37.5%). There were no recorded instances of self-assessment success or failure or self-attributions that indicated there were causal explanations for his behaviour. Self-performance thoughts ranked moderately highly in the first session when expectations were highest due to the newness of the unit, and dropped away over the next two sessions.

Summary of quantitative analysis of covert behaviour.

The quantitative analysis of Pat's covert behaviour in the three sessions provided some insight into that behaviour during learning. Feelings about his own performance

and feelings outside of that performance dominated much of that behaviour. Pat indicated in his early interviews a predilection for self –analysis and thoughts about wide ranging philosophical issues dealing with learning and the time constraints placed upon that learning. He reported numerous thoughts and feelings about the content of his learning and his own cognitive processes in dealing with that subject matter. He appeared much less interested in his own behavioural moves and those of his fellow students and his facilitator, while negative feelings and non task-related covert behaviour dominated only during the second session.

Third Sequence-Qualitative Attributional Analysis of Self-performance Covert Behaviour.

Over a half of Pat's thoughts and feelings during the three sessions relate to his feelings about his own performance and about the subject matter. The transcripts are full of long reports of positive and negative feelings about the content of the session at the time. Mostly these feelings occurred during long ruminations about the appropriateness, or not, of the content to what Pat termed "the real world". These ruminations are also heavily about Pat's own interaction with his feelings and how that interaction reflected his view of his performance.

Causal explanations of Pat's behaviour.

The transcripts of the interviews with Pat contained several chains of comment which included causal explanations and perceptions of his own behaviour and to a lesser extent, that of other students. As an example, Pat reported some anxiety about the content: "I think I was somewhat anxious (cognitive statement) because the topics weren't relevant and I was preoccupied with the assignment that I hadn't finished (causal explanations). It bothers me that I keep deadlining (emotional consequence)." (Session 2)

An examination of these linked comments revealed that they could be clustered into approach to learning, attitude to group work and a view of others in relation to self-performance.

Approach to learning.

Pat frequently complained about the external pressures upon his ability to study:

> There are many extraneous pressures on my study time – we've had visitors from the USA and I broke my toe. I have huge work pressures – exams to prepare and I have to apply for my own job. I am also lecturing on small business at night and I use normal sleep time to prepare. This forced a last minute cram – I do it all the time – it is a bad habit. I find I have a lack of time for study – my work, and of course my family who have top priority. (Session 2)

While there were references to outside pressures Pat made frequent cognitive links with whatever the subject was at the time. This remarkable intellectual ability was unique among this case study group. He reported, time and again, that some content initiated a chain of his own thoughts that were, if not tangential, at least bordering upon the peripheral. The resultant experience was sometimes beneficial to his learning. On other occasions it brought him into silent intellectual conflict with whatever the facilitator was saying, or with whatever he was asked to read in class. For example, on one occasion he perceived the facilitator to be dismissive of small business operators:

> Small business owners are not ignorant. They do not have the time for training – they have to survive…(a protracted diatribe follows)…How can academics criticise small business operators? There's a difference between having done it (own a business) and talking about it. All of this is not really educational – it's not a learning experience. I'm reflecting on government or company employees who get time off for study – small business can't afford that. This makes me feel isolated from this group. (Session 1)

On another rather remarkable occasion, after viewing videotape on sexual harassment, he reflected upon a globetrotting businessman friend of his whom would have been ruined if there were ever any hint of sexual harassment. And on his own experience as an optician:

I was always careful to place spectacles on a person at arms length and to take measures with minimal physical contact. I shudder to think what would have happened to my business if there were a hint of harassment. I tell my own class of kids that – they must be careful. (Session 2)

Such ruminations demonstrate depth of cognitive processing and personal meaning making not reported by any of the other participants.

The above examples are just two of a myriad of situations that Pat reported. These examples show positive triggers for the ruminations, but in other instances the triggers led to negativity. For example, after reporting a lengthy diatribe about the subject matter he states:

This is a bit of a pain. I am playing a passive role here – this is boring because it's not relevant and protracted. It's going to take some time to cover this subject, and that's not very exciting because it is old hat for me. My motivation is very, very low. When I reflect back on the previous session it was a total waste. I get frustrated when the session content is abstract and not applicable. (Session 1)

On another occasion, he reported his reflections on what had happened in class:

When I start thinking about having to come a long way from home to the university and going to the library, and sitting there for maybe a day to research fifteen (expletive) books to put into an assignment, I do sort of resent that – I think this isn't the real world. (Session 2)

This comment is further illustration of the academic versus "real world" dichotomy that permeated Pat's earlier interviews.

While Pat's SPQ indicated an achieving predominant profile this appears to be contradicted when he states:

I am not looking for A grades. I don't want to be the best in the class. I have neither the time nor the ability but I want to pass. If I get a pass I will be ecstatic.

> I don't expect it because of time and a lack of motivation. I feel a bit dissatisfied as I've always been a winner, a survivor, but not for this stuff. (Session 2)

While this comment apparently contradicts the achievement predominance profile, it appears that Pat perceives this "academic world" as different from previous experiences in which his achievement predominance has had full play. Yet, in another reflection on the occasion of being shown a book by a fellow student on how to write university assignments, he states

> I want to buy that book. I have to be conscious that this is a university assignment and not a business report. I am trying to write in an academic style. (Session 3)

Such an effort at pleasing the "system' is indicative of the achieving predilection. On a later occasion Pat reports some thoughts on learning which demonstrate a unique metacognitive process:

> While it's in books or in the teacher's mind it still belongs to the books or the teacher. It's not until you've got it down on paper in your own words and you can talk about it – then it belongs to you. I tend to reflect without interfering with my concentration. I've always learned visually and from hearing. That's why I find this paperwork hard to enjoy. (Session 1)

Reflection upon his own thought processes is further demonstrated when he uses a computer as a metaphor for his own learning, and in doing so, demonstrates an implicit understanding of what is almost classic constructivist psychology:

> I relate things I am being presented with to what I already know. No one's knowledge is ever complete. I plug it (the knowledge) in the back of what I know. I've got to get it so it becomes part of my knowledge bank. I was consciously putting those headings (from a reading) in the memory bank so I could bring them back again when needed. (Session 2)

Pat's approach to learning appeared at times to be superficial. On the occasion he was researching an assignment he indicated:

I went to an external library and found the summary of the report. I concentrated on the summary rather than the full report. I selected that topic because it was the only one the library had anything about and it was one I knew a fair bit about. (Session 2)

On another occasion, he stated:

I selected the article for analysis and paired up with another student I perceived as good at research. I wanted to see how she fished out the stuff. I just concentrated at picking out the main headings. I read it (an article on training in corporations) very quickly – looked at the headings and wrote down six main points. (Session 3)

While this approach appears superficial, it can also be argued that, if his motive were economy of effort, then his processing is efficient, if not achievement oriented. Interestingly, at this point, he again demonstrated his predilection for using some knowledge input to trigger thoughts in a broader context:

Even big businesses do not value training the individual. They don't want smart people. They want people who can do things. (Session 3)

Summary of characteristic – approach to learning.

Pat's approach to learning is almost a classic case of the "critical voice" system of beliefs. He appeared to enter university with a highly focused reason to gain a credential that was a necessary validation of expertise for job security and promotion. The focus was underlain with a cynicism that academia and academics were not of the real world as he had experienced it. Pat realised that he had to pay face value to gaining good grades and to conform with the requirements of university, but at the same time he held back any reasonable psychological commitment. His lack of connection with an academic environment that judged him may have caused him to undertake superficial approaches to his learning. On the other hand, he demonstrated a considerable depth of cognitive processing when he sought intellectual links with what was occurring in the

classroom and his knowledge and experience. Such links sometimes brought him great insight and on other occasions brought him into conflict. For Pat his belief system was one of approach-avoidance.

Attitude to group work.

Pat used the inputs from fellow students in much the same way as he used the readings he was asked to analyse – as a trigger for his own thoughts.

I enjoy small group discussion because I get different perspectives. I enjoy that as it confirms your own thinking. Some side issues are a learning time for me when I hadn't thought of them in that way. I think it is great when the facilitator announces a group discussion. Most of the learning is taking place in those groups and that is excellent. I don't enjoy the reading required but I like the group work in class. I've never been a student and always hated paper work. (Session 1)

With regard to his own participation as part of a group he was fully aware of the role he wanted to play:

I get mentally prepared to be the feedback person but I don't jump in and volunteer. I churn over the main points and I like to ensure the group keeps to the topic. I am comfortable about presenting on behalf of the group but I'm careful not to push myself. I am too verbal – always inclined to expound on my ideas and feelings. I let other people do it (talk) as I don't need that sort of practice any more. I don't need to prove myself. When I did present I did so because the rest of the table asked me to. I don't think they were confident about the material. I could talk for hours. I usually do things because I get joy out of them rather than rewards. (Session 1)

At a later stage he reported:

I got up a second time because I felt strongly about that subject and that's the one that ended up on the whiteboard. However, I was conscious of standing up too long and taking up time. In my own environment I can set the time. (Session 3)

Summary of characteristic – attitude to group work.

As Pat was apparently used to being in charge, he appeared to skip entirely the "apprenticeship student role" and move directly into a situation in which he was determined to construct his own learning world. At this second level he appeared to have made subtle and complex metacognitive decisions about his approach to learning. He used the thoughts of his peers to trigger his own thoughts and to make linkages with his world of experiences. Pat was aware that he already held a significant store of knowledge and felt he had to hold back on occasions from a group leadership role because he did not want to dominate.

View of others.

Pat reported a few thoughts and feelings about other students and these were often in relation to his own performance:

I'm not saying they (other students) all enjoy it (researching), but they are certainly more capable at knuckling down and doing it than me. It amazes me how much time people spend on their assignments. I am very much on the lower end of the academic scale, but high on practical ability. I believe being able to apply your knowledge is what it is all about. Most academics I have met can't get people to do things – they have no human relations ability. I'm blessed with a natural ability to get people motivated and working at the job. (Session 2)

Pat also carefully considered which students he would team up with during those times when pairing was required. He would select those who would be of the most advantage to him:

I picked (name) because I believed she was a good researcher and I picked (name) because she was good at computers. (Session 3)

With regard to his own feelings in class his contentment was inextricably linked to his perception of the relevance of the subject matter to his own life. For instance:

I'm starting off right today because I've taken some really good notes and I feel quite relieved. The article is related to my own aspirations and what I am teaching in my own class. I'm feeling pretty good and relaxed because I agree with what the author is saying and what the others think about it. (Session 3)

On another occasion, he reported:

I was hanging in real tight. I was tired and my foot was hurting but the content and discussion were interesting and overrode the pain. (Session 2)

Summary of characteristic – view of others.

For Pat there is a certain admiration for those people who can act as an academic is meant to act. However, for him any knowledge that does not have practical applications is immaterial. He also again demonstrates a practical, utilitarian approach to learning when he chose to pair with peers who could supplement his own abilities.

A Characterisation of Pat's Perception of Self-performance

The results of an attributional analysis of Pat's behaviour, together with the relevant findings of the quantitative data and interpretations from his interviews (Pat did not complete a self-report journal), have enabled an interpretation to be made of how Pat perceived himself and his self-performance. The analysis goes some way into discovering his underlying ideas, beliefs and implicit theories about learning as an adult.

Approach to learning and underlying motivation.

A contradiction appears to pervade Pat's underlying motivation to learn. His SPQ indicated a strong achieving tendency yet there were frequent allusions to formal learning situations that do not support this. When he attended courses in his early days he avoided completing examinations. He stated the reason for this was a fear of failure. Yet in his later life he demonstrated pride in his achievements in the business sphere. Perhaps his distrust of formal learning started at school – his feelings about his "academic" geography teacher who had not "been anywhere" is a powerful illustration of this. It is apparent that this distrust governed much of his later thinking when he frequently referred to the dichotomy between applied, practical learning and what he termed "academic" learning; or the "real world" versus the "academic world". The distrust was a source of anger, hostility and frustration that caused him to be wary of "academics". But herein lies another dilemma: while he reviled academics his lack of formal qualifications caused him concern when he knew this was a reason for his lack of progress in business. As well, he sought out and married an "academic" – a qualified psychologist whom he revered because of her intelligence and ability to talk above the mundane.

Pat made frequent statements about his achievements in business but he did not appear to transfer this achievement orientation to the university course. He reported his trepidation and was concerned about whether he could meet the demands of the program. He claimed he was the "world's worst student" and that procrastination would be his biggest worry. Such feelings were at odds with his approach to other aspects of his life. His ASQ indicated a strong tendency to optimism and this was borne out by other achievements in his life. But when it came to university this optimism appeared to fail him. He viewed university as a place to pick up a piece of paper rather than preparation for the application of skills in the workplace. Again this clash of reality and theory appears dominant. He reported that he hated assignments –"paper work" – because of his lack of academic bent, yet admired his fellow students who did not feel this way. Such admiration was more likely as a result of their perceived usefulness to him and his own time pressures.

He did feel tremendous external pressure upon his ability to undertake the university course – sickness, job and family all impacted upon his efficiency. Yet this pressure was perhaps one reason why he used economy of effort in researching assignments. He appeared to do little more than skim readings in preparation for assignments. Perhaps this was a deliberate ploy. Achieving predominant students have the tendency to economise effort. Time to work on assignments was at a premium. And his motivation was not high because this was "academic" and not "real". Perhaps he assessed the situation extremely well in terms of his own goals.

The outstanding aspect of Pat's approach to learning was his considerable reporting of long ruminations about the content discussed in the classroom. The readings, the discussions with other students, and sometimes the facilitator, triggered such ruminations. He reported amazingly long and detailed thoughts and feelings that emanated from these cues. At times such ruminations appeared peripheral, but when prompted by the researcher, a series of often hidden cognitive links would emerge. He reported that it is was during these times when he was able to link content with his own experiences that he was the most contented. Contrarily, it was during times when things became too "academic" that he became the most frustrated.

Perceptions of other students.

Pat's thoughts and feelings about other students did not figure prominently. Unlike the other subjects of this study Pat reported very few instances of perceived differences of ability between himself and other students. He did mention on occasions a fondness for social isolation but did enjoy interactions in small group work. He enjoyed the impetus that other comments in a discussion would give to his own thoughts that often went into a wider context. As well, he marvelled at some students' ability to undertake the workload when he perceived that the time constraints upon them should be the same as his own. He was also careful to cultivate relationships that would be of benefit to his own endeavours.

Perceptions of facilitator's moves.

From the outset Pat was interested in observing the facilitator's instructional and other overt moves in order to learn techniques he could use in his own instruction. He seldom related instances of either joy or disquiet when the facilitator announced an activity. There were a number of mentions of meeting the standards established by the facilitator in terms of assignment structure but these instances were often followed by an expression of indifference. He appeared to be interested in meeting standards but if that were not the case then he was not concerned.

The facilitator was more often a trigger for a stream of thought and associated feelings. Perhaps the facilitator, to Pat's mind, was too much of an "academic" and therefore cued negative covert responses. However, on other occasions, the facilitator was able to cue more positive responses, particularly when Pat perceived a relevance to the workplace.

Summary of Pat's Study

A triangulation of data from five interviews, the ASQ and the SPQ has enabled a useful picture to be drawn of the ideas, beliefs and underlying motives that Pat holds as an adult in a tertiary environment.

While Pat's achievement motivation was strong in his business and personal life he did not transfer this to university life. A view that the academic world was not the real world - a view seemingly germinated at school - and that theory was not related to applied skills, perhaps hampered a serious attempt at learning. For Pat, what learning did occur most often came from his fellow students, either directly, or indirectly when their comments triggered a stream of associated covert behaviour. It was these ruminations that seemed to give Pat the highest contentment. Unfortunately, the course was so structured that the facilitator required this internal behaviour to be translated into written assignments supported by other readings – and this was anathema to Pat.

Perhaps it came as no surprise that, on completion of the year in which this study took place, Pat terminated the course and moved interstate.

CHAPTER 7

Description of Results

Introduction

In this chapter, the results relevant to the case of adults entering tertiary study for the first time and their mental life regarding learning are described. In Chapter 5 and 6, the data gathered from the four participants were described and discussed individually. In this chapter, the data from the four participants will be combined in order to examine any commonalities and differences, and will act as a bridge to Chapters 8 and 9 which summarise and discuss the data.

Quantitative Data

It is possible to summarise the quantitative data generated from the Attributional Style Questionnaire (ASQ) and the Study Process Questionnaire (SPQ), and the data from the interviews as categorised by the Content Analysis of Students' Interactive Thought (CASSIT) instrument. The summary appears in Table 22.

Attributional Style Questionnaire (ASQ)

In terms of the measure of their explanatory style for selecting causal explanations for good and bad events there is a tendency in all participants toward Hopefulness, and individually there are some interesting differences. Both Gail and Pat recorded similar scores for Hopefulness and Hopelessness, 11.2 and 11.5, and 8.3 and 8.3, respectively. While these scores indicate a certain amount of vacillation between causal explanations, in the main both participants indicate strong optimism. The qualitative analysis of their reported comments certainly confirmed this. For example, when Gail's illness interrupted her studies she consistently referred to the temporary nature of the illness and an understanding that everything would improve in the near future. Pat referred on a number of occasions to a confidence about the temporary nature of setbacks and a desire to overcome them. Both Sam and Dee indicated a less tendency to Hopefulness, 9.9 and 9.5 respectively, and Sam particularly indicated the strongest tendency toward Hopelessness, 6.0, than the other participants. Perhaps Sam

felt his technical background would be pervasive throughout his academic career and this would negatively affect his performance. There were a number of comments to this effect throughout his transcriptions. For Dee, the ASQ indicated that there was no dominant tendency either toward Hopefulness, 9.5, or Hopelessness, 9.2.

Study Process Questionnaire (SPQ)

The Study Process Questionnaire (SPQ) gave a measure of the motives for learning and the strategies used in the processing of that learning. Gail indicated a Deep Predominant approach. Such an approach indicates that she sought to follow her own academic interests, to relate these to her previous experience and to generate her own examples of the content as it applied to her current experience. An example of this approach occurred when she sought to read widely about content over and above the reading requirements for assignments. Sam's score showed a tendency toward an Achievement Predominant approach and this was confirmed frequently in his transcripts when he referred to past academic achievements and his desire, for example, for high grades while at university. Dee more than the others showed a tendency to a Surface Predominant approach when she constantly referred to setting a time in her life when she would "fast track" her study to the detriment of other things. During her assignment preparation she adopted a superficial approach by only reading what was required and to summarise as concisely as possible major points. Pat appeared to the researcher to be an enigma. His approach was determined to be Achievement Predominant and this was certainly confirmed by his statements about his time before university. However, during his studies there was minimal evidence of this approach.

Quantitative Analysis of Interactive Thoughts

CASSIT was used in order to categorise the thoughts and feelings about learning for each of the participants. Feelings about self-performance ranked highly for all participants – first for Gail, fourth for Sam, third for Dee and second for Pat. This is not a surprising finding considering the literature and anecdotal evidence that suggests adults have emotions pertaining to their performance behaviour and outcomes of learning. In this study, emotions about performance were a mixture of positive and

negative feelings, though the tendency was towards positive emotions. For example, Pat reported 80% of all emotions about his self-performance as being positive and he recorded the least anxiety, 6%, compared with Sam who reported anxious feelings of 42% of his total but still reported positive feelings of 54% overall. When self-performance thoughts are added to the number of feelings generated about self-performance then these two categories form a significant proportion of the total thoughts and feelings reported. For example, Gail reported 40% of total thoughts and feelings, Sam 33%, Dee 40% while Pat went against the trend with 21%.

As indicated in Table 22 thoughts and feelings about an action involving other students, either of the other students as persons, their behaviour, or both, also ranked highly for all four participants. Again, the literature and anecdotal evidence indicates that adults show concern about other students. This study showed that these participants were no exception and particularly it showed what that concern was particularly about. For example, Gail showed concern about perceived off-task behaviour of her peers, Sam appeared pleased to be in the company of peers who appeared more accomplished than himself, Dee acquired a lot of knowledge from them and Pat loved the interaction.

Table 22 also indicates that thought processes involving learning the subject matter were also highly ranked amongst the participants. Each of the participants was attending university to learn and this is supported by the quantity of cognitive processes that involved this learning. For example, each participant reported processes ranging from perceiving and knowing to remembering and relating to past and present situations.

Interestingly, positive and negative feelings about other aspects of the learning process, that did not involve self-performance, did not rank highly. The exception was Pat who reported more positive feelings, 22.8%, about the learning experience both in terms of his own overall total and the totals of the other participants. Pat, more than the others, reported emotions concerning the content of the learning sessions. He frequently referred to those emotions generated by the topic under discussion, particularly on how that topic prompted feelings about past experiences. He appeared to take enjoyment from these connections, though occasionally they did engender some anger and anxiety as indicated by a total of 6.7% negative feelings.

Table 22

Summary of the Quantitative Data

TYPE OF DATA ANALYSED	CASE STUDIES			
	GAIL	SAM	DEE	PAT
Attributional Style Questionnaire (ASQ)	Hopefulness – 11.2 Hopelessness – 8.3	Hopefulness - 9.9 Hopelessness - 6.0	Hopefulness - 9.5 Hopelessness – 9.2	Hopefulness - 11.5 Hopelessness – 8.3
Study Profile Questionnaire (SPQ)	Deep predominant	Achievement predominant	Surface predominant	Achievement predominant
Quantitative Analysis	Self-perf.-Feeling 26.0% Beh. Moves-student 19.8% Cog. Processes 18.6% Self-perf.-thoughts 14.1% Beh.moves-fac. 11.3% Beh.moves-self 5.1% Subject matter 5.1% Feelings –Pos. Nil Feelings-Neg Nil Non task Nil	Beh. Moves-student 22.8% Cog. Processes 19.6% Self-perf. thoughts 17.1% Self-perf. feelings 16.5% Beh.moves-fac. 10.1% Subject matter 6.3% Feelings-Pos. 5.1% Beh. Moves-self 1.2% Non task 1.3% Feelings-Neg Nil	Beh. Moves-student 24.0% Self-perf. thoughts 20.4% Self-perf. feelings 19.9% Cog. Processes 12.8% Beh moves-fac. 11.2% Beh.moves –self 5.6% Subject matter 4.6% Feelings –Pos. Nil Feelings-Neg. 1.5% Non task Nil	Feelings-Pos. 22.8% Self-perf. feelings 17.2% Subject matter 13.3% Cog. Processes 11.1% Beh. Moves-student 7.2% Feelings –Neg. 6.7% Beh.moves-self- 6.1% Beh.moves-fac. 5.6% Non task 5.6% Self-perf. thought s 4.4%

While anecdotally it is accepted that adults experience thoughts and feelings during a learning experience, this study has quantified those thoughts and feelings into a range of categories. Thoughts and feelings are idiosyncratic but trends can be determined across participants that may well be true of learners outside this study.

Qualitative Data

Causal Explanations

One way of talking about the case of adults entering tertiary study for the first time and their mental life regarding self-performance is to examine their causal explanations and perceptions of their behaviour, the behaviour of other students and the facilitator. A summary of these causal explanations appears in Table 23 .

Attitude to group work.

Generally, each participant felt happy that the learning was conducted in small groups. Their explanations for this happiness ranged from Gail and Sam's need for inclusion and connectedness to Pat's enjoyment due to the group acting as a trigger for his own thoughts. Dee found the group experience both stimulating and frustrating owing to her perception of whether the group was on or off task.

Beliefs about learning.

Gail constructed her own learning because of her need to connect the classroom content to the world of work. She sought to build her knowledge by reading about and discussing the classroom content and then by reflecting on the ramifications for how she could apply that learning to her work world. Sam saw the classroom as an academic game because his view was always from an outside framework. He realised that there were certain conventions in the classroom that were required to be met but he probably never completely embraced the academic world. Pat showed a critical stance because of his belief that academics were not part of the real world. He made constant reports about how the real world acted differently from the way academics said it did, and he

never adopted the conventions required of the academic classroom. Dee adopted an essentially superficial approach because of her belief that real world experiences were more important to her learning than an academic learning that required understanding through texts.

Self-performance.

Both Dee and Gail viewed their expectations of successful self-performance from time to time with some doubt. Such doubt may well have been because of their reported low self-concept. Both admitted surprise at their acceptance into the program initially and were mostly surprised at their achievements in assignment work. Sam expected to perform well probably because of successful schooling and course achievement prior to enrolment. However, success was affected by external influences and his perceived technical, rather than academic, orientation.

Perceptions of the facilitator.

Pat enjoyed observing and listening to the facilitator because the facilitator was able to trigger thoughts and emotions about previous and current experiences. Often such triggers resulted in long reflective ruminations that he was able to use to connect with the content of the classroom. Gail's thoughts vacillated from positive to negative depending upon her perception of how well the facilitator was conducting the session. If he gave enough time for discussion and pondering of the topic then she viewed him favourably but if time given was inadequate then she became frustrated. Perhaps this frustration was a result of her desire to examine all topics in depth. Sam and Dee reported few causal explanations for their beliefs about the facilitator. Perhaps the orientation towards group work meant the facilitator was less important to them, and that self-performance and the performance of fellow students may have been more important.

Table 23

Summary of Causal Explanations of Behaviour

TYPE OF DATA ANALYSED	CASE STUDIES			
	GAIL	SAM	DEE	PAT
Causal Explanations	1. *Attitude to group work-* strong desire to be part of the group because of need for connectedness. 2. *Beliefs about learning –* constructing of own knowledge because of need to connect to world of work. 3.*Self-performance –* affected by varying self-concept. 4. *Facilitator's moves –* positive and negative thoughts depending on on facilitator's moves.	1. *Attitude to group work-* enjoyment due to feeling of inclusion. 2. *Beliefs about learning -* outside voice because classroom was an academic game. 3. *Self-performance -* achievement orientation frustrated by external pressures.	1. *Expectations –* low because of psychological distance and lack of time. 2. *Group work -* ambivalent because both stimulating and frustrating 3. *Learning processes -* surface because of belief in real world experiences. 4. *Self-performance* and *self-worth* - low due to low self-concept.	1.*Beliefs about learning -* critical voice because of belief academics not in real world. 2. *Group work -* enjoyed because a trigger for own thoughts but reticent to speak out. 3. *Views of others -* used them to assist own learning-including facilitator-because triggered own thoughts.

Basic Underlying Covert Behaviour

Another way of talking about the case of adults entering tertiary study for the first time and their mental life concerning learning, is to examine their underlying ideas, beliefs and implicit theories about that learning. These are summarised in Table 24. The covert behaviours observed are extremely individualistic. For example, Gail reported a reasonably strong fear of failure that was not reported by any of the others with any intensity. Such fear often meant she avoided the possibility of failure by not volunteering in group leadership situations or by not asserting her point of view. Pat adopted a similar stance, but his lack of desire to participate was more as a result of not wanting to be seen to dominate.

Both Dee and Gail reported a perception of their ability as only average. Perhaps there is a link between this perception and their reported low self-concept. Pat and Sam reported no such perception though Sam perceived his lack of ability in academic writing might prevent the high achievement he was seeking.

Each participant reported an idiosyncratic approach to learning. Gail reported a love of learning and an intrinsic motivation to understand at a deep level. Sam reported a need, and a belief, that learning should be relevant to his work place. As well, he desired to be successful at that learning as measured by grades on assignments. Dee also sought relevance, but more than the others, she sought a structure for her learning. Such structure was sought particularly from the assignment requirements and she only sought out readings that explicitly assisted in putting a structure on those assignments. Pat also sought relevance but that relevance also had to be practical. For him there was an almost constant clash of theory and practice.

There was one unifying influence underlying the learning behaviour of all four participants. All reported that external pressures to a greater and lesser extent affected their performance. Gail was probably the most affected emotionally by the pressure of her illness. Pat too had some illness scares. Sam had an ill wife, but mostly the task for all of them was the constant juggling of work, family and socialising, with the requirements of the academic classroom. It is perhaps the existence of external pressures that looms as largest, single influence upon the adult learner.

Table 24

Summary of Basic Underlying Covert Behaviours

TYPE OF DATA ANALYSED	CASE STUDIES			
	GAIL	SAM	DEE	PAT
Basic Underlying Covert Behaviour.	1.Fear of failure – avoidance of failure. Insecurity, lack of assertiveness. 2. Self-perception of ability – average . 3. Approach to learning – -love of learning -deep strategies -intrinsic motivation.	1. Achievement motivation and approach to learning - high and need for relevance. 2. Perceptions of others - ranked them higher than self – in awe – learned from them. 3. External pressures - very powerful influence.	1. Approach to learning and underlying reasons- surface-not a researcher- sought relevance - extrinsic motivation - sought structure - self-concept remained low	1. Approach to learning - must be practical - procrastination - clash between reality and theory - external pressures - long ruminations. 2. Perception of others - Social isolation but did enjoy interaction if stimulating.

CHAPTER 8

Discussion

Introduction

This chapter draws together for further discussion the variables identified from both the quantitative and qualitative analyses of the four study participants of Gail, Sam, Dee and Pat. According to Woolfolk (1993), a variable is "any characteristic of a person or environment that can change under different conditions or that can differ from one person to the next" (p. 577). More precisely, Swanson and Holton (1997) indicate that variables are "the phenomena that vary depending on the conditions affecting them" (p. 72). Therefore, as a result of using some of the pertinent "tactics for generating meaning" (Miles and Huberman, 1994) described in Chapter 4, those variables of major interest in this study that were identified and presented in Chapter 7, are further described here in accordance with theoretical framework outlined in Chapter 2. The theoretical framework provided a structure for the overview of the literature in Chapter 2, gave direction to the framing of the research questions, selection of instrumentation, data gathering and analysis, and is used in this chapter as a framework for examining the results. In other words, the framework is used to display those identified variables, or characterisations, that are the core of this study. Each of the key elements in the theoretical framework listed under the umbrella heading of adult educational psychology will be used to group together the important findings that are, firstly, common to all four of the participants and, secondly, those common to less than the four.

The Identified Variables

Adult Development

All four participants had experience in work situations other than Training and Development and appeared to be motivated by the need to enhance their new careers in Training and Development. No evidence was found to indicate other motivation, such as family transitions, so the literature (for example, Aslanian and Brickell, 1980) that indicated that career moves were important reasons for adults undertaking learning is confirmed by the four participants in this study. Each of them saw the opportunity to

develop their understanding of their work roles by participating in the learning experiences provided at the university.

In terms of the life span models of, for example, Maslow (1968), Loevinger (1976), Erikson (1978), Gould (1978) and Levinson (1978 and 1996), some inferences can be made from the data collected. Each of the participants, albeit differentially, demonstrated a maturity of mind and motivation driven by the need to actualise their potential in their workplaces. For these participants, one must agree with Granott (1998) that the act of learning is a developmental process that occurs in both the classroom and the workplace, and that those adults who embrace the desire for autonomy will participate in lifelong learning. All were battling, to a more or lesser degree, with a kind of internal conflict that was fed by some self-imposed doubt and some external pressures. Acceptance of these conflicts as an inevitable part of being an adult was an indication that all were functioning as adult learners. Indeed, their occupation as trainers of other adults placed them very much into that focus on life of the 'other' rather than 'self', as carers with concern of guiding the next generation of younger workers and older workers requiring upgrading of their knowledge and skills. As Knowles, Holton and Swanson (1998) indicated, adult learning is inextricably intertwined with adult development and motivation and readiness to learn is a function of development. These assertions were borne out by these participants.

Finally, the concept of the "new adult learner" (Husson, 1996) was confirmed in this study. The four participants fell within the age ranges of 22 years to 56 years, were in full time employment with employers supporting their efforts either financially or in kind, had family support for learning and were undertaking study for personal development.

Adult Learner Motivation

These participants confirmed Burns' (1998) assertion that adult learners are motivated by their needs in certain situations. All four, as already indicated, were motivated to attend to the new experiences of tertiary learning because they sensed the need to develop themselves at work. However, Burns' assertion that motivation is defined as a willingness to exert high levels of effort towards achievable goals was not

entirely supported by the reported comments of Dee and Pat. The amount of effort expended did vary significantly and appeared to be the result of diverse conceptions of learning and the varying view of how long each participant was willing to maintain that effort. For example, Gail and Sam appeared to be committed to a longer term experience than the others and therefore appeared to exert a more sustained level of effort than the others. In fact, Gail and Sam, on completion of the shorter Associate Degree, went on to complete the longer Bachelor award, while Dee terminated at the shorter award and Pat did not complete his award.

One of Wlodkowski's (1999) motivational conditions that enhance adult motivation to learn is inclusion – "the awareness of learners that they are part of an environment in which they and their instructor are *respected by* and *connected to one another*" (p.69). When learners realise they can consider opposing or different ideas, and have their own ideas considered by others in a climate of mutual respect, then involvement in the learning process will be improved. Respect is important to human beings, so regardless of prior experiences and current positions, all members of a learning group need respect to be given and received. Only at that point, says Wlodowski, will true connectedness be achieved for connectedness is more than respect – it is an awareness of a sense of belonging and that each cares for the others and is cared for in return.

In this study, Wlodowski's concept of inclusion seems to be contained in the identified variable of public participation. Public participation is concerned with each participant's thoughts and feelings about being part of the learning group. The major tactic used by the facilitator to activate learning was to utilise small group workshops and discussions. Dee adopted an approach-avoidance stance with members of her groups. She was at times stimulated by the group, and other times frustrated by the off-task behaviour of some members. Gail reported a stronger desire to be part of the group but at times she too became frustrated with the group dynamics. Perhaps she was less cynical than Dee of this situation. Sam was extremely positive about group work and felt a strong sense of inclusion. Pat used the ruminations of his group to construct his own learning world that was enmeshed with his outside experiences. What has happened here, perhaps, is that inclusion differs between individuals and within the

same individual depending upon their own comfort zone and their perception of how the group is participating at the time.

A group work climate has the potential to encourage inclusion providing other factors are present. In this study, the group work did provide those factors for it invited each individual to access their experience, to reflect, to discuss and to allow their experiences to give meaning to the content of the session. The transcripts are scattered with these observations in one form or another. However as indicated, the transcripts also demonstrate instances where the participants chose not to be included in the group. The reasons for these withdrawals range through initial shyness, off task thoughts, frustration with "grandstanders", a desire for social isolation and frustration with perceived off task group behaviour. Therefore, while Wlodowski paints a warm picture of inclusive activity, these participants have demonstrated that an individual's a sense of inclusion will ebb and flow according to that individual's thoughts and feelings at critical times in the learning process.

McInnis and James (1995), in an exhaustive study of First Year students across seven Australian universities, indicated that only 52 % of the sample were comfortable with participating in group discussion, while 30% indicated they always worked alone. Even though the sample was biased towards younger post secondary students, there is an indication that it is a false assumption that public participation is comfortable for adult learners, and the four participants in this study reported this on numerous occasions. In the current study the classroom sessions were structured in such a way that group participation was mandatory. The participants accepted the requirement for public participation in their learning. Not all of them, however, found the experience to be problem free. If group learning, with its need for respect and connectedness, is to be truly motivational then the group experiences, and the relationship of the individual to those experiences, needs to be optimal. Indeed, as Millis (1991) contends, the general consensus with respect to learning in adult groups is that the benefits outweigh the disadvantages particularly when it is conducted within a cooperative ethos. For instance, Gail described benefits when the group was on task and egos were not on show, and Pat reported delight when there were opportunities to discuss challenging propositions.

Another of Wlodowski's (1999) four motivational conditions is the relationship between a learner's attitude and their behaviour. An attitude is a combination of concepts, information, and emotions that results in a predisposition to respond favourably or unfavourably toward particular people, groups, ideas, events, or objects (Johnson, 1980). According to Wlodowski (1999) "attitudes powerfully affect human behavior and learning because they help people make sense of their world and give cues as to what behavior will be most helpful in dealing with that world" (p. 72). Learners apply past solutions to present problems and this allows them to cope and to be consistent in their behaviour. Sam, as an example, used his experiences on previous courses in the military as mental preparation for his university experience. In this study, the participants were all more or less reticent about their new learning experience, as the transcripts repeatedly showed. Because they were reticent about the new experiences their application of learned past reactions to similar situations enabled them to cope successfully. Perhaps this approach was a function of the maturity of the participants in the workplace and with life experiences in general.

Attitudes are also shaped by needs because they make certain goals more or less desirable (Wlodowski, 1999). In this instance, all of the participants had the need to reaffirm that their current work practices were supported by the theoretical constructs learned in the classroom. Dee constantly sought relevance between classroom content and her workplace; Gail constructed her own knowledge because of her need to connect to the world of work, and Pat often commented on his perceived clash of classroom theory and his perception of reality. Therefore, any classroom theory that did not assist them to immediately confirm or resolve practical work situations caused them consternation. There seemed to be a direct link between their attitude and their perception of how their needs were being met. For these participants, personal relevance appeared paramount. They perceived relevance when the classroom learning was contextualised in their personal and workplace meanings and when the relevance reflected their construction of reality. For them, the learning was "connected to who they are, what they care about, and how they perceive and know" (Wlodowski, 1999, p. 74).

Attitudes also influence people's reactions to change events – those events in their lives that affect their cognitive representations of themselves and others (Costa and

McCrae, 1989). As previously indicated, for the participants in this study another underlying reason for undertaking learning was the need for credentials in order to operate more effectively in the workplace. Pat and Dee particularly made this point while the others were more implicit. According to Merriam and Caffarella (1999), "adults often engage in learning as one way to cope with the life events they encounter, whether that learning is related to or just precipitated by a life event" (p.115). Work, and changes at work, can be a strong motivator to activate learning. Dee particularly demonstrated the situation of a desire to enhance her position at work, and a need to better understand her training role at work, as major reasons for undertaking tertiary study. Pat, while at times reviling "academics", realised an academic qualification was required to enhance his position and to provide him credibility at work and in the community of his choice. Sam and Gail realised the content and theory of the program could enable them to cope better with their work demands.

Strongly related to the desire for personal relevance is Wlodowski's third condition of motivation, the desire for meaningfulness. Any sense of feeling included in the learning situation, and any amount of positive attitude, will diminish if adults do not find their learning to be meaningful. "By making their goals, interests, and perspectives the context of learning, we create a system that evokes meaning and involvement in learning" (Wlodowski, 1999, p.76). For these participants, the transcripts are full of allusions to learning activities that did create meaning and involvement, but when they did not the participants gave full voice to their criticism. For example, Sam frequently referred to his need to relate his session notes back to his own experience thus adding to his current level of knowledge, while for Dee, books were only read if they were congruent with her own ideas.

Three of four of Wlodowski's (1999) conditions for adult learning motivation were explicitly confirmed in this study. The fourth, competence, requires a certain amount of inference as the transcripts do not explicitly speak of this condition. According to Wlodowski, adults require a sense of a growing level of competence if they are to continue with learning. Such competence may be measured against some self-imposed yardstick or against an external standard such as those competencies required for licences to conduct a trade. For these participants the reported comments did infer a need to be successful in assignment work that was assessed by the facilitator.

All of them were aware of the need to satisfy certain assessment criteria and this realisation for some caused a little consternation. Yet when grades were received that exceeded their expectations, they expressed not only joy but aspects of a growing level of competency.

Summary of adult learner motivation.

For these adults, motivation for learning seemed to have a variety of sources. A sense of inclusion that was encouraged by the group work motivated each participant to expend effort in the learning process. However, it was found to be a dangerous assumption that inclusion meant a warm comfort zone. This study found that group work is very problematic. While participants might have accepted inclusion as desirable, each demonstrated an idiosyncratic approach to the group work. Such idiosyncrasy appears not to be reported in the literature and therefore it is an important finding of this research. Not all adult learners approach group work with the same attitudes, and attitudes vary within individuals depending upon their perception of what is going on in the group.

All participants were also motivated by the confidence engendered by their previous experiences. While some were apprehensive, all participants felt that previous experiences would enable them to achieve at the required levels. There was also a strong perception that their needs would be met by the course and this engendered a positive attitude. One important need was the gaining of a relevant credential and it was against this need that the program's meaningfulness was always measured.

Adult Learning Theory

Merriam and Caffarella's (1999) framework for examining learning in adulthood – namely, the individual learner, the learning context and the learning process – proved to be a most useful framework for this study. Demographic and background data were gathered to reveal idiosyncratic information on each participant. The particular learning context was described in order to understand better the participants within the framework of the tertiary classroom. More importantly for this study, reported thoughts

and feelings of the participants during the learning process were gathered, coded and analysed.

As the data were gathered prior to Knowles, Holton and Swanson's (1998) elucidation of the six core andragogical principles, *post hoc*, some inferences can be made from the data that support the efficacy of these principles. These principles are the *need to know*, self-concept with respect to *self-directed learning*, *prior experience*, *readiness to learn*, *orientation to learning* and *motivation to learn*. *Readiness to learn* has already been covered in the section headed Adult Development and *motivation to learn* has already been covered in the section headed Adult Learner Motivation. The remaining principles are now discussed in turn.

Need to know.

According to Knowles, Holton and Swanson (1998), adults *need to know* how the learning will be conducted, what learning will occur and why it is important. In this study, the participants reported on a number of occasions their liking for the opportunity to learn in those small groups where there was a rich interaction of ideas. Mostly, the groups were leaderless with each individual having the choice to input or not. There was therefore a sharing of control over learning. As well, at the beginning of each learning session the facilitator used advanced organisers to indicate the day's agenda in order to satisfy the participants' need to know what content was to be learned and how it would be learned. The transcripts showed that these advanced organisers were not always well received especially when an unpopular activity such as speed reading was telegraphed. What is interesting from the data is the lack of need for the participants to seek answers from the facilitator as to why the learning was important. The answer instead came from their own perception of what was important and the yardstick of this was whether the content was relevant and meaningful. Indeed, the driving force underlying all of the participants' learning was relevance and meaningfulness – not that this always occurs, but they recognise it has to happen. Advocates of the socio-constructivist view of learning indicate that learners always make connection with past experience. However, in this study, all participants reported a *need* to make a cognitive connection of the content of the classroom with their own experience, either previous or current. Pat ruminated long and hard over these connections, Dee rated relevance of

material as the only reason for learning while it was of lesser importance to Gail. Sam constantly sought relevance and meaningfulness and was delighted when projects for assesssment could be used in his workplace.

Self-directedness.

Knowles and others have written at length about the adult learner's desire for *self-directedness*. Merriam and Caffarella (1999) indicate three emphases of the research into self-directedness – goals, process and as a personal attribute. Data treated *post hoc* shed no light upon the goals of self-directedness because it was outside its scope. However, the emphases of process and as personal attribute did emerge in the reported comments from the participants. All of them at various stages implied their learning was self-directed with regard to planning what they were to learn, how they went about this and what was required to have that learning evaluated by the facilitator. In this latter instance absolute self-directedness had to give way to the administrative requirements of the university so that grades could be awarded and recorded according to schedule. In the areas of planning and execution of learning, there was no evidence that the participants wanted or expected to be taught all the time. However, there were numerous instances when participants, particularly Dee, required structure from the facilitator and some guidance on how to proceed. It is perhaps inevitable that absolute self-directedness cannot exist within a tertiary classroom that has a facilitator who has administrative requirements to be met. Even though the learning context was essentially self-directed there were times when the learning was "taught" rather than directed by the individual. If the process of self-directedness seeks absoluteness then it did not occur for these participants. On the other hand, the reported comments of the participants did confirm that they believed directedness to be a personal attribute. Time and again there were comments on how much they enjoyed group work and how the groups added to or confirmed their own knowledge. They realised early in their program that the learning would not come from the facilitator but from a testing of their own assumptions and experiences against their peers'. Perhaps there is a link between self-directedness and personal meaning making – a link that may have further research implications.

Prior experiences.

The participants appeared to demonstrate Mezirow's (1997) tenet that adults need to understand their *prior experiences* and to make sense of what is happening to them. Such a requirement is difficult to do alone. That is why the participants reported why the group work concept was so powerful for them and why it was so idiosyncratic. The group work enabled them to share experiences, receive feedback, to listen to the experiences of others and to help them understand concepts. In the beginning though, when a group is first created, it is natural for individuals to be wondering about others when they first meet. What do the others know that I do not? Will I look ridiculous in their eyes? The participants in this study were no exception. For Pat, quantitatively the perception of other students was not a major proportion of his thoughts and feelings, but he did enjoy the interaction about complex issues with colleagues. Pat was essentially an isolate who felt that there was no need to impress his fellow students. He felt neither superiority nor inferiority, though at times admired the academic skills and effort of those who, like him, were pressed for time to devote to learning. For Dee, quantitatively, perceptions of other student's behaviour accounted for nearly a quarter of her thoughts and feelings. She sometimes remarked upon the fact that she felt other students were mirroring her own thoughts. Gail's perception of other students appeared to be strongest when she was aware of their off-task behaviour and any behaviour that demonstrated a high level of perceived egotism. Sam probably demonstrated the most positive perceptions. He often reported awe with others student's perceived knowledge and experience though this did not make him uncomfortable. Sam was happiest when he felt he was not alone in his thoughts and feelings – others thought and felt the same. Sam and Dee probably felt more connected with other students than did Pat and Gail. Sam and Dee had a sense of belonging and a shared understanding that was generated by mutually supportive thoughts and feelings. Pat, on the other hand, did not need the support from other students but revelled in the sharing of stimulating discourse, especially when it enhanced and was commensurate with his own view of the world. It was through groups that each participant was able to make meaning. Groups were, therefore, powerful in enhancing adult learning in this context.

Orientation to learning.

The andragogy in practice model (Knowles, Holton and Swanson, 1998) indicates that adults learn best when new information is presented in a real-life context, especially when they are able to utilise their current, as opposed to their previous, experiences. This was well demonstrated by the four participants. They reported on many occasions their liking for the learning strategies initiated by the facilitators of their program that related to real life. While from the facilitators' point of view, the Kolb (1984) experiential learning cycle was more implicit than explicit as a learning strategy, that model's stages were certainly followed by each of the participants. Each session was started with some kind of concrete experience such as the examination of a relevant case study. Small groups were utilised to allow the learners to observe and reflect upon that experience. This meant sharing of experiences with knowledgeable peers in an environment of inclusion (Wlodowski, 1999). Finally, lessons learned were translated into practice in the workplace through project work. For example, the theory and procedure underlying a training needs analysis was applied to a group of personnel in a work situation of the participant's choice. Indeed, as already discussed, the more meaningful and relevant the content was to the workplace the better the motivation to learn and apply that content.

In summary, the data did generate strong support for the six core learning principles described in Knowles, Holton and Swanson (1998). The participants did seek some control over their own learning though on occasions they sought structure and guidance from each other and the facilitator. Relevance and meaningfulness were imperative in answering why learning is important. In seeking control they did adopt a certain measure of self-directedness and with these participants that was manifested more as personal autonomy than a desire to self-teach. Prior experience was often freely shared with other group members and the experiences of others were greatly appreciated. All of the participants were ready to learn and were motivated by the need to know more about how they could improve their effectiveness in their workplaces. Their approaches, or orientation to learning, varied widely and their perception of inclusion, their strong, positive attitudes and perception of content meaningfulness all contributed to positive motivation states.

Adult Thought Processes

There were a variety of belief systems underlying learning amongst the group. Both Pat and Dee maintained a certain amount of psychological distance from the classroom with perhaps Pat demonstrating sometimes a most cynical attitude. Gail sought more inclusion while Sam reported a strong set of beliefs and actions firmly set within the real world of work. This study, as did Kasworm's (1999), indicated there was more to the premise that adult learners just engage in learning through problem orientation or pragmatic applications. There is a more complex interrelationship mediated by the situation of the learner and their knowledge based upon their life role as an adult, past schooling and work experiences, knowledge structures and the classroom learning process. Certainly each of the participants brought to the learning situation an idiosyncratic biography of knowledge, experiences, conceptions and expectations. The participants "suggest that learning engagement occurs through complex intersections of situated life contexts and personal meaning structures" (Kasworm, 1999, p.5). In this study, therefore, job and career utility are significant predictors of learning motivation for these participants.

Woven through the reported statements of the four participants is evidence of a number of Nuthall's (1999) five distinguishable socio-cognitive processes involved in the acquisition of knowledge and beliefs. There were certainly frequent allusions to the acquiring and clarifying of information. Indeed, the desire for this to occur was an important motivator to attend the course in the first place. As already discussed, the activity of creating associative links with related knowledge and experience, and integrating new experiences into the workplace, was an ongoing process that permeated a good number of the participants' thoughts. There was an almost constant need to evaluate the truth and consistency of new information against their current knowledge and beliefs. When there was a discrepancy between the new beliefs and the old then how far those new beliefs were adopted depended to a certain extent upon the participants' "knowledge voices" (Kasworm, 1999). For example, Gail believed in constructing knowledge by connecting the classroom learning to her workplace. If there were a discrepancy of beliefs she would more likely adopt the new beliefs. Pat, on the other hand, was critical of the academic world and was more likely to reject the beliefs of the classroom in favour of the beliefs generated by his own experiences.

Attribution Theory

Attribution theory (for example, Weiner, 1980) examines to what main causes people attribute their successes and failures. These causes are *ability, effort, task difficulty* and *luck.* Such causes are perceived rather than actual, but it is the perception that is important for achievement motivation. These perceived causes are critical in learning situations because "they influence self-concept, expectations for future situations, feelings of potency, and subsequent motivation to put forth effort" (Hunter and Barker, 1987, p.51). The researcher required the participants in this study to complete the Attributional Style Questionnaire (ASQ) in order to help discover causal explanations for the participants' behaviour. Such causes were grouped along a continuum of pessimism to optimism.

In the main, the participants' ASQ scores indicated a moderate to high degree of optimism. That is, their explanatory style for explaining good events was internal, permanent and able to enhance every experience, while for bad events they attributed causes externally, temporarily and specifically. As a result, while the participants came to tertiary study with some trepidation as to their chances of success, they were optimistic about their outcomes. Pat probably had less fear and a well- developed self-concept. Sam had a strong achievement orientation built by previous successes at school and self-education, while Gail and Dee had considerable doubts about their ability to perform. Gail came to tertiary study with a history of self-doubt that possibly emanated from a lack of assertiveness and a feeling of insecurity in her ability to cope with tertiary learning. Sickness throughout the duration of the study exacerbated the situation but a dogged attitude saw an improvement in her self-concept over the year. She, more than the other participants, demonstrated Seligman's (1992) assertion that in formal learning situations optimists try harder than pessimists in the face of challenge.

The study was concerned with the identified variable of self-performance – how did the participants view themselves in terms of their own performance? How learners view themselves influences their chance of success (Biggs and Moore, 1993). Anchored in most human motivation is the need to approach success and avoid failure (Barry and King, 1993). This general relationship between how learners feel about themselves and

performance has been postulated by Covington and Beery (1976) and Covington (1984). Essentially, Covington's self-worth theory of achievement motivation indicates that a learner's self-worth is influenced by their performance, self-perceptions of ability and the amount of effort expended.

Underlying the ideas of self-performance and self-worth is the notion of self-concept, or more specifically, self-efficacy (proposed by Bandura, 1977). Chances of success at a task depend upon a person's previous experience. Has the task been successfully performed previously? What is their perception of how the facilitator or fellow students think they will perform the task? What is their own perception of difficulty of the task? What attributions or style of explanation were seen as the reason for that success or failure?

In this study, the participants had no previous experience of tertiary study. They needed to rely upon related experiences such as general success at school, work and development of life-skills, or attainment on short courses or TAFE programs. Because the tertiary experience was new all of the participants, to a greater or lesser degree, faced the experience with trepidation. Such trepidation appeared to result from a mixture of self-perceptions of their ability, a fear of task difficulty and just how much effort was required to complete a tertiary qualification. Additionally, the geography of the institution, particularly the library and the simple process of borrowing books, was a new and therefore somewhat fearful factor in the cause for reticence. It is well documented (for example, Malouf, 1994) that adults approach a new learning situation with a raft of fears resulting largely from the need to avoid appearing inept in front of their peers. The transcripts of the current participants included many thoughts and feelings detailing such trepidation. Interestingly though, while some of the participants wondered about how fellow students would view their performance, there is not a single instance of concern over how the facilitator might think of how they would perform. Perhaps they viewed him as supportive.

All participants had views upon their self-performance and self-worth and all had varying degrees of trepidation about their success in tertiary study. Dee and Gail reported an improvement in self-concept though Dee's improvement was questionable in the light of some of her later comments. Perception of ability is also a sub-set of

views on self-performance and while no correlations between perceptions of ability and performance were undertaken Gail did report a feeling that her ability was average and thus her expectation was of average achievement. She probably, more than the others, demonstrated a major axiom of attribution theory that ability is fixed. However, where the axiom indicates this belief leads to setting performance goals that are easily achievable in order to avoid failure, Gail certainly set herself challenging goals. Perhaps the reason for this was that her reported fear of failure was in itself a driving motivator to ensure she was successful. Her grim, almost obsessive determination overrode her perception that she was of average ability. Sam, on the other hand, expected to do well but his perceived lack of ability to write in an academic style frustrated those hopes. He really needed some other way of having his achievement graded for his lack of writing ability prevented achievement in terms of academic goals.

Self-concept is fundamental to achievement motivation. Self-concept is largely determined by the perceived causes of success and failure. How individuals explain to themselves the reasons for past successes and failures will determine their expectancy of success or failure in future situations. In this study, the four participants were either moderately optimistic or highly optimistic on a scale that included mild pessimism and deep pessimism. In any large population, one could expect a bell-shaped curve of individuals in the ASQ across the entire range. This small sample had a most positive skew. Herein lies an interesting phenomenon. Despite all the fears, all the trepidation, all the wondering about task difficulty, perception of ability and the amount of effort that might be required, a marvellous belief that they would prevail in the end underpinned everything. The McInnis and James (1995) study found the older the student the stronger the sense of purpose (p.70). The current study supports that view. How individuals perceive themselves is a most potent motivator for learning. Perhaps it can be concluded that if one enters a tertiary learning situation for the first time with reasonable optimism, and a strong feeling of self-efficacy, then any fear of failure, or trepidation about meeting strange requirements, may likely be overcome, as occurred in this group.

Approaches to Learning

As this study was primarily about adult learning in a tertiary situation data were sought concerning the thoughts and feelings the participants held about their learning. Quantitative data were generated by the administration of the Study Process Questionnaire (SPQ) that sought information on the students' approach to learning, and an examination of qualitative responses was sought to confirm or deny the SPQ finding. The four participants interestingly covered the range of approaches to learning in the SPQ: Gail was Deep Predominant, Sam was Achievement Predominant, Dee was Surface Predominant and Pat was also Achievement Predominant. In three of the four cases self-reporting of covert behaviour confirmed the SPQ profile. However, in Pat's case he presented many examples of an achievement orientation in his career and "outside life" but not in any academic applications.

If there were any continuum in the SPQ profiles that indicates an adult educator's desirable student from an undesirable one then Gail's Deep Predominant approach to learning would be the most preferred. Her learning was motivated to seek meaning and understand a problem. She entered the course with a great deal of relevant content knowledge, reflected metacognitively on the tasks required of her and enjoyed investing the time and effort needed to be successful. All of these traits are typical of Biggs and Moore's (1993) Deep Predominant profile. Dee, on the other hand, demonstrated a Surface Predominant profile in that she indicated that she did enough work to "just get by" and to complete the course in the quickest time so that she could get on with her life. She appeared interested in learning main points by rote methods so that she could reproduce them in assignments. However, contrary to a typical Surface Predominant profile, she did make deliberate attempts to seek meaning and implications from her course work in order to better understand her workplace situation. Both Sam and Pat demonstrated classic Achievement Predominant profiles. Both were able to seek out what was required of them academically to achieve high grades and work on tactics to lead them there. However, in Pat's case, this was not done during the course of this study. Instead, his reported comments indicated this predilection in his life up to the commencement of the course but not during the course. Perhaps this was because he never really accepted the academic experience as legitimate – it was not the "real world".

These participants have demonstrated that there is a connection between learning outcomes and the strategies used to achieve them. Learners, such as Gail, sought meaning in order to achieve deep learning results, while learners, such as Dee, achieved surface learning when using rote and short cut methods. Sam certainly involved himself in optimal engagement in learning tasks, as the deep strategy demands, but this engagement was more a means rather than an end, unlike the deep strategy. It appears that the four participants in this study well demonstrated Biggs and Moore's (1993) approaches to learning, particularly as the qualitative analysis of their comments supported their quantitatively derived profiles. Such results do differ from the literature that indicated Training and Development students demonstrated deep approaches to learning (Fuller, 1999), and that mature-aged students were more likely to adopt a deep approach (Richardson, 1994). The reason for this is possibly due to the sample in this study being of only four participants – there are not enough cases to indicate a trend. However, just four participants do not necessarily invalidate findings because, as Harre and Secord (1972) indicate, social behaviour can be explained by intensive behaviour of individual cases. They state that "the generative mechanisms at work in social life can only be discovered by accepting the notion that the processes that are productive of social behaviour occur in individual people" (p. 133). Therefore, there may well be enough in the contrary findings in this study to warrant further research.

While approach to learning can be ascertained by the administration of the SPQ it is the qualitative data that enriches the understanding of these students in a learning situation. The making of meaning by seeking the relevance of the classroom content to the adult life and work world appears to be the fundamental driving force of these students – a relationship already demonstrated on a number of occasions. Indeed, it is the initial unsatisfactory fit between the classroom content and the individual experience that activates the engagement of the individual. After a satisfactory cognitive and emotional interaction with the content a shift to a fresh meaning is achieved. If the fresh meaning is not satisfactory then frustration will set in. On the other hand, when relevance is sought and achieved considerable satisfaction is gained and the student is motivated to continue the learning interaction.

Additionally, the idiosyncratic life events and transitions in an adult's life also activate learning. In this research, because the program of study was vocationally and experientially based, it was no surprise that the students were prompted by a desire to meet current and future developmental needs through interaction with the program and its promise of a credential. Yet the interaction is more than pragmatically motivated but is the result of a complex intersection of the adult's situation and the way they construct meaning.

What is interesting in this study is not only the confirmation of the literature but also the degree of intensity that each of the participants reported about aspects of their learning. These adults reported strong beliefs and reasons underlying their learning and it is useful to ponder possible causes of the intensity. Perhaps the vocational orientation established expectations that classroom content would be relevant to their workplace so they approached the learning with the expectancy that the course would deliver. When it did deliver they expressed intense satisfaction; when it did not they were not reticent to voice loud disapproval. Perhaps, too, both the implicitly and explicitly voiced expectancies of the participants that universities are too academic and not related to the real world, established a kind of cognitive and affective barrier to learning that would only be diminished when their negative expectations were reversed. In Pat's case though, his expectations were probably confirmed rather than overturned. It is significant that he terminated his participation just after the researcher finished collecting data from him.

Variables Outside the Theoretical Framework

Where possible, variables have been examined within the conceptual framework detailed in Chapter 2. However, an examination of the data did uncover two variables that did not sit comfortably within this framework. They are discussed below.

External pressures.

Pressures outside the classroom were common for all cases in the study. Dee reported external distractions the least while the other three reported pressures of varying degrees of influence, some of which were extreme. Gail was faced with an illness that exacerbated an already frenetic work, family and social life. Sam was working at two jobs, building a house and coping with an ill wife. Pat was coping with a new job, a variety of illnesses, a major health scare and a family life. All three never succumbed to such pressures but in some perverse way the pressures increased their determination to succeed. Gail demonstrated this determination the greatest while Sam seemed to take it all in his stride.

Lack of time and money are the most often cited reasons for non-participation in adult learning (Merriam and Caffarella, 1999). Once engaged in learning it appears that lack of time to devote to that learning is a prominent negative force. However, it was not just time that exerted external pressure, but the emotions involved with life outside the classroom that also exerted significant pressure. The emotions involved with illness of a partner or oneself, militate against total involvement with learning and this is not unusual in this age group.

One of the revelations of this study is the extent of the influence external pressure plays in the role of adult learning. It is a given that adults are busy people with many roles to play – parent, partner, worker, social and community participant. However, even though all the participants in this study reported enormous external pressure that for some was emotionally troubling, their high levels of optimism coincided with their strong achievement motivation to succeed. Gail particularly appeared driven to succeed. Herein probably lies a vital difference between the mature adult learner and the child, and even the younger school leaver learner. Adults have many roles to juggle and being an adult learner is just one of them. Dee, more than the others, anticipated the problem with multiple roles when she indicated she was prepared to put a window in her life of two years in which she was prepared for stressful, and not often enjoyable, experiences in a tertiary situation.

Perceptions of the facilitator's moves.

As all of the participants were trainers in their own right, thoughts and feelings about the facilitator could be expected to loom large. This was not the case. Apart from Pat, quantitatively, perceptions of the facilitator by the others scored about 11% of the total thoughts and feelings. Pat and Sam observed the facilitator's instructional moves as a model for their own developing training situation. Dee was largely cynical about the facilitation aspect of the learning experience though this cynicism was often modified in hindsight. Gail reported positive thoughts and feelings when the facilitator generated interesting activities and provided feedback on assignments, but was negative when the facilitator allowed off-task behaviour or closed activities prematurely. Perhaps the lack of interest in the facilitator stemmed from the fact that most activities were largely self-directed by small learning groups and the facilitator appeared to be reasonably invisible. If one accepts the notion that self-directedness is a personal attribute of adult learners then the role of the facilitator will not feature in the thoughts and feelings of students. They will proceed with their own learning in their own way giving little cognisance to the facilitator.

Summary and Conclusions

The four participants in this study have reported a wide variety of variables such as ideas, beliefs, emotions and lines of reasoning in their covert behaviour while undertaking learning in a tertiary situation. Findings generally support the adult learning literature. No other study has reported the strength and the intensity of adult thoughts and feelings about their self-performance as this one has. Therefore, where the findings in the literature may have been tentative and even speculatory, this study adds some confirmation to much of it.

Relevance and meaningfulness of classroom content to learners' lives and work is paramount. Learning in this study needs to be connected with how learners see themselves, what they care about, how they perceive and come to know. With these participants, when this occurs achievement motivation appears to soar; when it does not frustration and cynicism result.

Adult's belief in themselves as previous achievers creates a general optimistic view of life that in turn creates an attitude that effort will enable success. If it is *effort, ability, task difficulty* and *luck* that are the main causes to which learners attribute their success and failures, then these participants favoured *effort* and *ability* as the major causes of both success and failure. Indeed, there appeared to be a strong belief that effort and outcome covary; that is, the more effort applied to learning the better the outcome, not only in terms of assignment grade but also in an increase in knowledge and skills. *Ability* was always a lingering doubt with some of the participants, but *task difficulty* rarely, and *luck* never, appeared in the equation. Certainly, there was no indication at all of the belief that effort and outcome do not covary – the classic "learned helplessness" syndrome described by Seligman (1992).

All participants sought inclusion in the learning process. This meant interacting with the facilitator and the other students in their group. Such inclusion ebbed and flowed depending upon individual perceptions of the dynamics of group interplay at various times. When perceptions were that the group was off-task, or that individuals were exercising their egos, then participation ebbed. However, when the group was contributing to and supporting individual learning then the sense of inclusion was most powerful.

External pressures appear to be the single most limiting factor upon the adult capacity to learn in a formal setting. Lack of time is often cited as the major limiting factor. In this study, it was found that it was not just a lack of time but the emotions generated by the causes of that lack of time. Partner sickness, own ill health and competing pressures illustrated how time away from learning might emanate, but it was the emotion generated by such events that really took their toll. The participants in the study were all driven to succeed despite such restraints. Perhaps it was their innate optimism, their desire for a tertiary credential or their need to confirm that their workplace practices were based in acceptable theory that created a strong achievement motivation.

CHAPTER 9

Summary, Conclusions, Theory Development, Implications and Recommendations for
Future Research
Summary of the Study

Purpose

The general purpose of the study was to seek some understanding of the covert
behaviour of a group of adults in a formal tertiary learning situation. Particularly, the
study focused on questions pertaining to their thoughts and feelings, especially those of
a self-performance nature, before, during and after a learning session.

Firstly, the study sought to discover the characteristics of each of four adult
participants in terms of their idiosyncratic background and experience, the context in
which they live and work, motivations for undertaking tertiary study for the first time,
what their expectations are and some possible reasons why these expectations are held.
Secondly, the study sought to investigate some of the covert behaviour of the
participants during and after a learning session. Particularly, the study examined
individual participants' thoughts and feelings about their performance, the nature of the
learning tasks and other people involved in the learning situation. This conception of
self-performance may be regarded as an evolving personal system of interrelated ideas,
beliefs, views, emotions and lines of reasoning concerning self-performance that can
direct an adult learner's achievement-related behaviour. Thirdly, the study was to
examine the approaches to learning that each participant reported prior to learning and
whether these were confirmed by reported thoughts and feelings during and after
learning. Finally, the study was to present findings and to compare those with evidence
from published studies in order to make some contribution to closing the gap between
the study of adult education and educational psychology.

Methodology

Three consecutive three-hour learning sessions concerning the content in an
undergraduate Training and Development course were videotaped for use with follow-
up stimulated recall interviews. Four participants described their thoughts and feelings

pertaining to self-performance during the learning sessions. Pre-performance interviews and the administration of two instruments that measured explanatory style and approaches to learning were administered. Self-report journals and field notes were also utilised. The research design was intended to yield data that provided insights into the attributional behaviour of the participants, particularly in terms of self-performance.

Analysis Techniques

The data gathered were both of a quantitative and qualitative nature. Quantitatively, data were gathered about individual explanatory style using the Attributional Style Questionnaire (ASQ), about approaches to learning using the Study Process Questionnaire (SPQ) and participant behaviour was coded according to CASSIT, a content analysis system adapted for the research. The content analysis system of student interactive thoughts facilitated the quantification of participant behaviour.

Participant self-performance covert behaviour was analysed from an attributional perspective. Causal explanations of student behaviour were described according to identified chains of comment. As well, the characteristics of a participant's underlying ideas, views, beliefs, emotions, and lines of reasoning were discerned. From this attributional analysis and the ASQ a characterisation of each participant's conception of self-performance was described and interpreted.

Participant reported comments were also analysed in order to examine any possible correlation between approaches to learning as identified by the SPQ administered pre-performance and comments reported during performance. While no statistical test of correlation was administered, intuitively there was strong correlation in three of the four cases.

Conclusions

Because the study was limited to the investigation of a small number of adult learner conceptions of self-performance it is not possible to generalise beyond the limits inherent in the study. However, certain conclusions can be reached concerning adult

learner behaviour in a formal learning situation and the causal explanation of that behaviour. The conclusions are presented in the form of answers to the research questions with which the study was concerned.

What are the Characteristics of Adult Learners entering a Tertiary Setting?

What are their backgrounds in terms of education and experience?

All of the participants were in their forties and fifties and had similar early education and experiences. All left school once they reached the non-compulsory age limit for schooling. Only Gail reported that experience to be disappointing, while Dee and Pat found school to be boring and irrelevant to their lives. In the case of Sam, a school with a technical emphasis disrupted his desire to achieve high grades. After schooling all went into employment. Gail and Dee followed the societal expectations of the time that girls should undertake employment designated for females, and Sam and Pat followed similar expectations that required boys to enter jobs that enabled training and development in a career for life.

Both Gail and Pat appeared to follow the societal expectations of the time that women marry early and have children as soon as possible. The expectation was that women did not need to work – that was the role of their husbands – rather their role was to be mothers and homemakers. For both women these early years did interrupt their careers but the interruption did act as a motivator to undertake further learning once their roles changed. Significantly, talk of marriage and children did not figure prominently in the early interviews with Sam and Pat because they too were carrying out the role expected of them – to forge a career.

What motives do they have for entering the course?

All four participants cite similar motivation for entering the course. Owing to a particular transition in their lives they were ready to learn more about the line their careers had taken them. They were all in a situation that required them to train other adults and this was the trigger to learn more about the theory and practice of training and development. Apart from perhaps Pat, the realisation that they needed to learn

more about their employment was not sudden. Rather, the motivation to re-enter learning appeared to develop over a period of time. In Gail's case, it was a matter of delayed learning while motherhood dominated her life. For Dee, it was a divorce and a consequent need to forge her own career that set this motivation smouldering. Sam slowly developed a liking for training and he saw a need to develop those skills through further learning.

What expectations do they hold about the course and is there a relationship with their motivation?

For the four participants expectations about the course had a similar theme. They expected it to be a challenge simply because it was an unknown entity. Three of them had never contemplated a university course before, so firstly, their acceptance and, secondly, their early experiences, were surprising and unanticipated. Some of them expected their fellow students to be more intellectually advanced but this was more as a result of their own perception that they were in some way inadequate. All also had a high expectation that the learning experiences generated by the course would satisfy their need to top up their own learning and assist them in their personal development as trainers.

If life events triggered their need to re-enter a formal learning situation then their expectations that the learning situation would satisfy that need is a useful assumption. In each case the assumption was confirmed. The participants perceived the course to be vocationally oriented with assessable projects being workplace based and not examined in the traditional end-of-semester way. The expectation that the course would achieve its objectives was in itself a powerful motivator to join the program. Therefore, expectations and motivations positively co-varied for these participants.

To what do they attribute these kinds of expectations?

The expectation that the course would be a challenge could be attributed to each of the participant's status as mature age people who had never, or only slightly, contemplated attending a university course. Indeed, they had little experience in formal

learning situations. Hitherto in their lives there had neither been the desire nor the opportunity to enter tertiary learning. There was a history of finding secondary schooling boring and irrelevant so there was an assumption that all learning was of this ilk. If formal learning were required then attendance at a TAFE college or short courses was sufficient, but most learning was "on-the-job". University was perceived to be a place for intellectual pursuits and not of the real world so therefore its relevance was in doubt. Coupled with this pragmatic attribution was the doubt that they would be able to cope – that their perceived lack of ability at a tertiary level would prevent them from achieving.

What are the Characteristics of Participants' Covert Behaviour during a Learning Session?

What categories of participant covert behaviour are reported during a session?

Examination of the transcripts of the stimulated recall interviews with the participants revealed a wide variety of covert behaviour that included interactive and non-interactive aspects. Interactive data included thoughts and feelings reported by participants as occurring during the learning session. Non-interactive data included thoughts and feelings that occurred before or after the session. Only interactive data were coded. A diversity of interactive data were coded according to broad trends of self-oriented thoughts and feelings, thoughts about the content of the sessions, other person-oriented thoughts and feelings, feelings in general and non task-related thoughts and feelings. The nine categories of participant interactive covert behaviour were subject matter, cognitive processes, behavioural moves-self, behavioural moves-student, behavioural moves-facilitator, self-performance thoughts, self-performance feelings, feelings-positive and negative, and non task-related thoughts and feelings.

Within a number of these general categories several sub-categories were identified in order to facilitate a more intensive analysis pertinent to the aims of this study. The sub-categories tended to separate perceptions, inferences, attributions and expectations. The categories that were sub-categorised were behavioural moves-self, behavioural moves-student, behavioural moves-facilitator, self-performance thoughts and self-performance feelings.

What is the frequency of the various covert behaviours reported by participants?

All participants reported self-performance feelings most frequently. These comprised 20% of the total and ranged from Pat's 17.2% to Gail's 26%. Behavioural moves-student were the second most frequently reported category comprising 18.5% of the total and ranging from Pat's 7.2% to Dee's 24%. Cognitive Processes comprised 15.5% of the total and ranged from Pat's 11.1% to Sam's 19.6%, while the next frequently reported category was self-performance thoughts with 14% of the total and ranging from Pat's 4.4% to Dee's 20.4 %. All other categories recorded frequencies less than 10% and non task-related thoughts were the least reported at 1.5%.

The self-oriented categories, namely self-performance feelings, self-performance thoughts and behavioural moves-self, comprised 39% of the total and ranged from Pat's 27% to Dee's 46%.

Therefore, it can be concluded the most frequently reported categories of covert behaviour were self-performance feelings and behavioural moves-student. The least reported category was the non task-related category.

What are the characteristics of participants' reported covert behaviour that pertains to self-performance?

The participant self-performance-thoughts category was subdivided according to aspects of self-assessment, perceptions of tasks, self-attributions and self-expectations. The most frequently reported interactive thoughts in this category were self-expectations ranging from 22% for Sam to 62% for Pat. Self-attributions were the next frequently reported ranging from zero for Pat to 32% for Gail. Self-assessment-success ranked third with a range from zero for Pat to 30% for Sam. Apart from task difficulty with a frequency of 20% for Dee other categories were ranked lowly. Therefore, it can be concluded that self-expectations, self-attributions and self-assessment-success characterised the largest proportion of self-performance thoughts.

Self-performance covert behaviour also included self-performance-feelings. Feelings of happiness and contentment dominated the frequency count with Pat reporting 81% of all self-performance feelings through to Gail's 50%. Anxiety ranked next ranging from Pat's 6% to Sam's 42%, while negative feelings such as sadness ranked next and ranged from Sam's 4% to Dee's 26%. Frequency counts of feelings dealing with, for example, pride and shame were negligible. Therefore, it can be concluded that positive feelings characterised the expression of self-performance-feelings for these participants.

What are the Conceptions of Self-Performance that Adult Learners Appear to Hold in a Tertiary Learning Situation?

What ideas, beliefs, views, emotions, lines of reasoning make up the learner's conception of self-performance?

As a result of an examination of the interviews with the participants the researcher tried to ascertain the conceptions of self-performance held by each participant. The major components of these conceptions were found to refer to some common ideas, emotions and lines of reasoning. Self-performance was found to be a major component in these references. Particularly, expectation of success was found to be a factor in the determination of self-performance. As the learning experience was entirely new to all of the participants they were unable to use any previous tertiary learning as a criterion upon which they could base their expectation of success. Therefore, they needed to rely upon other experiences and their perceived ability to determine their expectation of success. It was their unique view of these other experiences that meant expectations of self-performance would vary for each participant. Both Gail and Dee came to the program with a low self-concept that limited their expectations of success. Sam realised that external pressures would probably inhibit his chances. Pat's expectations were not high, and even though he had achieved a lot in his life, he was cynical about the whole tertiary experience. For him he was ambivalent about self-performance – if he was successful then that was good, if not then that was good as well.

The participants over the three sessions reported feelings about self-performance. Mostly the feelings were positive ones of enjoyment, happiness and contentment though

there were a significant number of morally neutral feelings that were negative such as frustration. Anxiety was also expressed in varying degrees from minor anxiety to a strong fear of failure.

Participant perceptions of task difficulty and structure occurred reasonably frequently. For some participants the fact that a task required research from the literature was concerning mainly because such an exercise was seen to be too "academic". As well, this open structure was often perceived to be annoying because it was not seen as relevant to the workplace. On the other hand, other participants seemed to enjoy the research but it also had to be highly relevant and linked to the participants' own experiences. Regardless of their view, the frequent references to the assignments, and the grading of those assignments, were ones of expectation of success.

All participants commented frequently about other students in terms of their perceived effort and achievement. They perceived that other students were performing, and would perform, in a superior fashion to them. However, feelings that resulted from this were not negative but rather they saw this as an opportunity to learn from these people. Cooperation rather than competition appeared to be a major belief. As a result, self-performance expectations were highly ranked by all participants.

Causal explanations of self-performance behaviour were frequently reported by three of the four participants. Many causes affecting performance were external to the learning situation, such as employment demands and illness, and it was the emotions engendered by these competing demands that affected performance.

Therefore, it can be concluded that a participant's conception of self-performance tended to include the following components: self-concept and expectations of success, positive and negative feelings including a large amount of anxiety, perception of task structure and difficulty, positive feelings about peers and external causes affecting performance.

What relationships exist among the ideas, beliefs, views, emotions and lines of reasoning of the learner's conception of self-performance?

The researcher discerned several relationships between the components of the participants' underlying covert behaviour. The most pervasive relationship was between what was learned and its relevance to the workplace. All participants entered the program with a need to know more about how they could apply best practice to their employment. Expectations were such that as the program was advertised as vocationally oriented it would indeed be meaningful and relevant to their workplace. Some participants were pedantic about this relationship and did not accept anything in the program that was perceived to be irrelevant, for example, assignment work that required a literature search, while others had a more liberal attitude. Particularly, Gail who had a Deep Predominant approach to learning, was more liberal in her interpretation of relevance than Dee who wanted a qualification that was relevant and over with in the shortest possible time.

The need to see relevance also had a relationship with participants' state of mind. If relevance was perceived then enjoyment and happiness resulted; if relevance was not perceived then a certain amount of annoyance and frustration resulted.

Another pervasive relationship was between self-concept and self-performance. Low self-concept affected two of the participants in the beginning of their studies. It meant they entered the program with trepidation about their ability to perform at the tertiary level. Such concerns were the product of previous experiences in which their self-worth had been tested and found lacking. However, what was amazing about these participants was their fundamental optimistic belief that they could succeed. The optimistic belief was enough to enable them to confront their fears of not being successful and that other students would perform better. As the program progressed there is evidence in the transcripts that self-concept did improve. The other two participants were less concerned about their fears, probably as a result of a higher self-concept. Their Achievement Predominant approach that was based on successful prior experiences allowed them to more easily confront the new learning situation.

Perceptions of other students' behaviour and performance appeared to be used by the participants for comparing their own behaviour and performance. Gail's lack of assertiveness and feeling of insecurity resulted in her reticence to speak out in group work initially. Her fear of failure really meant an avoidance of failure. Therefore, it was less threatening for her not to contribute publicly. Sam perceived other students as more experienced and better educated than himself. He was therefore in awe of their performance and behaviour. For him though this was not a negative feeling but he used the perceived strength of others to contribute to his own learning. Dee too found that listening to others enabled her self-performance to improve but at times others' behaviour had an opposite effect. Pat's high self-concept and experience meant he did not have to prove himself in a public forum. Instead, he used the behaviour and thoughts of others to trigger his own ruminations about how the content being discussed was meaningful to prior, current and even future experiences.

Performance self-expectations were generally based upon a self-perceived causal factor. Gail tended to base her expectations on effort whereas Sam and Pat perceived ability to be the underlying cause. Dee too based her expectations on effort though her perception of how much effort she would expend at times was less than Sam and Gail. Pat's self-perception of ability was based upon success in prior experiences, but his view that the academic world was largely irrelevant to the "real world" probably meant that he would not expend much effort. He spoke constantly of procrastination resulting from external pressures and this was evidence that he did not expend too much effort to overcome such pressures.

There was little evidence of the facilitator affecting self-performance. Largely because there was plenty of group work the influence of the facilitator was seen as minimal. While the participants did express a need to please the facilitator in assignment work, outside of that, perceptions of the facilitator were reported with little frequency. There were positive emotions generated when the facilitator did something acceptable to the participants and negative feelings resulted when the moves were seen as unpopular.

Therefore, it can be concluded that a participant's conception of self-performance tended to include the following relationships between and among components: learning

and perceived relevance and meaningfulness, self-concept and self-performance, perceptions of others' performance and behaviour and self-performance, self-expectations and self-perceived causal factors. There were few relationships discerned between the facilitator's moves and self-performance.

What seems to be the origin of these ideas, views, beliefs, emotions and lines of reasoning of the learner's conception of self-performance?

The evidence suggested that the participants' conception of self-performance reflected their idiosyncratic background, early education and life experiences. There were similarities in the female participant's backgrounds that influenced their expectations of success at the tertiary level. Schooling was terminated prematurely for both though each viewed that event differently. Perhaps there is a correlation between how that termination was viewed and each female's approach to learning. Gail felt cheated because she was enjoying the learning experience. She subsequently indicated a Deep Predominant approach to learning. Learning for her was a meaningful and enjoyable experience. Dee, on the other hand, felt that schooling was irrelevant and boring. There was no intrinsic motivation. She subsequently indicated a Surface Predominant approach to learning. Sam was an achiever at school and that approach was reflected in his reported approach to learning. Pat too was an achiever but did not apply that same determination to tertiary learning.

In terms of the transitions in their lives all were ready to undertake tertiary learning. Their careers had reached a point where they felt they needed to know more about the theory and practice of their profession. Their expectations of a vocationally oriented course were for relevance and meaningfulness. Such expectations had origins in the promotional material for the course and the enrolment process that gave credit for previous experiences. These expectations were then used as criteria by which success of the course was measured. Feelings about self-performance therefore fluctuated according to how well these expectations were met.

Generally, all participants brought to the learning a vast array of experiences. They had set habits and some established tastes, many preoccupations and firm attitudes. They also had a specific purpose for their learning that was driven more by a

desire of intrinsic rewards than extrinsic ones. These appear to be the significant origins of their ideas, beliefs, emotions and lines of reasoning.

What role does a learner's causal perception of success and failure appear to fulfil in a conception of self-performance?

Both effort and ability were found to be attributions of success for these participants. Failure was not a factor in this study as the only measure of achievement was a limited number of practically based assignments. The only way a student could fail would be not to complete the assignment. For these participants, failure was not so much a grade less than 50 but a grade less than they expected. Thus, when Sam received his grades he attributed what was to him a less than acceptable grade to some deficiencies outside of his own effort. There must have been some misinterpretations on his part, or he had set his standards too high and he was not meeting them. Gail attributed her success to the effort she put into each assignment but was always surprised that her achievement was so high. Dee too attributed her success to effort though in her case she felt her effort was below that put in by others. She justified this discrepancy by indicating that there were other things in her life that were more important. As well, she expressed pleasure when the facilitator made her complete an assignment. In some instances her initial response to an assignment was that it was too huge but the experience, when forced upon her, was gratifying. Pat attributed his successful self-performance to his ability. However, early in the program he soon realised he would have to put in a different kind of effort than previously. He soon realised that to be successful he had to adapt, reluctantly, to what he perceived to be an academic way of doing things. In doing this though, there was possibly no real psychological commitment to the learning tasks.

Therefore, it can be concluded that causal perceptions of success and failure influenced learner conceptions of self-performance.

What are some of the characteristic qualities of a learner's conception of self-performance?

From the concluding comments thus far it has been possible to discern some overall qualities of an adult learner's conception of self-performance. The drive to achieve some learning that would assist participants in the workplace appeared to be salient. This seemed to be linked to the participants' approach to learning that came essentially from previous experience. The participants' causal explanation of their performance tended to reflect the nature and level of their self-concept that, in turn, gave rise to a host of emotions.

The causal framework for the chains of comment referred to in the qualitative attributional analysis of self-performance covert behaviour sections for each participant, appeared to establish a set of qualities characteristic of that participant's conception of self-performance. The expression of a cognition tended to be followed by the expression of an emotion. The subsequent causal explanation of behaviour tended to reflect some underlying idea or belief, and often gave rise to some consequent behaviour.

Therefore, it can be concluded that the characteristic qualities of a learner's conception of self-performance appeared to be attributionally based.

What are the Conceptions of Approaches to Learning that Adult Learners Appear to Hold and then Develop in a Tertiary Learning Situation?

What are their conceptions of approaches to learning before the learning experience?

Prior to performance all participants completed the Study Process Questionnaire (SPQ) in an effort to assess the extent to which they endorsed different approaches to learning and the motives and strategies comprising these approaches. Gail reported a Deep Predominant approach that indicated a desire to develop competence in learning by reading widely and inter-relating new learning with previous learning. Sam and Pat reported an Achievement Predominant approach that indicated a desire to enhance self-esteem by achieving high grades through all the accepted ways required of "model

students". Dee reported a Surface Predominant approach that indicated a desire to meet minimum requirements through reproducing the bare essentials. All participants with the exception of Pat confirmed their approaches during the interviews.

Therefore, it can be concluded that conceptions of approaches to learning can be ascertained for an individual, and by examination of the thoughts and feelings related to their learning, conclusions may be drawn on how that approach is developed during a learning sequence.

How do their approaches to learning relate to their motivation?

Gail had a love of learning engendered at school and this continued throughout her life. On entering university she frequently reported a powerful intrinsic motivation that included deep strategies for learning. She undertook to construct her own knowledge in order to connect to the world of work. Sam's school days engendered in him an achievement motivation that he also carried into the university experience. For him university was an academic game that allowed him to demonstrate his need to be successful in terms of achievement. His one frustration was his perceived lack of academic writing skills that would prevent such achievement. Dee's school experiences were less than satisfactory and may be a reason for her adoption of a surface approach. At university the surface approach manifested itself in the need to consider real world experiences and relevance to the workplace above any other possible "academic" pursuits. Her motivation was essentially extrinsic. The tertiary experience would lead to a qualification that would enhance her current and future positions in her company. She sought structure in the assignments and did not see the need to read more than the minimum requirements to receive a passing grade. Pat was an enigma to the researcher. He reported an achievement orientation that was certainly demonstrated in his life prior to university. He was critical of the academic world because it was not "real". If that world was not practical then it was not worth the effort to seek achievement in it. There was a certain amount of extrinsic motivation behind his enrolment. Perhaps a clever wife and a recognition that those with academic qualifications did progress rapidly in careers were a driving force for him. However, extreme external pressures and procrastination did not allow him to demonstrate his achievement orientation to learning. Yet on a number of occasions he reported the delight he received from being

associated with bright minds that allowed him to ruminate long and hard about his own experiences.

Therefore, it can be concluded that approaches to learning do include motivation elements that lead to following strategies associated with each approach.

Do these approaches change during the learning experience?

A qualitative analysis of the transcripts of all four participants confirmed the conceptions of learning determined by the quantitative SPQ instrument. There were frequent references to learning approaches that indicated the SPQ was a valid instrument for this group. The transcripts showed no evidence at all of any change in approach to learning throughout the period of the study. It appears that as each approach was entrenched on entry nothing in the new learning experience altered that. Pat was the only enigma. His stated approach to learning was well confirmed in experiences prior to enrolment but this was not followed during the learning experience.

Therefore, it can be concluded that approaches to learning did not change during the learning experience.

Possible Theory Development from the Study

Considering these conclusions holistically perhaps an extension to existing theory can be floated. With each participant there appeared to be an implicit belief, or theory, that the learning goals of the program were achievable after a period of apprehension. How did this manifest itself among the participants? There was a growing confidence evident in the learning context. There was an adoption of a sense of assurance from the facilitator and fellow students. There was a strengthening of self-concept. There was a covariance of effort and outcome. All of these suggest a realisation phase in the participants' behaviour and a momentum that began to emerge. The question that might be posed is this a necessary state for adult learners to enter beyond the apprehensive state that prevailed on entry to the tertiary course? Perhaps this phenomenon can be modelled as in Figure 3.

Pre-entry state

Apprehension and trepidation phase

Performance state
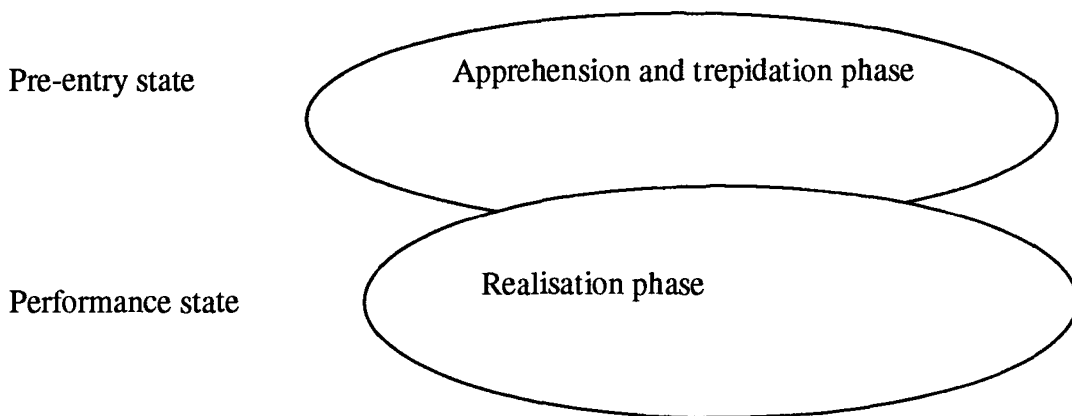
Realisation phase

Figure 3. Theoretical phase progression for adult learners.

At some point during the learning process the performance state, the realisation phase, takes over from the pre-entry state, the apprehension and trepidation phase. Presumably, exactly when this occurs will differ for each individual, but it did occur for the participants in this study.

It is interesting to conjecture about the relationship of this linearity of progression with Kasworm's (1999) position that most adult learners progress through an "apprenticeship" phase in the student role to the construction of a "learning world". In the apprenticeship role, the adult learners "constructed a world of learning by the rituals and routines of the classroom lectures, note taking, papers, examinations and grades" (p.2). Because these students had come from outside the college setting they focused on becoming a good and successful student. As these students moved beyond this level they entered the learning world where they:

> made subtle and complex metacognitive decisions about the approach to learning. These adults were active decision-makers regarding what materials should be learned at a surface level approach and what materials and ideas should be learned in an in-depth approach for long-term retention (p2).

Kasworm appears to be positing only an emphasis on cognition. What happened with the current study was both an affective change and a cognitive change. It is possible that both the cognitive and affective changes of state occur linearly, and

perhaps, there is a correlation laterally between the two changes of state. Figure 4 illustrates this possible model.

Theory Development Model   Model Based upon Kasworm (1999)

Pre-entry
state

Performance
state
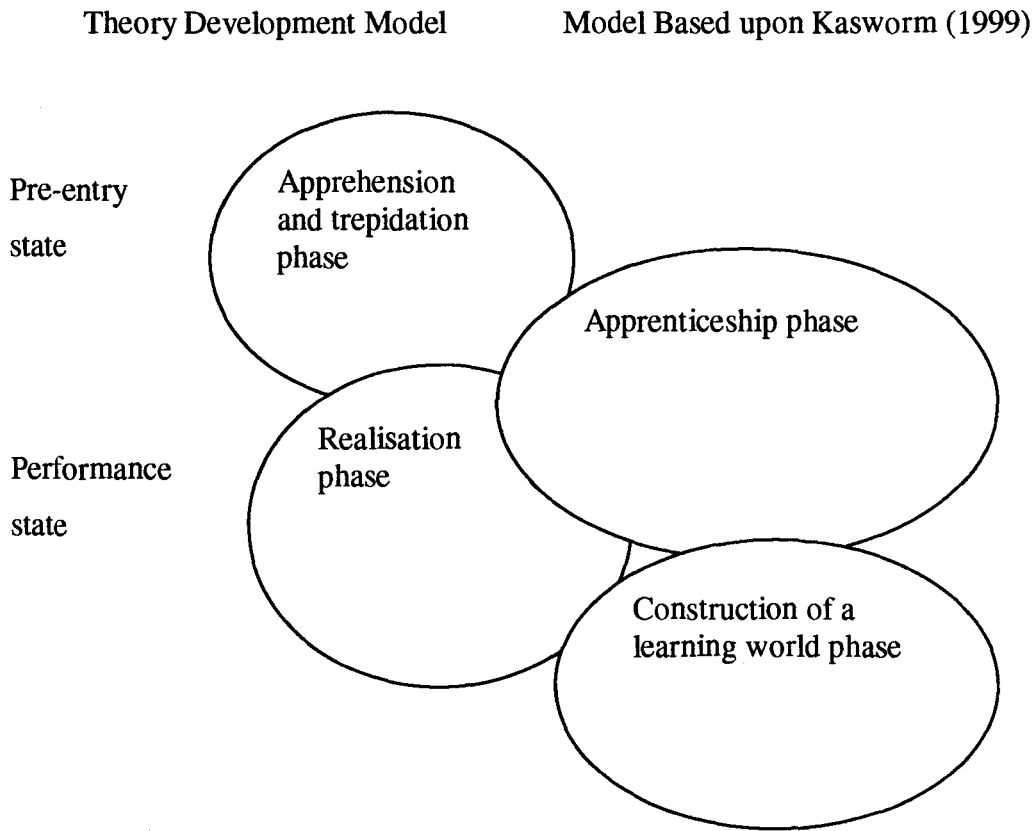
Figure 4. Theoretical linkages between phases from this study and Kasworm's (1999) phases.

In Figure 4 what is being postulated is apprehension occurs prior to entry to learning, and once entry is achieved the apprenticeship phase commences. However, there may well be elements of the apprenticeship phase occurring at pre-entry. Hence, the overlapping sections in the figure. For example, a learner may at that point be mentally rehearsing aspects of the apprenticeship such as how they will take notes, relate to peers and the facilitator, or prepare themselves for assignments, before actually entering that phase. The realisation phase overlaps both the apprenticeship and learning world phases as the learner grows in confidence and assurance.

Interestingly, in a seminal paper on academic work in elementary and secondary classrooms Doyle (1983) indicated a similar phenomenon:

Over the course of a term, there is likely to be tuning to task demands in a class. At the beginning of the year, students face the initial problem of understanding what tasks a teacher expects them to accomplish, and they are typically sensitive to task-related information. As tasks are accomplished and feedback is received from the teacher, the character of the task system becomes more apparent. Students can then selectively attend to information that has consequences for task accomplishment regardless of whether it is explicitly signaled by the teacher. In other words, the efficiency of their information processing increases substantially (p.181).

Doyle was discussing the general cognitive development of children, but a point of wonderment would be whether such development might also occur for adult learners facing a tertiary experience for the first time. Perhaps the participants in this study did experience cognitive development as they moved between the apprehension and realisation phases or between the apprenticeship and learning world phases.

Doyle's contribution to the understanding of academic work is the sobering suggestion that students have an agenda of which the teacher may be unaware. For instance, Doyle identifies that classrooms have an evaluative climate in that various forms of public recognition for appropriate performance occur. In the adult classroom in this study examples of this occur as participants answer questions publicly and contribute their knowledge in group discussion. According to Doyle, such evaluative climate connects academic tasks to a reward structure. The function of answers or discussion contributions in a reward structure adds four interesting dimensions to the accomplishment of academic work.

- The answers or contributions a facilitator actually accepts define the real tasks of the classroom. For example, if a facilitator asks for analysis of an article but accepts a descriptive discussion then students will tackle future tasks in that fashion;
- The strictness of the criteria a facilitator uses to judge answers and contributions has consequences for task accomplishment. If students detect less strictness they may well pitch their responses to a lower level;
- Students also restrict the amount of output they give to a facilitator to minimise the risk of making a mistake and appearing foolish. They give tentative answers in

order to elicit feedback from the facilitator and other students and thus avoid committing themselves; and,

- Students often use delaying tactics when the facilitator indicates a transition to a new activity. Delaying tactics may include peripheral questions on the activity just concluded and on the new activity, and requests for more detail on the new activity. All of this is designed to encourage the facilitator to alter their preconceived activity management schedule.

Thus Doyle indicates "that academic work is transformed fundamentally when it is placed in the complex social system of a classroom" (p.185). The transformation occurs because students may have an agenda contrary to that of the facilitator. The character of these transformations is as follows:

- Whether students pay attention to facilitator questions or participate in discussion would seem to depend upon the relationship of these events to task accomplishment;
- Students are sensitive to cues that signal accountability or define how tasks are to be accomplished;
- Students sometimes invent strategies to circumvent the information processing demands of academic work; and
- Because tasks are administered to groups and performance on these tasks is often evaluated publicly, facilitators are under pressure to adjust standards and pace to the level at which most students can accomplish tasks. An example of this occurred in this study when Dee indicated that the group placed pressure on the facilitator to change the difficulty and length of an assignment.

It is posited here that what Doyle found in children's classrooms can also be applied to adult learners in a first time tertiary setting. The agenda that students hold can be at variance with the agenda of the facilitator. Students use a variety of techniques to manipulate the academic work and the facilitator may be unaware of these techniques. A wonderment here would be whether there is an inverse relationship between facilitator experience and the classroom-wise student. The less experienced the facilitator and the more experienced the student, the less aware the facilitator will be of how academic tasks are manipulated in formal classrooms. Perhaps, therefore, students

do progress through an apprehension, or apprenticeship phase, and once they become aware of the academic tasks in the classroom and they have feedback on what is required, they achieve a realisation, or learning world phase.

Therefore, as the participants in this study were normal, natural people it can be concluded that there may be a linearity of phases through which adult learners progress. These phases may be both cognitive and affective in nature and there may be lateral correlations between these phases.

Implications for the Teaching of Adults and Learning in Adulthood

The implications of this case study of the conceptions of adult learner self-performance and approaches to learning appear to be numerous. Each of the four participants indicated their uniqueness and idiosyncratic behaviour while undertaking tertiary study for the first time. There were also some common themes woven through the combined stories of the four participants. By viewing the learning performance in a formal situation several insights emerged that should have some implications for understanding learning in adulthood and the facilitation of that learning. While these implications may not reflect anything new in terms of the literature they do emphasise basic aspects of the covert behaviour of adult learners that may have been overlooked in the drive by facilitators to structure adult learning experiences.

For the adult learner relevance and meaningfulness of any new learning is vital if significant learning is to occur. Adult readiness to learn and their need to know are often initiated by some life transition. In this study, the transition was the move to a new career in Training and Development. In order to apply best practice principles to that career each participant sought theory and knowledge from a tertiary program that would award them a qualification as well as exposure to best practice theory and knowledge. Therefore, relevance and meaningfulness were expected properties of the program. With this in mind it behoves program designers and facilitators to ensure that the content, delivery and evaluation are indeed relevant and meaningful to each learner. This may be achieved by grounding the content in the workplace and requesting that any project for evaluation be workplace-based. In other words, facilitators should orient learning to a real life context. If the learner can see that a project will enhance their

own knowledge and skills, and if these can be recognised especially by colleagues and managers, then the learner is more likely to be motivated to learn. As well, facilitators need to be aware that workplace relevance has not only cognitive importance but there are emotional responses to perceived relevance of new work. In this study, if relevance were perceived by the participants then positive feelings were generated, but if that were not the case then some potentially destructive emotions resulted.

This study has shown that adults bring a variety of approaches to learning and motives and strategies comprising these approaches. Such approaches are probably entrenched from early schooling, and by the time adults reach mature age learning situations, they are well entrenched. Facilitators of adult learning, therefore, need to be aware that any cohort of adults will have a variety of approaches to learning, so content, delivery and evaluation, will need to reflect this variety. For instance, there needs to be a wide list of resources so that the deep learner may indulge their desire to connect current understanding with understandings contained in the literature. Assignments need to be strongly structured so that the surface learner can be comfortable with knowing they are not being evaluated outside restricted guidelines. A range of grades needs to be available so that the achieving learner can fulfil their need for ego enhancement and increase in self-esteem by achieving the higher grades.

As well as approaches to learning adults also have a variety of belief systems of engagement in learning that are expressed as knowledge "voices". Such voices may reflect a belief that the new learning experiences were confusing and needed to be understood and then assimilated. Or that the experiences were culturally unique and, therefore, separate from the real world. Acceptance, or not, of this perceived dichotomy might be the foundation of beliefs held by the adult learners. In this study it was found that the participants ranged across all these belief systems. Thus the unique interactional role of learning academic knowledge structures through the eyes of adults embedded in significant life roles has implications for facilitators. Facilitators need to recognise the importance of the social and cultural context of learning and the place authentic experience plays in learning. Facilitation therefore needs to help learners develop skills and competencies in a particular context of practice. The learner's workplace is a logical context for this to occur.

The need for inclusion for adult learners has an important implication for adult educators. Inclusion was seen to be a vital motivator for these participants. Therefore, a facilitation strategy such as group work can encourage inclusion to occur. Group work allows participants to share understandings and to learn from peers. However, constituents do not always perceive group work to be optimal. They will drift in and out of proceedings according to how they are viewing the process at the time and how they are feeling about themselves. Facilitators knowing this will be able to vary the constituency of the group, the length of time the group operates and will introduce experiences other than group work in order to maximise commitment from learners.

This study indicated that adults new to tertiary learning and undertaking it later in life would do so with a certain amount of fear and trepidation. Such trepidation is not only a wonderment of the geography of the institution and the novelty of its resources, but also how their peers will perceive them. It is useful therefore to enable an orientation period to occur prior to the learning sessions. Orientation may allow the learners to feel comfortable in the new environment and a session that encourages sharing of their fears may enable them to understand they are not alone. Such a session may also feed the adult's need to know by an explanation of the how, what and why of their new learning.

The study has theorised that apprehension is almost a given with adult learners on entering tertiary study, but such apprehension gives way to an increase in confidence, if not self-concept, the further the individual advances and achieves competence. Facilitators, therefore, need to consider an approach to the assessment of learners' work that eases them gradually to the standards required of academic learning. For example, insistence upon the conventions of referencing written papers and the use of academic writing may be relaxed in early assessments but tightened in later ones. Use of literature to support a written argument may become a later requirement. Such gradual tightening of standards by facilitators will acknowledge that adult learners have a good deal to concern them in the early days of learning, and competence will come with increasing confidence.

Self-directedness has been well covered in much of the adult learning literature. The current study showed that in its absolute form self-directedness is limited by

administrative requirements such as having grades in at a certain time. However, this is not to say that the participants did not adopt self-directedness as a personal attribute. Facilitators therefore need to allow adults a certain amount of discretion in how content and learning experiences are arranged. Certainly, by encouraging workplace learning self-directedness may be achieved.

Each participant in this study faced a complexity of external pressures that not only took up time but also had emotional consequences. Facilitators need to be aware that this will occur in every learning situation. Flexibility in delivery and evaluation may accommodate those adults who have external pressures impinging upon their learning. As well, counselling may need to be available to assist learners with emotional outcomes generated by such pressures. In the classroom, facilitators can assist learners to focus on the day's activities by using music, attractive visuals, encourage participation and use of a wide variety of learning techniques. All of these will preoccupy the learner and keep their attention from wandering to whatever external pressures are facing them.

Perhaps one of the most vital implications for facilitators of adult learning results from the findings of the study that self-oriented thoughts and feelings comprise the largest number of all thoughts and feelings. There are a myriad of thoughts and feelings about self-performance and the behavioural moves of other students. There are feelings generated by perceptions of task difficulty and structure, about self-concept and about expectations of an unknown world. In other words, each learner has a unique mental life that operates totally outside the observation of the facilitator. In normal classroom circumstances this mental life will most likely never be revealed. It was only revealed in this study because the researcher asked about the thoughts and feelings of some willing participants. Therefore, while definitive clarification may be impossible in a normal functioning classroom, facilitators may assume that the mental life is extremely active in all participants. By coming to this understanding facilitators may need to build flexibility into their learning experiences so that all needs can be accommodated. All learners will not enjoy all learning experiences. Some will require structure but others will require less structure. Some will embrace group work all the time while others will drift in and out of commitment. At times, facilitators may simply have to acknowledge that there are a range of feelings and thoughts, and to have these,

regardless of what they are, is acceptable to both the facilitator and to other students. What is unacceptable though is that a facilitator will arrange a learning experience without an understanding of, and due regard for, the mental lives of adult learners. When this understanding occurs the desired relationship between educational psychology and adult education will be closer to fruition.

Recommendations for Further Research

This study was exploratory in the sense that attempts were made to describe and interpret adult learners' conceptions of self-performance and approaches to learning through attributional analysis. Little is known about the mental life of adults undertaking tertiary learning for the first time and later in life. The research line has considerable scope for development and this study seems to suggest numerous directions for further inquiry. Some of these directions are presented next.

Adult Learner Interactive Thoughts

- Adult interactive thoughts in a tertiary classroom are only becoming reified. How adults process information in terms of their experiences and how they integrate this with conceptions of self-performance could contribute to theories about learning in adulthood.

- The study has revealed that self-oriented thoughts and feelings form a significant component of adult interactive thoughts. These data are thin and there is a need for replication studies with a wide range of adult learners in not only formal learning situations but in workplace learning situations.

- The origins of adult conceptions of self-performance would appear to be significant for facilitators of adult learning. Some general trends were indicated in this study but more detailed studies are required.

- Any correlation between conceptions of self-performance and achievement and approaches to learning and achievement were not carried out in this study.

Therefore, correlational studies in achievement-oriented learning situations could be fruitful.

- Adult emotions appeared as a significant component of covert interactive behaviour. Study into this intervening variable could assist facilitators to become more aware of learner emotional health.

- Optimism was a fundamental component of the overall attitude of the participants in this study. Further research is required into the part that optimism/pessimism plays in the process and product of learning.

Theory Development

The possible theory development that emerged, namely that adult learners progress through both cognitive and affective phases before and during the learning process, requires further investigation. The phases concern apprehension and then realisation. For example, are these phases common for all adults? Are the phases linear? Is there a lateral correlation between the cognitive and affective phases? Are Doyle's (1983) suggestions that student agendas are unknown to facilitators a function of adult learners in the realisation phase? All such questions may well generate data in developing an interesting theory of adult learning in a tertiary setting.

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APPENDIX 1

ATTRIBUTION STYLE QUESTIONNAIRE

ATTRIBUTIONAL STYLE QUESTIONNAIRE

Directions

Read each situation and <u>vividly</u> imagine it happening to you.

Decide what you believe would be the <u>one</u> major cause of the situation if it happened to you.

Write this cause in the blank provided.

Answer three questions about the cause by circling <u>one number</u> per question. <u>Do not</u> circle the words.

Go on to the next situation.

Situations

YOU MEET A FRIEND WHO COMPLIMENTS YOU ON YOUR APPEARANCE.

1. Write down the <u>one</u> major cause:

_____

2. Is the cause of your friend's compliment due to something about you or something about other people or circumstances?

    Totally due to other   1   2   3   4   5   6   7   Totally due to me.
    people or circumstances

3. In the future when you are with your friend, will this cause again be present?

    Will never again   1   2   3   4   5   6   7   Will always be present.
    be present

4. Is the cause something that just affects interacting with friends, or does it influence other areas of your life?

    Influences just this   1   2   3   4   5   6   7   Influences all
    particular situation   situations in my life.

YOU HAVE BEEN LOOKING FOR A JOB UNSUCCESSFULLY FOR SOME TIME

5. Write down the <u>one</u> major cause:

_____

6. Is the cause of your unsuccessful job search due to something about you or something about other people or circumstances?

Totally due to other   1   2   3   4   5   6   7   Totally due to me.
people or circumstances

7. In the future when you look for a job, will this cause again be present?

Will never again   1   2   3   4   5   6   7   Will always be present.
be present

8. Is the cause something that just influences looking for a job, or does it also influence other areas of your life?

Influences just this   1   2   3   4   5   6   7   Influences all
particular situation   situations in my life.

YOU BECOME VERY RICH

9. Write down the one major cause:

_____

10. Is the cause of you becoming rich due to something about you or something about other people or circumstances?

Totally due to other   1   2   3   4   5   6   7   Totally due to me.
people or circumstances

11. In your financial future, will this cause again be present?

Will never again   1   2   3   4   5   6   7   Will always be present.
be present

12. Is the cause something that just affects obtaining money, or does it influence other areas of your life?

Influences just this   1   2   3   4   5   6   7   Influences all
particular situation   situations in my life.

A FRIEND COMES TO YOU WITH A PROBLEM AND YOU DON'T TRY TO HELP HIM/HER

13. Write down the one major cause:

14. Is the cause of your not helping your friend due to something about you or something about other people or circumstances?

> Totally due to other   1   2   3   4   5   6   7   Totally due to me.
> people or circumstances

15. In the future when a friend comes to you with a problem, will this cause again be present?

> Will never again   1   2   3   4   5   6   7   Will always be present.
> be present

16. Is the cause something that just affects what happens when a friend comes to you with a problem, or does it influence other areas of your life?

> Influences just this   1   2   3   4   5   6   7   Influences all
> particular situation   situations in my life.

YOU GIVE AN IMPORTANT TALK IN FRONT OF A GROUP AND THE AUDIENCE REACTS NEGATIVELY.

17. Write down the <u>one</u> major cause:

---

18. Is the cause of the audience's negative reaction due to something about you or something about other people or circumstances?

> Totally due to other   1   2   3   4   5   6   7   Totally due to me.
> people or circumstances

19. In the future when you give talks, will this cause again be present?

> Will never again   1   2   3   4   5   6   7   Will always be present.
> be present

20. Is the cause something that just influences giving talks, or does it also influence other areas of your life?

> Influences just this   1   2   3   4   5   6   7   Influences all
> particular situation   situations in my life.

YOU DO A PROJECT WHICH IS HIGHLY PRAISED.

21. Write down the <u>one</u> major cause:

---

22. Is the cause of your being praised due to something about you or something about other people or circumstances?

     Totally due to other   1   2   3   4   5   6   7   Totally due to me.
     people or circumstances

23. In the future when you do a project, will this cause again be present?

     Will never again   1   2   3   4   5   6   7   Will always be present.
     be present

24. Is the cause something that just affects doing projects, or does it also influence other areas of your life?

     Influences just this   1   2   3   4   5   6   7   Influences all
     particular situation   situations in my life.

YOU MEET A FRIEND WHO ACTS HOSTILEY TOWARDS YOU

25. Write down the <u>one</u> major cause:

_____

26. Is the cause of your friend acting hostile due to something about you or something about other people or circumstances?

     Totally due to other   1   2   3   4   5   6   7   Totally due to me.
       people or circumstances

27. In the future when interacting with friends, will this cause again be present?

     Will never again   1   2   3   4   5   6   7   Will always be present.
     be present

28. Is the cause something that just influences interacting with friends, or does it also influence other areas of your life?

     Influences just this   1   2   3   4   5   6   7   Influences all
     particular situation   situations in my life.

YOU CAN'T GET ALL THE WORK DONE THAT OTHERS EXPECT OF YOU.

29. Write down the <u>one</u> major cause:

_____

30. Is the cause of your not getting the work done due to something about you or something about other people or circumstances?

Totally due to other   1   2   3   4   5   6   7   Totally due to me.
people or circumstances

31. In the future when doing work that others expect , will this cause again be present?

Will never again   1   2   3   4   5   6   7   Will always be present.
be present

32. Is the cause something that just affects doing work that others expect of you, or does it also influence other areas in your life?

Influences just this   1   2   3   4   5   6   7   Influences all
particular situation   situations in my life.

YOUR SPOUSE (BOYFRIEND/GIRLFRIEND) HAS BEEN TREATING YOU MORE LOVINGLY.

33. Write down the <u>one</u> major cause:

_____

34. Is the cause of your spouse (boyfriend/girlfriend) treating you more lovingly due to something about you or something about other people or circumstances?

Totally due to other   1   2   3   4   5   6   7   Totally due to me.
people or circumstances

35. In future interactions with your spouse (boyfriend/girlfriend), will this cause again be present?

Will never again   1   2   3   4   5   6   7   Will always be present.
be present

36. Is the cause something that just affects how your spouse (boyfriend/girlfriend) treats you, or does it also influence other areas in your life?

Influences just this   1   2   3   4   5   6   7   Influences all
particular situation   situations in my life.

YOU APPLY FOR A POSITION THAT YOU WANT VERY BADLY (E.G., IMPORTANT JOB, GRADUATE SCHOOL ADMISSION. ETC) AND YOU GET IT.

37. Write down the <u>one</u> major cause:

---

38. Is the cause of your getting the position due to something about you or something about other people or circumstances?

       Totally due to other   1 2 3 4 5 6 7   Totally due to me.
       people or circumstances

39. In the future when you apply for a position , will this cause again be present?

       Will never again   1 2 3 4 5 6 7   Will always be present.
       be present

40. Is the cause something that just influences applying for a position, or does it also influence other areas of your life?

       Influences just this   1 2 3 4 5 6 7   Influences all
       particular situation   situations in my life.

YOU GO OUT ON A DATE AND IT GOES BADLY

41. Write down the <u>one</u> major cause:

---

42. Is the cause of the date going badly due to something about you or something about other people or circumstances?

       Totally due to other   1 2 3 4 5 6 7   Totally due to me.
       people or circumstances

43. In the future when you are dating, will this cause again be present?

       Will never again   1 2 3 4 5 6 7   Will always be present.
       be present

44. Is the cause something that just influences dating, or does it also influence other areas of your life?

       Influences just this   1 2 3 4 5 6 7   Influences all
       particular situation   situations in my life.

YOU GET A RAISE

45. Write down the <u>one</u> major cause:

_____

46. Is the cause of your getting a raise due to something about you or something about other people or circumstances?

    Totally due to other   1   2   3   4   5   6   7   Totally due to me.
    people or circumstances

47. In the future on your job, will this cause again be present?

    Will never again   1   2   3   4   5   6   7   Will always be present.
    be present

48. Is the cause something that just affects getting a raise, or does it also influence other areas of your life?

    Influences just this   1   2   3   4   5   6   7   Influences all
    particular situation   situations in my life.

APPENDIX 2

STUDY PROCESS QUESTIONNAIRE (SPQ)

STUDY PROCESS QUESTIONNAIRE (SPQ)

What the SPQ is About

On the following pages are a number of questions about your attitudes towards your studies and your usual ways of studying.

There is no *right* way of studying. It all depends on what suits your own style and the courses you are studying. The following questions have been carefully selected to cover the more important aspects of studying. It is accordingly important that you answer each question as honestly as you can. If you think that your answer to a question would depend on the subject being studied, give the answer that would apply to the subject(s) most important to you.

How to Answer

For each item there is a row of boxes for a five-point scale on the Answer Sheet. A response is shown by marking *one* of the five boxes for an item. This underlines the desired number.

The numbers stand for the following responses:

5 – this item is *always* or *almost always* true of me.

4 – this item is *frequently* true of me.

3 – this item is true of me about *half the time*.

2 – this item is *sometimes* true of me.

1 – this item is *never* or *only rarely* true of me.

Underline the number for each item.

1. I chose my present courses largely with a view to the job situation when I graduate rather than out of intrinsic interest to me.

2. I find that at times studying gives me a feeling of deep personal satisfaction.

3. I want top grades in most or all of my courses so that I will be able to select from among the best positions available when I graduate.

4. I think browsing around is a waste of time, so I only study seriously what's given out in class or in the course outlines.

5. While I am studying, I often think of real life situations to which the material that I am learning would be useful.

6. I summarise suggested readings and include these as part of my notes on a topic.

7. I am discouraged by a poor mark on a test and worry about how I will do on the next test.

8. While I realise that truth is forever changing as knowledge is increasing, I feel compelled to discover what appears to me to be the truth this time.

9. I have a strong desire to excel in all my studies.

10. I learn some things by rote, going over and over them until I know them by heart.

11. In reading new material I often find that I'm continually reminded of material I already know and see the latter in a new light.

12. I try to work consistently throughout the term and review regularly when the exams are close.

13. Whether I like it or not, I can see that further education is for me a good way to get a well-paid or secure job.

14. I feel that virtually any topic can be highly interesting once I get into it.

15. I would see myself basically as an ambitious person and want to go to the top, whatever I do.

16. I tend to choose subjects with a lot of factual content rather than theoretical kinds of subjects.

17. I find that I have to do enough work on a topic so that I can form my own point of view before I am satisfied.

18. I try to do all of my assignments as soon as possible after they are given out.

19. Even when I have studied hard for a test, I worry that I may not be able to do well in it.

20. I find that studying academic topics can at times be as exciting as a good novel or movie.

21. If it came to the point, I would be prepared to sacrifice immediate popularity with my fellow students for success in my studies and subsequent career.

22. I generally restrict my study to what is specifically set as I think it is unnecessary to do anything extra.

23. I try to relate what I have learned in one subject to that in another.

24. After a lecture or a lab I reread my notes to make sure they are legible and that I understand them.

25. Lecturers shouldn't expect students to spend significant amounts of time studying material everyone knows won't be examined.

26. I usually become increasingly absorbed in my work the more I do.

27. One of the most important considerations in choosing a course is whether or not I will be able to get top marks in it.

28. I learn best from lecturers who work from carefully prepared notes and outline major points neatly on the blackboard.

29. I find most new topics interesting and often spend extra time trying to obtain more information about them.

30. I test myself on important topics until I understand them completely.

31. I almost always resent having to spend a further three of four years studying after leaving school, but feel that the end results will make it all worthwhile.

32. I believe strongly that my main aim in life is to discover my own philosophy and belief system and to act strictly in accordance with it.

33. I see getting high grades as a kind of competitive game, and I play it to win.

34. I find it best to accept the statements and ideas of my lecturers and question them only under special circumstances.

35. I spend a lot of my free time finding out more about interesting topics which have been discussed in different classes.

36. I make a point of looking at most of the suggested readings that go with the lectures.

37. I am at college/university mainly because I feel that I will be able to obtain a better job if I have a tertiary qualification.

38. My studies have changed my views about such things as politics, my religion, and my philosophy of life.

39. I believe that society is based on competition and schools and universities should reflect this.

40. I am very aware that lecturers know a lot more than I do and so I concentrate on what they say is important rather than rely on my own judgement.

41. I try to relate new material, as I am reading it, to what I already know on that topic.

42. I keep neat, well-organised notes on most subjects.

APPENDIX 3

GUIDELINES FOR STIMULATED RECALL INTERVIEWS

GUIDELINES FOR STIMULATED RECALL INTERVIEWS

The guidelines for stimulated recall interviews were adapted from those developed by King (1979) and Marland (1977).

Discuss the Goals of the Research with the Participant

The following points should be discussed with all participants in the research.

Little is known about first time adult learner's thought processes during a formal learning session at a university. The goal of this research is to find out the thoughts, feelings, reactions and perceptions of an adult participant during the learning session (that is, cognitive interaction, classroom events, content, the facilitator and other students). Viewing of the videotape of the session facilitates recall of thoughts and feelings experienced at the time. While individual verbal and non-verbal behaviour may be observed such behaviour is not always the complete picture of what is occurring with learners.

It is considered that a study of the mental life of participants during learning could yield insights into the development of a better understanding of adult learning for those facilitators responsible for arranging adult learning experiences.

Prior to the Interviews with the Participant

1. Arrange the interview setting in a quiet, private location where the participant can look at the video monitor and not be distracted by the interviewer.

2. Give the participant time to become familiar with the videotape and the fact that the interview will be recorded on audiotape.

3. Explain the purpose of the stimulated recall interview and indicate clearly what is required of the participant. Stress the role of the participant is to recall the thoughts,

feelings, reactions and perceptions experienced during the session and to indicate when a conscious decision was made and the reasons for making that decision.

4. Explain to the participant that they will probably form new impressions from the session, and of the events that occurred during the session, while viewing the tape. Ask the participant to try to distinguish between the thoughts and feelings experienced during the session and those experienced while watching the tape. It is important for the participant to indicate these different thoughts even if not prompted by the interviewer.

Role of the Participant

Recall of thoughts and feelings is facilitated when a participant views videotape of a learning session. A better method is a "think aloud" procedure where participants report their thoughts and feelings as they occur. In the situation of this research this is not practical, as it could be embarrassing for the participant and disruptive for the rest of the group. Seeing events in the session on videotape helps to trigger or stimulate recall – hence the term "stimulated recall".

We know the mind works faster than the voice so there are a myriad of thoughts, feelings, reactions and perceptions that even the most perceptive observer could not detect, as they are internal. As the participant relives the session by viewing the videotape they are invited to provide a detailed account of their thoughts and feelings by talking aloud into an audiotape recorder. To facilitate this process the following is made clear to the participant:

1. They may control the tape by stopping it, rewinding it or fast-forwarding it.
2. The interviewer may do the same and ask probing questions according to the events on the tape, or from prompts previously recorded during the live taping.
3. As the participant is viewing the tape ensure they are distinguishing between thoughts and feelings occurring at the time and not as a result of the viewing. Ensure the interviewer is aware of the distinction as well.

Role of the Interviewer

In the stimulated recall session with the participant, the role of the interviewer is to assist the participant to recall and verbalise the covert thoughts and feelings experienced during the learning episode that has been videotaped. To facilitate as complete and as accurate recall as is possible, the interviewer must:

1. Try to establish a relaxed, warm, friendly and supportive atmosphere prior to and during the interview.
2. Try to facilitate and encourage self-discovery. It is important for the participant to believe they are capable of reporting inner processes without the interviewer telling the participant what they were.
3. Avoid making interpretations of, and judgements about, what appears on videotape. However, ask open questions that require elaboration and clarification rather than closed questions requiring "yes" or "no" answers.
4. Assume a respectful disposition towards the participant and the videotape and communicate that the participant is being taken seriously.
5. Keep the participant's attention focused on the TV image and avoid distractions.
6. Encourage the participant to talk and not to get too engrossed in the relived session.
7. Be patient while the participant becomes involved in reliving the learning session.
8. Listen carefully to the participant's communication and avoid trying to figure out what to say next before the participant has finished.
9. Keep the participant's discussion focused on what transpired in the actual session and, in particular, on the participant's covert thoughts and feelings, the sources of these, conscious decisions and reasons for making those decisions.
10. Stop the tape (if the participant has not already done so) at points in the session where it appears profitable for purposes of this research and at the following points in the tape:

- When the facilitator asks a question or indicates an activity.
- When the participant responds directly to the facilitator or another student, or initiates communication with the facilitator or another student.
- When there are non-verbal cues suggesting the participant is annoyed, excited etc.

- At any transition in the flow of the session, for example, changing from facilitator-led discussion to group discussion.

11. Ask probing questions to facilitate maximum disclosure by the participant, for example:

    What were you thinking/feeling at that point?

    Why did you say/do...?

    What reasons did you have for saying/doing...?

    What do you understand about what the facilitator was saying/doing...?

    What other thoughts/feelings can you recall?

    What, if any, any off-task thoughts were going through your mind?

    Tell me about anything that you did/did not want to happen?

12. Ensure questions are brief and able to create an intense awareness in the participants of themselves.

13. Avoid questions that are suggestive, imply criticism, disagreement or disapproval.

14. Check frequently that the participant is differentiating between interactive and non-interactive thoughts.

APPENDIX 4

CONTENT ANALYSIS OF STUDENTS' INTERACTIVE THOUGHTS
(CASSIT)

CONTENT ANALYSIS OF STUDENTS' INTERACTIVE THOUGHTS (CASSIT)

This content analysis system was developed by King (1979) to enable the categorisation of students' interactive thoughts and feelings during formal learning experiences. Originally used with primary school students the system was slightly modified for use with adult learners in a formal tertiary learning setting.

Data

Data analysed consisted of transcripts of participants' interactive thoughts during a series of learning sessions. The transcripts were prepared from audio recordings of post-session interviews. Post-session interviews involved the use of stimulated recall methodology whereby the participant was prompted to recall thoughts and feelings by video cues. Data available in the transcripts consisted of both non-interactive and interactive data. Non-interactive data included thoughts and feelings prior to a session, after a session or were subsequent disclosures pertaining to causal explanations of behaviour for the benefit of the researcher. Non-interactive data were not coded. Interactive data involved all those thoughts and feelings reported by the participant as occurring during the learning sessions. These data were coded according to the following guidelines.

Coding

There are two major steps in the content analysis system:

- Identification of interactive data; and

- Unitisation that involves:
  (a) identification of units of interactive data, and
  (b) placement of units into categories.

Step 1. Identification of Interactive Data

The first step is to distinguish interactive data from non-interactive data. While participants were reminded to recall only those thoughts and feelings that occurred during the sessions, the differentiation between interactive and non-interactive data was

largely the task of the researcher. Clues to interactive data often were prefaced by the participant saying: "I was thinking/feeling....", or where an emotion could be inferred: "I felt devastated when he asked me to present on behalf of the group." Clues to non-interactive data usually took the form of: "I can't remember what I was thinking at that stage", or "I was upset on the way to the class because...". As well, non-interactive data often took the form of the participant reporting what they were doing rather than what they were thinking: "I was just looking at my notes." At this point, the researcher would seek an interactive response by asking: "What were you thinking at that point?" If the participant responded with a positive response, such as "I was thinking how they (the notes) related to work", then this was recorded as interactive. When there was a doubt in the researcher's mind as to whether the data were interactive or non-interactive, then it was categorised as non-interactive.

Step 2. Unitisation

The unitisation phase, according to Marland (1977), involves two stages:

- the process of unitisation or segmentation; and
- categorisation.

Segmentation consists of dividing the data into units such as paragraphs, sentences or thoughts. Categorisation involves placing each segment into one of several discrete clearly defined categories.

The unit.

The unit of analysis in the content category system is what Marland (1977) refers to as a thought and is defined as a more or less complete idea. The thought may comprise an entire paragraph, a sentence or a single word so long as it is centred on a single thought. Such units need to be separated from the transcripts carefully, particularly when the transcripts contain common speech characterisations such as mazes and false starts. For example, in the following transcript, the units that are recorded are italicised, and the mazes and false starts ignored:

"Well it is my enthusiasm…when I mean…what's happening as the course was…*the thought of the course and having to get the assignments done is just an added stress point*…um…and it's enormous in that *I don't want to fail…I don't want to drop out, but today I've been thinking you know what are my options if this continues.*"

The categories.

From examination of the transcripts, nine categories of participants' interactive thoughts and feelings have been used in this study. Each category consists of a set of thought units with one or more distinct characteristics. Consequently, given the nature of the categories, a thought unit was only categorised once. The categories used are listed and explained below.

- *Subject Matter.* Units in which a participant's thoughts were focused specifically on the content of the learning sessions were coded as "subject matter". For example, "I'm reflecting on the corporate level or government level and not the 80% that are small businesses."
- *Cognitive Processes.* A "cognitive process" is the unit where the participant reported a thought process, or mental action, involving learning the subject matter. For example, "I tend to relate things that I'm being presented with to what I already know and then project them in my mind – that's what I'm doing here."
- *Behavioural Moves-Self.* In this category, the participant reported thoughts about an action they were performing, had previously performed or was considering performing in relation to the learning process. Thought units should involve a motive, desire, intention or some other self component. For example, "I'm just noticing around the class and thinking there's no one really switched on this morning and that's not helping me get too involved."
- *Behavioural Moves-Student.* In this category, the participant reported their thoughts and feelings about an action involving their fellow students. The thought units might have referred to the student as a person, or their behaviour, or both. For example, "Well, I think (student's name) is a pretty

smart woman and I felt that picking her as partner would help my research abilities as she's really good at assignments."

- *Behavioural Moves-Facilitator.* A "behavioural moves-facilitator" is a unit in which the participant reported their thoughts and feelings about an action involving the facilitator of the learning session. The thought unit may have referred to the facilitator as a person, their behaviour, or both. For example, "I didn't like the way (the facilitator's name) referred to small businesses as ignorant in their training and development of their staff."

- *Self Performance- Thoughts.* This category included units in which the participant was thinking about their performance and outcomes. The essential element of these learning-related thought units is self where the participant is thinking about how well they have achieved, monitoring their current performance and contemplating expectancies of future behaviour and outcomes. For example, "I am expecting to do well on the next assignment."

- *Self Performance-Feelings.* As in the above category, the participant reports on a behaviour and outcome but in this category it was an emotional response. For example, in the above example where the participant reported a thought about expectation for success in an assignment, the thought was accompanied by an emotion: "If I get a pass in it I will be ecstatic."

- *Feelings.* The transcripts contained reports by the participants of the emotions they experienced during the sessions other than those experienced in association with self-performance. They usually took the form of pleasure, surprise, annoyance, frustration, apprehension and anxiety. Such feelings were therefore coded as positive or negative. For example, "I was feeling quite excited about the role play" and "I didn't feel like participating today."

- *Non-Task-Related.* Participant thoughts that did not pertain to the subject matter were coded in this category. In the main, such thoughts concerned matters outside the learning situation such as what the participant intended to do that night, or thoughts about their family or partner. For example, "I was thinking about how long my wife would have to stay in hospital and I didn't hear what (facilitator's name) said."

Sub-Categories.

Given the purpose of this study the categories of behavioural moves-self, behavioural moves-student, behavioural moves-facilitator, self-performance-thoughts and self-performance-feelings, were sub-categorised.

- Behavioural Moves-Self included such references to avoiding or seeking public participation: "I didn't want to be the spokesperson." A further pair of sub-categories involved attending or not attending: "I didn't hear what they said."
- Behavioural Moves-Student included such references to perceptions of fellow students' performances, inferences of other students' thoughts, perceptions of their behaviour and direct interaction with other students: "One of the women stood up and said there was a person who is dominating and I knew it was me."
- Behavioural Moves-Facilitator included sub-categories of actions by the participant that included a sensory or cognitive experience such as perception, interpretation or evaluation of the facilitator's behaviour, perception of the facilitator's instructional moves, and direct interaction with him: "I wish he would give us more time to discuss the paper."
- Self-Performance-Thoughts included aspects of self-evaluation of success and failure, and perceptions of task difficulty and task structure. Thoughts that were causal explanations of self-performance behaviours and outcomes were coded as self-attributions. Likewise, thought units that were references to a participant's future performance behaviour and to their expectancy of success and failure, were coded as self-expectations: "I think I will do OK as it seems related to what I have to do at work."
- Self-Performance-Feelings included anxiety, morally neutral-positive feelings such as happiness, morally neutral-negative feelings such as sadness, morally unneutral positive feelings such as pride and morally unneutral-negative feelings such as shame.

Coding Summary

In order to code the transcripts according to the conventions suggested by Marland (1977) and King (1979), the following steps need to be taken:

- Decide whether the data are interactive or non-interactive. Code only interactive data.
- Italicise each thought unit within the set of interactive data.
- Assign each interactive thought unit to a CASSIT category, and where sub-categories are required, use these as well.

APPENDIX 5

MEMBER CHECK LETTER

MEMBER CHECK LETTER

As part of the member check process, Gail was asked to read all of the information contained in her section of Chapter 5. As well as copious supportive comments upon the accuracy of text of the document, she sent the following unsolicited letter:

Dear Bryan,

I have read your Interview Document and I am absolutely amazed at your observations and the accuracy of them.

You have captured my moods, thoughts and feelings at the time. Reading through the document I was astonished at how miserable and whinny I was.

Having now completed the degree and acknowledged that I can do it, my confidence has risen.

When I reflect on what you observed as motivating factors for completion of tasks, I would have to tell you that your study was one of those motivators. There was no way I was going to give up and let you down, especially as the other participants in your project dropped away. It was necessary for me to achieve for myself, my family and friends, my work situation and for you so that at the end of your study one little guinea pig survived.

Thank you for choosing me to be part of your studies. You have incredible insight and that is obviously why you are so highly regarded by the students and other lecturing staff.

Kind regards,

(Gail)

Signed and dated.

APPENDIX 6

EXAMPLE OF SESSION RUNNING SHEET AND CLASSROOM LAYOUT

EXAMPLE OF SESSION RUNNING SHEET AND CLASSROOM LAYOUT

Example of Session Running Sheet

The following is an example of a running sheet recorded by the researcher during the taping of the learning sessions. Questions listed for asking of the participants during the stimulated recall interviews are in italics.

Session Three

Tape Counter	Event
0000-0176	Revision of Session 2. Facilitator talking Individual activity – silent reading and then select a partner to discuss the article. *What did you think/feel at the beginning of today's session?*
0176-0220	Pairs – Pick a partner and discuss three topics. *What did you think/feel about this?*
0220-0496	Whole group discussion on assignment –a critique of articles. Put down in single sentence point of view of article. Edit this and edit again. *What did you think was the point of this activity?* Sam read his sentence. Pat volunteered a comment on the article.

0496-0699	New exercise. Handout of paper and preview of today's session.
0699-0758	Silent reading. *How did you go about this?*
0758-0823	Small group discussion. Sharing of ideas. Sam leading the group. *What were you thinking/feeling when...?*
0823-0929	Large group sharing exercise. Dee participating. *Why do you think the facilitator did this?*
0929-1039	Continue group discussion. Gail looking excited. Pat quiet.

Morning Tea Break

1039-1063	Whole group reporting back. *What are you thinking/feeling at this point?*
1063-1202	Pat reporting back to whole group. *How did you feel?*
1202-1384	Lots of laughter caused by wisecrack by (another student). (Facilitator's) response. *How were you feeling?* Dee's comment on article.

1384-1540	Brainstorming session

1540-1660	Pat gives group feedback on brainstorming session. Received applause. *How did you feel?*

1660-1699	Each group reported back. *What were your thoughts here as it was just before lunch?*

Dee looking tired. Sam quiet. Pat looking happy. Gail bemused. Other students keep on talking. *What were your feelings when (facilitator) indicated this afternoon's activities?*

Lunch Break

End of Taping

Only the morning sessions were recorded. The afternoons, immediately following the lunchbreak, were used for the stimulated recall interviews. Each participant was interviewed as close as in time to the recorded session so that immediacy could be maximised. As can be seen in the Classroom Layout that follows, the interviews took place in an adjoining room in which replay and audiotaping facilities had been set up. The classroom was typically set up as indicated. Desks were grouped to accommodate about six or seven students. Groupings were self-selected. When addressing the whole class the facilitator stood essentially as indicated but did roam the room from time to time. Most activities were conducted in the smaller groupings either as group work, in pairs or as individual exercises. Group leaders for whole class feedback were self-selected, though occasionally, the facilitator would nominate a spokesperson to report the group's findings to the entire class.

The classroom contained large windows along the right side, and there were two doors into a corridor separating the classroom from the stimulated recall interview room. There were whiteboards at each end of the room and pin-up boards along the left side between the doors. The only audiovisual aids available were an overhead projector and a videotape player.

Classroom Layout

Stimulated

Recall

Interview

room

OPEN ACTIVITY AREA

Including coffee facilities

Students grouped at tables of six per table

Facilitator

TV Cam-era