Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

Theory to Practice: Is there a real connection for teachers in teacher education?

A thesis presented in partial fulfilment of the requirements for the degree of

Master

of

Education

at Massey University, Palmerston North, New Zealand

College of Education

Te Kupenga o Te Matauranga

School of Arts, Development and Health Education

Health and Physical Education

Anne Kingsley

December 2006

STATEMENT BY CANDIDATE

I certify that the Thesis, "Theory to Practice: Is there a real connection for teachers in teacher education?" is my own research, except where otherwise acknowledged, and that this thesis has not been submitted for a higher degree at any other institution.

To the best of my knowledge no material in the thesis has been previously published or written except where this has been stated and referenced.

ABSTRACT

The purpose of this study was to examine the process of learning to teach, which is the focus and objective of the one year Diploma of Teaching (Secondary), and to assess whether education in theory can make a difference in graduate teacher competence.

Questionnaires and semi structured interviews were used to ascertain the perceptions of student and beginning teachers on how well theory and practice are integrated in the Diploma programme. The study would indicate that student teachers appear to see little relevance of theory to classroom practice. The study also suggests that student teachers believe that the majority of learning occurs in classrooms during the practical teaching experience and consider that the mastery of management is the most crucial factor of teaching.

The research also sought to establish to what extent students bring established beliefs with them to University and the extent to which their perceptions of what constitutes an effective teacher. It was apparent that student teachers had, at least in the beginning, established opinions based on their own experiences as school students, about what constitutes an effective teacher. These student teachers also claim that associate teachers varied hugely in their ability to support and give feedback to student teachers in the classroom, and indicated that it was difficult for the college tutors to bridge the gap between theory and practice.

The findings of the study will suggest fundamental changes need to be made to the organisational structure of teacher education in order to meet the needs of the modern teacher with modern classrooms.

ACKNOWLEDGEMENTS

The researcher wishes to acknowledge the support and generous co-operation from the Director and staff of the Graduate Diploma Teaching Secondary programme.

I am indebted to Peter Lind and Ruth Kane for their advice at the start of my journey.

To Steve Lang, my very patient, supportive and caring supervisor, and those students who took part in the research, and to Don Miller who sadly died before the research was completed, but who guided and inspired me to believe I could complete this thesis.

I appreciate the support the family have given me in this venture.

Finally, I am grateful for the assistance from my work colleagues and Vanessa in particular.

TABLE OF CONTENTS

Statement by Candidate i

Abstract ii

Acknowledgements iii

Table of Contents iv

List of Illustrations, Figures and Tables v

1.0 Introduction 1

2.0 Literature Review 4

2.1 Introduction 4

2.2 Theory and Practice 4

2.3 What defines an effective teacher and some learning frameworks? 9

2.4 Considerations regarding teacher education 14

2.5 Purpose and best method of teacher education 18

2.6 Historical influences 20

2.7 Historical and political influences and effects 22

2.8 Current opinions on teacher education and desirable outcomes 25

2.9 Teacher education research findings 28

2.10 Integration of theory and practice 30

3.0 Research Design and Methodology 34

3.1 Brief Outline 34

3.2 Ethical issues 37

3.3 Interview process and rationale 39

3.4 Reflective diary 42

3.5 Background of interviewees 43

3.6 Limitations of the interview process 44

3.7 Coding interviews and rationale 45
3.8 Questionnaires process and rationale 46
3.9 Limitations of questionnaire 47
3.10 Coding the questionnaire 48

4.0 Results and analysis 51
4.1 Interview results and analysis 51
4.2 Questionnaire results and analysis 55
4.3 Questionnaire analysis 62

5.0 Discussion and Conclusion 64

6.0 Recommendations 76

7.0 References 82
7.1 Bibliography 94

8.0 Appendices 95
(i) Sample of interview questions 96
(ii) Themes /coding units from the interviews questions 98
(iii) Coded questionnaire 102
(iv) Graphs / Analysis of Data and Graphs from Questionnaire 119

LIST OF ILLUSTRATIONS

FIGURE 1: Main Contributors to 50% of the Course According to the Interviewees' Transcripts 101

FIGURE 2: Distribution of Responses to B.1 (educational technology) 119

FIGURE 3: Distribution of Responses to C.2 (strategies for teaching practical skills) 119

FIGURE 4: Distribution of Responses to C.5 (to be confident about your skill for critiquing curriculum documents) 120

FIGURE 5: Distribution of Reponses to C.7 (planning to meet the needs of individual students) 120

FIGURE 6: Distribution of Responses to C.12 (to learn about special needs teaching) 121

FIGURE 7: Distribution of Responses to C.13 (to learn about teaching gifted and talented) 121

FIGURE 8: Distribution of Responses to A.1.1 (present view point - programme provided adequate theoretical base) 122

FIGURE 9: Distribution of Responses to A.2.1 (present viewpoint - programme provided adequate practical base) 122

FIGURE 10: Distribution of Responses to A.3.1 (confident with the New Zealand Curriculum) 123

FIGURE 11: Distribution of Responses to B.3 (to learn about adolescent issues) 123

FIGURE 12: Distribution of Responses to C.6 (reflecting on current educational issues) 124

FIGURE 13: Distribution of Responses to D.1 (to spend teaching in an actual classroom) 124

FIGURE 14: Distribution of Responses to D.2 (to receive good feedback from your Associate Teaching on Teaching Practice 125

1.0 INTRODUCTION

This study explores the effectiveness of the structure and delivery of the training and education provided for graduate student teachers, whose perceptions will be gathered after one year of study and practice. The study will assess the extent to which they have become effective beginning teachers, teachers who are aware of the interface between theory and practice; who can integrate theory and practice; who understand the knowledge and skills required to apply good pedagogical teaching strategies appropriately, and who understand the rationale for critical thinking and critical action (Programme Aims, Paper number 136.431 p. 2).

Having been involved in teacher education for over twenty years it seemed to the researcher that in spite of much knowledge and many skills, beginning teachers were not as confident in the classroom as they might be after three or four years of preparation. Research of the one year programme will hopefully give the students a voice and provide an opportunity to consider that there may be a more effective way to establish the content and process of the programme.

Brouwer and Korthagen (2005) claim that the experience of the student teachers' own schooling has a big influence on their beliefs and values, and that this experience should be taken into consideration if pre-service training for teacher education is to be effective. In particular, theory and practice need to be well integrated in teacher education.

The school culture is formative and has the effect of influencing the beginning teacher and preventing them from acting in a way that does not 'fit'. It can be difficult, if not impossible, for a beginning teacher to significantly change established and well entrenched practice in schools. This socialization in schools can generate a 'washout' during teaching experience and the images of beginning

teachers are often shattered when faced with reality in the classroom. This 'washout' is described by Korthagen & Kessels (1999) as a diluting of beliefs and values when student and beginning teachers are surrounded by the particular culture of the school. This culture may well not be aligned with their own values and beliefs about teaching. This dilemma often causes beginning teachers to struggle for control and management of the class and so go into 'survival mode'. Many student teachers do not feel well prepared by lecturers in teacher education so take notice of teachers in schools who are successfully teaching pupils in the classroom. Hatton & Smith (1995) drew the same conclusion from their research four years earlier than Korthagen & Kessels (1999)

The research study carried out at Konstanz University in Germany as cited in Brouwer & Korthagen (2005) that the most successful programmes in teacher education were ones with an integrative approach in which student teachers practical experiences are closely linked to theoretical input. This combination tends to empower the beginning teacher and is more likely to lead to the development of innovative and independently reflective teacher competence.

Ben-Peretz (1995) noted that transparent teacher education would help to communicate a cohesive view of knowledge, and Wideen et al (1998) believe we need to take a closer look at the learning process involved during the time teachers are practicing to develop their competence and expand their professional skills.

Integration of theory and practice refers to arranging competence acquisition as a gradual process which provides a step for the next stage of the process of becoming a competent beginning teacher. Integration also means coordinating the acquisition of theoretical knowledge whilst developing teaching skills and adopting learning as an enquiry and reflection into one's own actions. In other words relevant incidents which are real experiences may better equip the student or beginning teacher to be a more reflective teacher than tutoring the

student teacher in theory which may be disconnected from the student teacher's actual practice. Ben-Peretz (1995) claims that, in order to prepare beginning teachers for future classrooms, there needs to be a deliberate decision to improve teacher education, and action needs to be taken to integrate theory and practice. Will it then be possible to call it a praxis?

2.0 LITERATURE REVIEW

2.1 Review of relevant literature introduction

The intention of this chapter is to review literature that explores the interface between theory and practice in a one year Graduate Diploma Teaching (Secondary) programme, hereafter referred to as the GradDipTchg(Sec).

Reference is made to the material supplied to students in the GradDipTchg(Sec) which is used to code the interview transcripts and the questionnaires. An attempt is made to explore to what extent students of the Diploma programme perceive that the programme meets the stated learning outcomes, and how well prepared they felt to teach in classrooms.

2.2 Theory and Practice: How might they be defined; how do they interface and what is their significance to teacher education?

There are a number of definitions of the terms 'theory' and 'practice' and not all definitions are agreed upon by academics. There are differing opinions as to the extent to which practice can be taught within a university culture. There are also many different opinions as to the extent to which teachers in training are enabled to apply the theoretical knowledge they acquire in training, to the classroom.

For the purposes of this research, theory will be described as "a way of explaining or predicting a phenomenon by applying ideas or concepts to a framework" (Day, Fernandez, Hague & Moller, 2005, p. 331). Hence theory will be interpreted as a system of ideas and concepts based on given principles. Teachers will be assisted to anticipate how this body of knowledge will influence the

outcome of the application of certain beliefs, values and actions and choice of teaching strategies.

Again, for the purposes of this research, 'Practice' will be used as per the definition in The Readers Digest Oxford English Dictionary (1993, p. 1191) of a "repeated action or performance in order to gain skill". Theory and practice are often viewed as separate but interconnecting entities.

Korthagen (2000, p. 60) expresses his perception of theories as being "frameworks, ideas and principles in educational settings." According to Eraut (1994) theory can be explained as interpreted meanings in educational settings, of a balance of concepts, frameworks, ideas and principles. Korthagen (2001) believes that, particularly in the case of teaching and learning, theories are informed by practice and practice is informed by theories. They therefore have a symbiotic relationship.

Korthagen (2000, pp. 23-26; 2002) uses the terms "epistome" and "phronesis" knowledge. "Epistome" knowledge is what the teacher in training, learns in theory and "phronesis" is situational knowledge -based theory which helps the student to see the relevance of the knowledge of pedagogy, and to respond accordingly in a more informed way. "Phronesis" is more than just an idea in the head of the learner, it adds to their knowledge, problem solving abilities and subsequent actions in the classroom.

Korthagen (2001 p. 24) argues that what is needed here "is not a scientific understanding (episteme) but practical wisdom (phronesis)". He explains that phronesis knowledge describes more concern with "specific concrete cases and complex or ambiguous situations" rather than scientific theories. He further claims that practical wisdom or perceptual knowledge, uses rules only as summaries and guides and he refers to Nussbaum (1986 p. 305) who would prefer that the wisdom be described as "flexible, ready for surprise, and prepared to seek resourceful improvisation."

Some researchers (Day, Fernandez, Hague & Moller, 2005, Russell, 1988) claim that theory should be taught in the university, and that practice belongs in the school classroom. On the other hand Kippen, (2003) cites Cowan (1998) who believes that the discussion of actual and meaningful events is essential and contributes to deep learning. This knowledge transmission model, he believes, is the main mode of delivery in universities and declares that it is not in his opinion a very effective strategy for teaching and learning. Without the opportunities to ask questions and clearly articulate the connection between theory and practice, how will the transfer of skills and knowledge occur? However, Ramsden (1998) claims that the transmission of knowledge is only one part of the learning process and comments that the process should be a co-operative process between the student and the teacher. He further claims that the learning should be considered as learning, in order to assist the student teacher to decipher the meaning of the relationships and continually see strategies and methods to create an effective and interactive learning environment in the classroom. Meanwhile, Korthagen (2000) claims that theory and practice should be integrated and that the aim of teacher education is to encompass the knowledge of psychology, sociology and educational research. The content of these disciplines is inevitably chosen by the teacher educators.

Historically, theories of knowledge were believed to be static and inflexible. Later the perception of theories changed and generally knowledge became accepted as being adaptive and responsive (Heylighten, 1993). This allowed more flexibility for teacher educators to adopt the concepts embedded in psychology, sociology and educational research to meet the needs of their student teachers. The change is supported by Lave & Wenger (1991 p. 21) who comment that "a training programme that consists of instructional settings separated from the actual performance would tend to split the learner's ability to manage the learning situation and consequently detract from his ability to perform the skill".

Teachers need to acquire both knowledge and skills to become effective teachers and to this end Eraut (1994) quotes Oakeshott (1962) who claims that technical knowledge in particular is used systematically and explicitly whilst practical knowledge is used directly and indirectly. But these definitions possibly deny the close association of both.

Korthagen (2000) stresses that it is difficult to judge the best time to introduce technical knowledge, because the material actually has a limited influence on how the student teacher teaches until it takes on personal meaning. Anderson (1982) on the other hand, bases his belief about knowledge and its acquisition on having two stages of development. He identifies one as the procedural stage and the other as the declarative stage. The procedural stage is factual and normally exists as propositions which can be procedural, articulated and performed whilst learning is taking place. The declarative stage is achieved when the demonstration of cognitive activities and skills, resembles an automatic response. This latter stage gradually leads to less conscious thought processing and allows the brain to release more power to engage in higher order thinking and deeper learning, which subsequently facilitates the acquisition of knowledge and further problem solving skills (Anderson 1982).

During the procedural stage, Chi & Glaser (1985) contend that, in order to enhance learning, it is necessary to provide realistic, relevant and readily available support from an 'expert' and allows opportunities for student teachers to develop specific problem solving skills in a practical way. The role of 'expert' assists the development of the beginning teacher by providing feedback to enable the learner to progress through what Fitts (1964, p. 253) describes as the "associative phase". These processes do not involve deliberate thinking, and allow the learner to add new knowledge to existing knowledge, and make spur of the moment rapid interpretations of the situation and the overall purpose of, and the reason for the action (Clarke & Jarvis-Sellinger, 2004, Eraut, 1994). Such decisions in time

become largely intuitive, and this may make the role of the Associate teacher a difficult one since it could be hard for them to give a quick explanation to the 'novice' about what led to the automatic responses and actions of the 'expert' (Eraut, 1994). On the other hand, it may be that this would give the expert teacher more time to give individual challenges and support to their students and student teachers.

It is important to recognise the problematic nature of knowledge since it is perceived by some teachers to be a static body of indisputable facts developed in isolation rather than considering that it is affected by the construction that occurs in a social context and is affected by relationships rather than simply perceiving knowledge. Korthagen (2001) also promotes the belief that any general theory is only helpful if the learner receives coaching in the real situation where they experience, and have to deal with the problem themselves (Dewey, 1968, cited in Korthagen, 2000). Meanwhile, Lave and Wenger (1991) promote the concept that learning is a social practice in which a person plays an active role in shaping their identity and their relationships by learning the accepted pattern of behaviour of the other people in their occupation. They adopt the values and knowledge and generally attempt to fit in with their community. There are many reasons for a person wishing to conform and belong in this situation.

In summary, there is currently much debate and differences of opinion about the knowledge base required in teacher preparation. Opinion ranges from hyper-modernist lists of classroom techniques, to describing teaching as a simple extension and combination of personally acquired knowledge and beliefs (Pajares & Bengston, 1995).

Good teachers need deep knowledge and the skills and understandings in order to put these understandings into practice. (Initial Teacher Education Policy Review Report, 2004 p. 3). The writers of this report also state that "teacher quality" is the most "important variable influencing student achievement". John

Hattie (2002) supported this belief in his address to teacher educators TEFANZ Conference in Melbourne. He also stated during this presentation that the teacher has the greatest influence on children's learning than any other single factor.

Korthagen (2001) describes the developing practice he researched in Utrecht University in 2000, where he points out the benefits to student teachers and teacher educators who over time have developed a willingness to adapt. The programme provides opportunities for frequent commuting between specific and individual experience and reflection by the student teachers leading to a development of proficiency to integrate theory and practice. He confirms that this contributes a great deal to student teachers' growth perception and subsequently their self-efficacy.

The two theoretical goals Korthagen (2001, p. 13) offers is how the links of theory and practice concern the nature of theory relevant to teachers and the others concerning "the relationship between the teachers' inner processes and teachers' behaviour."

2.3 What definitions are used to describe an effective teacher, and what are some of the learning frameworks that constitute effective teacher education?

Eraut (1994) claims that any framework for promoting learning will need to consider and take account of an appropriate balance of learning settings, allow time for study, communication, consultation and reflection. The environment should also be supportive and led by staff that are willing to take time to give good feedback. Eraut (1994) cautions that the student teacher must have the capacity to learn, and be open to the possibility of change in order to develop as a teacher. This makes it even more crucial that the best applicants are attracted

and selected to teaching and are nurtured during their initial teacher education for at least their first five years in their career. It would also seem important that associate teachers are skilled and knowledgeable in order to give good feedback to student teachers.

Joyce & Shower (1988) take a more craft based approach to learning how to become a teacher. They advocate that the process is embedded in the theory or description of a skill or strategy in conjunction with modelling of the skills of teaching. They further support the research of Eraut (l994) who believes that practice is more effective in simulated or actual classrooms, provided that the student teachers receive specific feedback about their performance as soon as possible. In Aotearoa, New Zealand, the Review of Teacher Education recommends an induction period for beginning teachers following practicum and teaching experience in order for them to learn to teach in contexts and to consider, select and apply theory.

When considering teaching and learning, it is also important to discuss what a large number of researchers and organisations have attempted to identify which characteristics best describe an effective teacher. Tinnings (2004) quotes the following strategies for effective teaching. He focuses on content knowledge, management skills, planning for student time on task, keeping students on task, making tasks meaningful and aligning students' ability as well as providing a warm and positive environment.

Researchers (Darling-Hammond, 2000; Goodland, 1993; Hattie, 1990) have much to say about the preparation and definition of what makes an effective, good or professional teacher. Codd, Clark, and O'Neill (1998) comment extensively about the dangers of reducing the teacher to a 'technicist' or 'capable' teacher as defined in the Ministry of Education ERO Report New Zealand Council for Educational Research (2002). Codd, Clark and O'Neill (1998) all mourn the loss of the 'professional' content of the current pre-service programmes. They define

'professional' content as sociology, psychology, ethics and some of the history of education.

Snook (1998) advocates that a good teacher must first be an 'educated person', and maintains it should be the main aim of teacher educators to model and instill in student teachers, the love of lifelong learning. Teachers in turn should pass this on to the children in the classroom, primarily for the benefit of these students, in order for them to learn how to learn. Snook (1998 p. 147) also points out that women and men can become proficient doctors, lawyers, accountants, engineers without being 'educated', but that "it is the function of teacher education to produce educated teachers, not just technicians," who merely learn the tricks of the trade.

Darling-Hammond (2000) supports the production of a standards based measure of teacher quality that reflects the growing knowledge about what effective teachers need to know and are able to demonstrate. The assumption is made that learning is a process recognized as a relatively permanent change in a performance or knowledge, most of which is visible.

Stronge (2002) claims that teachers should be able to design programmes that increase student achievement, and also have the ability to cater for children from different backgrounds. He considers that effective teachers can identify the relevance of pedagogical preparation and current knowledge, and be capable of making strong links between content knowledge and pedagogy.

Another opinion and belief promoted by Danielson (1996), and echoed by the claims of the Education Review Office (ERO, 2004), is that there is a body of knowledge and skills that are necessary to be learned, mastered and furthermore assessed in relation to teacher competence. Danielson (1996) published a "Framework for Teaching" to assess teaching and teachers' competence, defining levels of performance and consequently the skills to be acquired during training in order for student and beginning teachers to become effective teachers. These

have also been identified as standards that student teachers must meet to qualify for provisional registration. Elbaz(1991) contributed to the debate and claimed that it was very important that teachers had content knowledge in order to be effective.

Korthagen (2004, p. 79) cautions of the dangers of reducing teaching to a list of capabilities and is of the opinion that "a good teacher cannot simply be described in terms of isolated competencies which can be learned in a number of training sessions". Palmer (1998) appears to agree with Korthagen that good teaching cannot be minimized to technique and states that a good teacher needs a clear identity and should be a person with integrity.

Although many different researchers have produced lists of the characteristics of an effective teacher, Hattie (2002) claims that very few have been based on actual classroom evidence. He believes that expert teachers have a good understanding of the concepts of pedagogy and are able to target instructions in a more integrated and coherent way thus making meaning more understandable for their student teachers. He also comments that not all experienced teachers are expert teachers. Hattie (2002) supports other researchers previously referred to (Darling Hammond, 2000; Korthagen 2001) in that he claims that realistic teacher training must begin at the point of the student teacher's own experiences rather than objective theories from books on the teaching and learning. His view is based on the belief that the brain makes connections with what it already knows (constructivism). Coolahan (2002) discusses the benefits of deep learning and the subsequent gains in long term memory for all learners.

Korthagen (2001) refers to Liston & Zeichner, (1990) who contend that student teachers need to have access to knowledge beyond their own immediate experience of life and schooling, in order to be able to critically reflect on their own practice. A reliance on the student teachers' own personal experiences, may

not allow students to consider research-based ethics, and culturally rich theories of human development which celebrate diversity and inclusivity, when considering ways of thinking about children, and a variety of their learning practices. (Korthagen, 2001). Korthagen (2001) further states that, what is needed is a rich and varied conceptual repertoire to enable student and beginning teachers to engage in well informed and varied forms of reflective practices, which empowers them to make better decisions in lesson content and pedagogy.

Amongst the words used to describe teachers who are seen to be confident and competent of high quality teaching are 'good,' 'effective', and 'capable' some of which require the beginning teacher to master a set of skills and knowledge. O'Neill (1998, p. 204), warns about using the "technicist stance of teacher assessment that relies on individual responsibility and accountability". He goes on to describe the complex kind of professional judgment needed in the preparation of effective classroom practitioners. O'Neill (1998) attempts to persuade the reader that because teachers are seen as role models, (see also Codd 1998; and Clark, 1998) ethical material should be an important part of teacher education. It is therefore imperative that student teachers be encouraged and given opportunities to examine their beliefs and values early in the programme. Biddulph & Biddulph (1999) described the study of a number of teachers who disclosed a fear of mathematics and were adversely affected because these feelings of fear hindered their learning of and competence with this subject.

Grudnoff & Tuck (2001) cite Loughran, Brown and Doecke (1996) who claim that learning to teach while training is different from learning to teach while teaching and express the belief that this accounts for some degree of culture shock when new teachers are responsible for classes in their first year of teaching.

The debate about what the beginning teacher needs to possess in terms of knowledge, skills, and personal characteristics shows no sign of abating. As

recently as September 2005 the Teacher Registration Board published their intention to produce a set of standards applying to teachers, which describe what a teacher "will know, understand and be able to do at the point of graduation" (Lind, 2005 p. 4). Such an ongoing pursuit of understanding of the relationship between theory and practice is a healthy endeavour and one that this research continues. The process is perhaps better described as becoming a teacher rather than training to teach.

Korthagen (2001 p. 15) contends that the constructivists' view of learning would indicate that the student teacher "develops his own knowledge in a process of reflection on practical situations, which creates a concern and a personal need for learning", and expresses the opinion that an effective teacher is a professional teacher who not only implements learning but functions as a curriculum developer.

2.4 Some considerations regarding teacher education and what are the issues to be considered in the construction and delivery of programmes?

Gore (2001) contends that we have not investigated the fundamentals of pedagogy and curriculum in sufficient depth in our educational institutions. In addition to classroom teaching, teachers undertake many other tasks and have responsibility for many facets of their students' lives. Preparing teachers to be morally responsible is a huge challenge (Goodland, 1990), but a considerable amount of time is spent by practicing teachers dealing with parents and colleagues and other professionals as well as caring for and nurturing young people to live effective and happy lives in this changing world.

Calderhead & Robson, (1991) Carr & Kemmis, (1986) Chen & Ennis, (1996) and Pajares, (1992) all claim that every incoming student teacher has some knowledge and beliefs about teaching and learning, which are mostly based on

their own experience as students in the education system. For example, student teachers come to tertiary study with images, feelings, needs and behavioural patterns as a result of their own educational experiences and astute teacher educators can assist student teachers by making them aware of the relationship between gestalts and their own learning as children. Hattie (2002) indicates that this may also cause inner tensions to surface and that this is a good place to start constructive and meaningful work with a student teacher, as opposed to only book theory. This researcher believes more needs to be learned about the importance of this claim and also what efforts are made by teacher educators to accommodate this belief. This research seeks to contribute towards this awareness.

Attitudes are developed when a set of beliefs focus on situations and once interpreted, affect responses to situations. Chen and Ennis (1996) make the point that attitudes do play a major part in what and how teachers teach. It is important to consider student teachers' self concept which is the result of their beliefs and values since they affect their attitudes (Pajares, 1992) which in turn affect their feelings and also influence the way they teach (Chen & Ennis 1996; Schempp & Graber, 1992; Zeichner, 1999). According to Giddens (1991, as cited in Tinnings, 2004) self-identity has to be moulded, altered and sustained in response to a fast developing and changing society and education, on a global scale. This is not an easy journey for some student teachers, and may not happen in the short term.

In connection with this, Wideen, Mayer-Smith & Moon (1998) stressed how important it was for having student teachers examine their prior beliefs, as an initial first step in the process of learning to teach successfully. In fact Korthagen (2004 p. 89) maintains that "if teacher educators want to help student teachers in their professional development, they must start by trying to understand the way these students view teaching and learning and how they have

come to construct these views". According to Korthagen (2001) student teachers need to analyse their perceptions (their view of reality) about teaching and learning and in doing so their own understanding becomes more explicit. However, once beginning teachers enter teacher education they are challenged to filter new beliefs and values and have to decide what, if anything, they will modify (Francis, 1997).

Korthagen (2001) urged teacher educators to understand that when a student's equilibrium is disturbed, changing views can meet with much resistance. Korthagen (2001) advocates that student teachers need to be taken seriously and that it is important to work with them on the basis of their concerns. In order to make any kind of movement one's equilibrium has to be disturbed.

To begin to address this question Luckner and Nadler (1992) contribute to the discussion and define beliefs as a mental and cognitive map that serve as a guideline to keep people within their comfort zone, and they uphold the view that beliefs exist to maintain a state of equilibrium. Korthagen (2001) notes that it is fundamentally uncomfortable changing one's view of the world in a three or four year programme. It would seem reasonable to presume that it may be even more difficult for a student teacher to change in the one year programme of secondary teaching.

Hargreaves (1998a) argues that teaching is a profession in which feelings and emotions play an essential part, and certain caring people make more effective teachers. Korthagen (2001) agrees that if a teacher is unaware of their own feelings and needs, they are unlikely to be aware of the feelings and needs of their students. Zeichner & Liston (1987) acknowledge the complexities and realities of becoming a teacher and advocate that student teachers first need to reflect on their own perceptions in order to be able to adapt during training.

However, there is little agreement in the ways in which student teachers actually inform and learn from their practices. Studies by Gibbs (2003), and

Sachs (2003), have focused on the behaviour, attitude and practice of beginning teachers, and question whether what they think has an influence on what and how they teach, and how these are interlinked.

The image one holds about the links and proportional balance between theory and practice, according to Eraut (1994) can significantly influence one's understanding of the personal learning process. Eraut (1994) refers to a teacher education course run in Sussex, United Kingdom, which begins with the student teachers submitting an autobiography. The benefits, according to Eraut (1994) are that learning to reflect is not limited to the theory component of the course but can inform the student teacher on the subject content, the ways teachers both teach and interact and their awareness of feelings, attitudes and personal goals. This self awareness can contribute greatly to the student teachers' ability to reflect well.

Brouwer & Korthagen (2005 pp. 153-154) indicate that there is a "gap between theory and practice which seems to persist across different times and contexts", and cite Zeichner & Tabachnick (1981) when they discuss the dominant role of practice in shaping teacher development during pre-service teaching education. The 'washed out' effect is often felt by beginning teachers during practical experiences which exaggerate the actual gap between theory and practice. The 'wash-out' effects exacerbate the lack of transfer between teacher education and schools.

Brouwer and Korthagen (2005 p. 155) agree with what Dann, et al (1981) reports as the "phenomenon of 'reality shock' or 'practice shock" and believe that the 'idealistic image beginning teachers have is very quickly 'shattered' when they realise the realities of teaching. Beginning teachers have to survive the transition and an adjustment to teaching practices that exist in schools. They develop these idealistic expectations in teacher education and then experience pressure

from traditions and values upheld by the school particularly when practical action in the classroom is required (Brouwer & Korthagen, 2005, p. 155).

2.5 What is the purpose and best method of teacher education?

Arguably, the teacher's role is to teach their students and Hill & Hawk (2000) define the purpose of compulsory schooling in a democratic society where the responsibility of teachers is the development of future citizens who are able to play an active role in society. They further claim that the inclusion of the study of ethics and moral issues theory meets this requirement, and should therefore be part of any teacher education programme.

Collins (2004) states that much teacher education is often actually learning to behave like a teacher, rather than acquiring teacher knowledge and skills. However, Korthagen (2000) citing Dewey (1968) also promotes the belief that general theory is only helpful if the learner receives coaching in the real situation where and when they experience the problem themselves and can identify the connection.

Teaching and learning are important educational undertakings and Lave & Wenger (1991) and Daniels (2001) concur that they believe learning is most effective in collaborative participation which takes place in supportive environments. In line with this Korthagen (2001) states that what student teachers value in theory is what proves successful for them in practice. The successful practice is then learned, validated and repeated.

Eraut (1994) expresses his opinion that most learning relies mainly on publications in a variety of media, practical experience and from interaction with people. This learning continues in the workplace and involves the beginning teacher in a continuous succession of cases, problems, or projects about which they have to learn. As previously stated, this may not contribute to their

knowledge unless there is specific critical reflection. What is more, Eraut (1994) and Feiman-Nemser (1990) believe that significant parts of the learning will take place in the context of use and that there is little immediate transfer from one setting to another. In other words, student teachers may not transfer the theory gained in training, to practice in the classroom. Eraut (1994) also asserts that being able to reproduce knowledge in writing does not mean a transfer will automatically happen to the student teachers' actual teaching and this could influence the effective use of theory. This may be a problem for teacher education, since many of the assessment tasks are written. It is also a concern for teacher educators as to how they assess student teachers during their training. If knowledge is only assessed by the University in the form of essay writing tasks, this may not be a true check of a student teachers' knowledge or skills to become an effective teacher.

Learning takes place in a participation framework, and not in an individual's mind and this manifests itself in situations such as the behaviour expected from the congregation in a church, or spectators in sports where people learn to behave like those around them. Student teachers often feel obliged to fit in with the school culture to experience a sense of belonging (Feiman-Nemser & Buchmann 1989).

Analysing specific incidents that student teachers observe, or in which they are involved in the classroom, present a very good and meaningful basis for discussing and developing knowledge of pedagogy and skills of teaching. To support this view Russell (1988) states that pre-service student teachers fail to see the implications for themselves, and thinks that much of the theoretical course work undertaken within the walls of the university is irrelevant once they begin to teach in the classroom. They identify a schism between theory and practice.

Student teachers need to have guidelines according to Brock (1999, p.127) who agrees with Dewey (1968) that what parents want most is their children to be cared for " with humanity and sensitivity as developing human beings". This presents another dimension of teaching for the student teacher and beginning teacher. This researcher believes that children do not care what the teacher knows as long as they know that the teacher cares. It is important to consider therefore how teacher education might respond to this demand in the most effective way.

2.6 Some of the historical influences on teachers and teacher education

Since the implementation of 'Tomorrow's Schools' in 1988 (MOE), parents have had more say in the way that their children are taught and schools are managed. Traditional apprentice type practices in the 1960's were thought to be the best way for pre-service teachers to learn how to teach. Consequently closer ties were developed between theory and practice by giving time and attention to pedagogical teaching and supervised practice (Feiman-Nemser, 1990).

College of Education lecturers in Aotearoa New Zealand, frequently model teaching styles for student teachers, but generally do not verbalise their thought processes or describe the theories, beliefs and knowledge they hold as they respond to incidents in their classrooms that might explain the rationale for their decisions and actions. This makes it difficult for the apprentice to understand the reason for 'expert' teacher behaviour especially when it is rapid, automatic and not obvious to the novice. Unfortunately these teaching moments pass quickly and the opportunity may be lost to the novice.

Beginning teachers, in attempting to understand and implement the links between theory and practice, often experience overwhelming feelings of panic and

simply surviving is a challenge (Cole & Knowles, 1993; Veenman, 1984). This feeling tends to make the student or beginning teacher determined to control the students and the classroom environment when they go on teaching experience during their training. They are placed in an associate teacher's classroom and assessed on their performance. This frequently means the way they manage the class of learners is in an environment which they have not created. This is of concern to Gibbs (2003) since he indicates that too much control can stifle creativity, in both student and teacher.

In addition to this Gibbs, (2003) and Haigh & Ward (2004) claim that in practical teaching experiences, many student teachers reported that they were not being given the freedom to develop their own creative approaches. Nor were they encouraged or given opportunities to be innovative or take risks. Curham (1996) recorded as a result of his research with beginning secondary teachers, that it was the acquisition of professional confidence, knowledge of the curriculum, ability to manage the classroom, well prepared resources and an ability to relate to students that helped student and beginning teachers in their transition to actually feeling like teachers.

The research at Konstanz University in Germany, cited in Brouwer & Korthagen (2005) also indicated that the most successful programmes were those with an integrative approach in teacher education in which student teachers practical experiences are closely linked to theoretical input in a cyclic system. The research findings also claim that integrated teaching of this nature tends to contribute more effectively in developing innovative and independently reflective teacher competence.

The Konstanz research team focused not only on teacher attitudes but also on teacher competence in order to explore what were positive characteristics of teacher education programmes and how they influenced the quality of their graduates. Brouwer & Korthagen (2005 p. 158) introduced the term "starting

competence" which they explain describes the future potential of beginning teachers to be competent enough to create activities to engage students in problem solving real and meaningful programmes.

In this article Brouwer & Korthagen (2005) advocate that in order to achieve an integration of theory and practice teacher education would be well advised to provide cyclical and graduated programmes around four types of student teacher requirements which become increasingly demanding. The first step would be an introduction and observation in a practice school, then taking parts of lessons, then teaching whole lessons, and finally teaching a series of lessons. It is important to repeat that the process is sequential. During this process and in the interval between teaching experiences, student teachers should be given theory and support in critical reflection to minimise the gap, to consolidate the learning and decide on the next action for the following teaching experience. For this to work it will be necessary for teacher educators to care for a small group of no more than fifteen student teachers and closely cooperate with mentor teachers in schools.

Suffice it to say, much concern has been expressed about the competency of beginning teachers (Research on Teacher Education in New Zealand, 1993-2004). What therefore can be learned from the history of teacher education, and how might theory be linked to practice in an effective and meaningful way for teachers in the twenty first century?

2.7 Teacher education - historical and political issues and effects

By the end of the nineteenth century, before formal teacher education was established, teaching knowledge and skills were acquired mainly through practical experience in school classrooms.

During the 1960's teachers' traditional legitimacy was undermined (Clarke & Jarvis-Sellinger, 2004) and public opinion of teachers as professionals, diminished. Accountability using standardised tests was introduced to assess classroom students' improvement in learning, and subsequently, teachers' competence was judged on whether or not these results improved. This did not help restore the professional authority of teachers (Clark & Jarvis-Sellinger, 2004). Later in the twentieth century in Aotearoa, New Zealand, various social and technological issues created the need for more teachers and other kinds of teacher preparation (Codd, 1998). As a result of this situation, 'pressure cooker' programmes were developed and included the study of curriculum and pedagogy at the expense of time for 'in school' practice.

In the United Kingdom, post World War Two, higher education institutions were accused of admitting only middle class white people to teacher training and efforts were made to encourage diversity in the teaching profession. Teacher training colleges too were instructed to accept some social responsibility to actively recruit and nurture a wider variety of talents and gifts when promoting pre-service teacher programmes (Nolinsk, 1999).

Early in the twentieth century teaching was believed to be a tradition-bound craft, based on common sense and old tried and tested, mostly unchallenged practices. The training was viewed as the theory component and the apprenticeship under an 'expert' master teacher, viewed as the practice. One of the consequences of being encouraged to observe and learn, is that student teachers tend to copy the behaviour of the College lecturer and or the master teacher, in an effort to be as effective (Korthagen & Kessels, 1999).

Collins (2004) notes that, during the 1960's, when teachers were in short supply, politicians were eager to adopt the short course teacher training to fill the much needed teacher vacancies. Ramsey (2000, as cited in Collins 2004) commented that teachers themselves were prepared to have schools take

responsibility for teacher training under an apprenticeship type scheme. More recently, the pendulum swung the other way, and University programmes, within an academic research environment were established, and replaced some of the actual classroom experiences of teaching. In support of this initiative, Shulman (1987) believes that teaching is a profession that can be taught outside the school environment, so considers that University is an appropriate situation for teacher education to learn relevant theories.

During the nineteen sixties and seventies in Aotearoa New Zealand, university programmes were established in an effort to secure some status for the profession. To defend this move, opinion was strong from some quarters that it was possible and desirable for teachers to be able to apply the so called 'paint by numbers' structure set of guidelines of teaching and learning to classroom situations (Tom 1997). As a direct result of this action the classroom with all its realities was perceived as less important than the academic research environment.

The input of classroom teachers may well have been thought of as less valuable than the contribution made by the academics. Naturally this has alienated some teachers. It is generally considered by many practicing teachers, particularly by some of the more experienced Associate Teachers, that the practice in the 'real world' has been replaced by the thinking of the University, and as such is detached from classroom reality. The theory taught by university lecturers, some of whom have had little or no teaching experience, was perceived by a number of beginning and experienced teachers, as sterile and ineffective in the classroom. This may be because the classroom environment is not sterile, static or totally predictable, and the application of a set of inflexible rules is seldom the best option (Hoban, 2004).

2.8 Current opinions on teacher education and desirable outcomes

Korthagen (2000) states that teacher education is still in a state of confusion and needs to resolve some major issues. Here, in Aotearoa New Zealand, much pressure has been put on the Ministry of Education to provide more school based programmes, and some parents and politicians are dissatisfied with teacher education 'per se'. A number of powerful groups including the Business Round Table, and teachers themselves, believe traditional programmes were not making a success of preparing teachers for future teaching and the realities of the classroom (Kippen, 2003). Haigh & Ward, (2004) advocate that it is important for future teachers to be able to facilitate the students' ability to be involved in higher order thinking, practice problem solving strategies and learn to believe that knowledge is dynamic. An unfortunate outcome of this policy is that, student teachers often find themselves at least for the first few months of teaching, in a situation where they are totally involved with management and subsequently have no time to engage in effective decision making.

More recently, programmes have valued, and focused, on educating student teachers to be critical thinkers and to prepare their students to be good citizens, rather than 'top them up' with large amounts of content or subject knowledge (Korthagen, 2004). Likewise, University Graduate Diploma programmes provide a range of teaching and management strategies. The student teacher is then required to choose from them quickly when faced with actual situations as they occur in the classroom (Korthagen, 2004). The demographic picture of New Zealand's population is changing and cultural differences need to be recognised and valued, particularly when non-dominant social groups are the ones without a great deal of power (Gore 2001).

Kane (2005) comments that some schools may accommodate as many as fifty different nationalities and she stresses the need for teachers to be

competent in teaching a number of different strategies in practice to cope with the increasing diversity.

Gore (2001) attempts to persuade teacher educators to be prepared to take account of a student teacher's background in order to avoid presenting a fragmented curriculum and ensure that theory and practice congeal in a meaningful and supportive way.

The Ministry of Education, in consultation with Te Puni Kokiri and the New Zealand Teachers Council (2004) discussed the need for a framework that provides incentives for teacher educators to extend the programme to meet the reality of contemporary classrooms. It is important for teachers to be equipped with the ability to understand students' backgrounds; their family and cultural influences rather than make excuses for what students may not be learning. It is claimed that teacher education programmes identify the important characteristics they can develop to help the students learn better.

In a draft for consultation article, (Te Kokori, 2005) comments were expressed on an audit released in 2001 about concerns that there were still more than an acceptable number of student teachers graduating from teacher education facilities who were not well prepared to work effectively with Maori students who were in mainstream settings. The criticism was also levelled at teacher education and the fact that teacher education is not adequately addressing the issue of an increasingly diverse population.

Darling-Hammond (2000) points out the value of drawing on multicultural research traditions including psychology, socio-cultural and linguistic research in education in order to provide student teachers with the opportunity to develop this knowledge. She also urges teacher educators to strategise the knowledge base and curriculum about practice and theory.

Smith & Zeichner (2003) believe that student teachers and teacher educators often have difficulty in transferring the methods learned in theory into their classrooms. They claim that opportunities for student teachers to teach, observe and reflect on quality teaching are vital components of teacher education and an integral part of initial training. They also considered that an appropriate system is needed to provide all student teachers with a practicum that reflects the breadth and diversity of the teaching environment in which they will teach; an experience that will reflect best practice.

As already stated, Korthagen (2001) claims that teachers need more useable tools, and a broader education which includes psychology, sociology and history, in order to be effective. He indicates that discussions on whether programmes should start with theory or practice are dangerous and unlikely to resolve the debate and that the real question is how to integrate them and develop the relationship between teacher cognition and teacher behaviour. Wideen et al (1998) claim that there needs to be a network of relationships between theory and practice and that student teachers need the support of experienced mentor teachers to help them develop and enhance their learning. Korthagen (2004) cites Vygotsky's six types of effective intervention and recommends teachers and teacher educators model them. These, he claims, are modelling, contingency management, giving feedback, instructing, questioning and cognitive structuring. Again he stresses the importance of the experience taking place in a productive, supportive and safe environment. It is also very important that student teachers or beginning teachers receive good corrective, specific and rewarding feedback.

Zeichner & Liston, (1987) claim that the learning environment is sometimes not considered in the process of transmitting knowledge. He asks teacher educators to consider the whole person and the theory of situated learning. Daniels (2001, p. 24) describes the beliefs in situated learning as "a way of being

in the social world, not a way of coming to know about it", and she stresses the importance of the relationship between cognitive understanding and actual experience. Lave & Wenger (1991 p. 13) concur with Danielson (1996) and claim that "learning is located squarely in the processes of co-participation". In other words the skills are better learned in the social context actively engaged in teaching in the classroom.

As more of the actual education of student teachers is being undertaken by schools, Korthagen (2004) raises some questions about the quality of programmes and believes that it can only be satisfactorily answered if we achieve through discourse a mutually acceptable definition of "what makes a good teacher?"

The Headmaster of Auckland Grammar, John Morris, Education Forum Chairman commented in a media release from the Education Forum on 8 April 2006 that "wide reforms were necessary to improve teacher quality" in his report to the Members of Parliament. He informed the meeting that people with "great energy, great toughness of fibres and high intellectual ability" were needed as teachers. He also described and promoted the 'School Centred Initial Teacher Training' scheme currently trialling in the United Kingdom, the United States of America and Europe, where "teacher trainees" gained qualifications whilst working in schools.

2.9 Teacher education research findings

In view of the number of research findings, this researcher holds the view that a selection of responses to situations as they arise in the classroom may be made intuitively by the associate teacher. The student teacher may not understand the intentions, values and beliefs underlying the incident, nor consider the diversity of pupils in the classroom. This limits the responses of the student

teachers to what they have observed and heard from a supervising or master teacher instead of critically analysing the situation and making a decision based on their own understanding.

Clarke & Lampert (1986) put forward the claim that they believed it took on average five years to become an effective teacher who could respond to complex situations for themselves without so much conscious deliberation.

Collins (2004, p. 230) acknowledges that teaching is a 'highly orchestrated performance' and identifies the need to improve school and university partnerships in order to maximize learning opportunities. Collins (2004) claims that the teaching profession needs university status, but stresses that there is a need for social interaction between all involved parties, and the importance of developing the students' ability to use reflective critical practice. Only then, he believes, will change and improvement happen.

The learner's ability to understand the lecturer's performance depends on the 'apprentice' engaging in the performance in congruent ways. Lave & Wenger (1991) question the idea that verbal explanation (which may be the natural style of a university lecturer) is an effective mode of instruction and for student teachers, believes that modelling and demonstrating are more effective. Korthagen (2001) also claims that teacher educators prescribe what they believe students should know and that it has a limited effect on how student teachers teach. This could be due to a number of already discussed issues, and the fact that student teachers may feel no ownership of the activity and may not relate to the prescribed material. Snook (2005, p. 1) claims that it is the responsibility of the teacher educator to develop the "minds and hearts" of young people by contributing to their powers of traditional human thought in the sciences, humanities and arts.

Snook (2005 p. 1) further states his conviction that teachers face a new type of student that he describes as "children of the market". These children, he

believes, are highly susceptible to believing that their sole role in life is that of a consumer, and they have subsequently become materialistic, inactive, do not eat well and are besotted with television and video games. This makes the teacher's role much more demanding, since they are competing with this kind of student expectation in the classroom.

2.10 Integration of Theory and Practice

To add to the demands on teachers, diversity was once defined by Poskitt (2004) as gender, race, and the disadvantaged, but is currently interpreted as meaning any different special group of students. This therefore means that because all children contribute their own diversity, this increases the actual number of children considered as having special needs (Poskitt, 2004). This increase places additional pressure on a beginning teacher and makes integrating theory and practice more stressful, often causing a feeling of barely surviving.

As previously mentioned, teachers frequently experience 'wash out' during their first two years of teaching, and adopt a survival mode which becomes modified by the culture of the school (Korthagen, 2000). One of the major problems Korthagen (2001) believes is the socialization of school culture. Many student teachers become submerged into the culture of the school, and struggle with the day to day management of the classroom. Trying to work out how theory can be integrated into practice seems impossible. He strongly advocates that student teachers would benefit from learning to be reflective so that they may process and evaluate their own practice. He further recommends that it is important to support the students learning about; how to become aware of their learning needs; how to gain useful and meaningful personal experiences; how to reflect on this experience; and then to decide on a course of action to improve the situation.

Korthagen (2001, p. 49) develops the critical reflection model concept by identifying "five stages of practical learning, firstly, the action; looking back on that action; awareness of all essential aspects; creating alternative methods of action and finally trialling that action." The cyclic effects of this have been very effective, and facilitated growth competence. Korthagen (2001) points out that critical reflection is not simply thinking later about an incident but a critical form of teaching. He expresses the need for teachers to be aware of their thinking patterns and examine their strategies openly and honestly when evaluating their own behaviour.

Korthagen (2001) goes on to emphasize the need for teachers to be aware of the observable and specific teaching skills that are assumed to be related to becoming an effective teacher. Reflection of personal meaning and relevance is "the means by which experiences are translated into dynamic knowledge" (Korthagen, 2001, p. 103). Wideen et al (1998) records that the traditional teacher education, where the university provided the theory, methods and skills and the schools provided the setting in which that knowledge was practised but where little communication existed between the two institutions, teacher integration was difficult. Teacher education was often a collection of modules or independent courses in which theory is presented without making connections between courses or with practice.

Gore (2001) claims that it is important that teacher educators both teach and model good classroom practice. Gore (2001) further recommends that the way forward for student teachers is to help them to understand that the nature of knowledge is a body of facts that is socially constructed and problematic. Gore (2001) warns that teacher educators are inclined to advocate one, or a combination, of the following; a strong content knowledge model; an apprenticeship model; a programme of critical consciousness; or emphasise the philosophy that children are unique and come from diverse social circumstances.

The process of learning to teach is not a simple issue because of the personal learning histories and the student teachers' pre-conceptions and beliefs regarding teaching and learning. As stated earlier, student teachers' learning also depends on the opportunities afforded during their teacher education and their practical experiences during the preparation period. It is well known that not all student teachers have the same teaching experiences; some are better in some areas than others for various reasons.

Teachers must learn to grow and abandon some of their pre-conceptions; learn to focus on the learning process for their students in the classroom; transmit content knowledge, and learn to accept the leadership role especially in the classroom. They must be able to manage a positive classroom environment and be able to reflect on their own teaching and be responsible for seeking professional development (Day, Fernandez, Hague and Moller, 2005). Calderhead & Shorrocks (1997) record their views that learning to teach is a complex task and believe that learning to facilitate this learning is more important than coming up with a list of competencies.

Stronge (2002) refers to studies that found fully prepared teachers with background knowledge can more easily recognise the individual needs of children and are able to adapt their teaching to provide diverse opportunities for all children to achieve. He advocates that a direct link should be made between content knowledge and pedagogy (Stronge, 2002). In the opinion of Stronge (2002) teachers have attained their expertise through real life classroom experiences and time. He further claims that the process should be that of becoming an effective teacher rather than learning to teach and that this process takes from five to eight years.

Teacher education programmes should reflect best practice in schools, and the practicum should be an opportunity for student teachers to develop creative and thoughtful approaches with the support and guidance of a mentor teacher

(Haigh & Ward, 2004). They also reject the view that teaching experience is an opportunity for student teachers to apply the theories they have been taught in colleges of education. Haigh & Ward (2004) claim that each teaching experience should be an opportunity for student teachers to take a critical and reflective look at their own developing philosophies and practice, rather than merely practising any of the many strategies of teaching. Watson (2005) suggested that individual students teaching experience was very much affected by the style of leadership adopted in schools, as well as the role played by the associate teacher.

How can the individual student teacher be assisted to become "reflective professionals and learn how to connect theory and practice"? What should the best teacher education programme look like? How do Colleges of Education Graduate Diploma of Teaching (Secondary) programmes appear to be meeting the needs of its current student teachers?

It is the intention of this research to explore the perceptions of the students in the one year Graduate Diploma of Teaching (Secondary), and thus to gauge the extent to which the University teacher education programme equips student teachers to become effective teachers.

3.0 RESEARCH DESIGN AND METHODOLOGY

3.1 Brief outline of the study

This research study addresses the interface between theory and practice and explores how students of the Graduate Diploma Teaching (Secondary), hereafter called the GradDipTchg(Sec) at a New Zealand College of Education, perceive the effectiveness of the programme, and how well it actually prepared them to teach in today's and tomorrow's classrooms.

This research study is a combination of qualitative and quantitative methodology, and thus adopts a 'bi-focal' approach to data collection implemented through interviews and questionnaires. The triangulation is achieved through the inclusion of a thorough literature review.

According to Bell (1996) triangulation is a process that allows data to be gathered from more than two sources so that data may be analysed in order to compare and balance the findings to ensure as much integrity and fairness as possible. Triangulation is also used to establish the existence of certain themes which may run through all three means of gathering data in the case of this research.

Grounded theory was considered to be the most appropriate method for the interviews, and the interviewer was well aware of the importance of having no preconceived ideas about the sort of data that would be provided by the interviewees (Glaser & Strauss 1967, Strauss & Corbin 1990). It was important to code the answers to the questions after each of the three interviews in order to adjust the questions for the next set of interviews. It is likely that this will result in other themes emerging during the interviews.

Another good reason to use grounded research as one of the first methods of data collection was to "begin with the data and use them to develop a theory" (Leedy & Ormrod, 1974, p. 154). This was particularly important since the researcher had been lecturing for many years in this field, and had felt it necessary to enter the research study with 'new eyes' and not attempt to pre-empt the themes.

Mills, (2000) also recommend Grounded Theory as the research method for analyzing these case studies at this stage of the study, and indicates that this method of research begins with the research situation. The task of the researcher is to understand what is happening and explore how the players manage their roles. The process was to include observation of body language, warm up type of conversation and semi structured question interview. Key ideas would be collected (note taking) and subsequently comparison and contrast would be made between the interviews. The results of these comparisons would be recorded and categories identified using what Lofland (1996), as cited in Berg (2001 p. 133) calls 'Ethnographic content analysis,' by coding the properties of the emerging themes and sub-themes.

According to Altrichter & Posch (1989, p. 8) it is recommend that when using grounded theory methodology the researcher should assume that "the theory is concealed in the data" to be discovered. Unlike most qualitative research, grounded theory, is not hypothesis-testing type of research. This methodology was also considered to be appropriate for the situation, since it would allow the interviewer to prompt, clarify and probe the answers of the student teachers (Grudnoff & Tuck, 2001).

Bouma (1984, p.64) expresses in strong terms that "interview schedules and questionnaires are devices for measuring variables", and related to one of the variable being studied. Recording the coding also allows the researcher to go back over the material several times. It became apparent that different themes

emerged after two of the three interviews in all three cases. However, although the third uncovered some new data it was not possible to organise any other interviews to pursue these further with these three volunteers.

This overall data collection was conducted in two stages. The first stage was to follow the journeys of three graduate students who were part of the GradDipTch(Sec) programme in 2004 by interviewing each of them when they returned to College after their teaching experiences. These student teachers were also asked to keep a diary which would not be viewed by the researcher but was designed to assist the participants to collate their perceptions as they occurred and to recall their thoughts at the time. The second stage was to send out questionnaires in the middle of September 2005, to all the internal year group students from this same 2004 cohort.

The research design facilitates the exploration of the connection of theory and practice as perceived by students of the one year programme of the GradDipTchg(Sec) both during and after the year of study 2004. This delayed longitudinal study would allow the participants of the 2004 year group to reflect on the questions about the effectiveness of the programme, as perceived by them, having taught in their own classrooms for almost one year during 2005.

The interviews would track the ongoing perceptions and responses of the three student teachers during the year of study, and the questionnaires would provide a reflective response after almost a year of teaching. Consequently a form of longitudinal study would be achieved.

The first questions were prepared for the first interviews and all three student teachers were asked mostly the same questions. The transcripts were coded into themes, and the themes that emerged were as follows:

* How adamant all three were about the kind of teacher they wanted to be.

* All had been influenced by the qualities of a previous teacher.
* They held very different views on what makes an effective teacher.
* The importance of good relationships with staff and students.
* Concern about what they wanted more of was class management strategies.

The second interviews required the student teachers to consider their own teacher effectiveness and revealed that:

* The student teachers were aware of the range of associate teachers and school discipline systems.
* How some associate teachers were too busy to be able to be very helpful mentors.
* How it was always necessary to continue to keep the classroom environment as it was created by the associate teacher and allowed little opportunity to be creative.
* What little relevance they felt the work in the College of Education had to the real classroom.

The third interviews were predominantly dedicated to the student teachers using Critical reflection as described by Korthagen, (2000) to assess their competency and their own ability to teach in an effective way.

3.2 Ethical Issues

The ethical issues for this study included the need for anonymity of the participants particularly during the interview phase when the three student teachers were still in the programme. This is important because, confidentiality

was a consideration for both groups of student teachers; the interviewees and those who returned the questionnaire, the teacher educators and associate teachers and the institution which gave permission for this study to be conducted. It was vital that the ethical commitment to confidentiality complied with the "ethical stance for educational institutions involving Human Participants" (DuBois, 2002, p. 2). To avoid conflict of interest the researcher was not required to teach any of the pre-service teachers and would ensure that people's identity was protected. Since participants to the research would be asked to comment on various aspects of the programme and institution, it is possible that this may make them hold back on their comments or on the other hand make highly positives comments to avoid any repercussions and consequences. In the interests of affording anonymity and mitigation against this, the ethical practice of the researcher was critical in ensuring that risk to the wellbeing of the participants be minimised and a strategy set up in the event of there being a problem. It was imperative that advice be sought from within the College of Education in the event of there being any cultural implications.

An application for ethical approval was prepared and presented to the Ethics Committee of the University. Permission was granted for the study to be implemented, and the Director of the one year programme agreed for the Graduate class of 2004 to be addressed in the hope of motivating three students to participate in the study. Written information was left with those who expressed an interest in being involved and subsequently three student teachers volunteered to support the study. Guidelines for the study were explained, including the student teachers' rights. Contracts stating the conditions of participating in the study were duly signed by the three volunteers. These student teachers were also asked to keep a diary of concerns, successes and any other relevant information. This diary was to be a tool for the student teacher, and as already stated, not to be viewed by the researcher.

Three participants were regarded as a safe number since it was considered feasible for the study to continue with two participants, but a third would ensure that it was possible for the study to continue should one leave the programme part way through the year. Interviews were used because it "represents a direct attempt by the researcher to obtain reliable and valid measures in the form of verbal responses" (Kahn & Cannell, 1957, pp. 526-595) from more than one student teacher.

Other advantages include the interview situation allows the interviewer to be flexible and allows for observation of body language, and respond accordingly. It is also possible to clarify an answer, reframe a question or to ask for further information. Added to which it is useful to collect personal information about attitudes, perceptions and beliefs and inconsistencies can be checked (Kahn & Cannell, 1957).

3.3 The interviews: Process and rationale

Data in the form of transcribed semi-structured interviews was gathered during 2004 from the three volunteer student teachers who were currently studying for this Diploma. Furthermore, data was gathered, as soon as possible after students returned to the College following Teaching Experience on each of the three occasions. The three teaching experiences were organized for early in the year, around the middle of the year and towards the end of the year. A semi-structured interview process was used and each interview lasted approximately one hour. Notes were made during the interviews including any significant body language. All other interviews were carried out in a seldom used, two-roomed building on the campus at the University where there would be no interruptions. Interviewees agreed to the interview conditions and were assured of confidentiality and informed that they could switch the tape recorder off at any

time, and have anything deleted from the transcripts. Transcripts were typed up and shared with the participants to ensure that the transcript was a true and correct record of their feelings and comments, and that any and all identifying information would be deleted.

According to Drever (1995) this semi-structured format is effective in that, when properly conducted, it encourages and allows the interviewee to talk, yet allows the interviewer to move the student teacher on and keep them on the subject. Maintaining eye contact, timing and tone of voice were important, and the manner should be friendly and business like. The interviewer is encouraged not to dominate or lead the student teacher. It is recommended by Drever (1995) that the interviewer keeps the major research question in mind and prepares several appropriate questions. {See appendix (i)}

This semi structured type of interview outline allows for prompting and clarification when the interviewee seems to want to go on, or to check if they have finished answering that particular question, and give some general direction to the interview. Probing is a very useful way of inviting different answers to the question.

Typical phrases are "Go on, tell me more about ..." to something they have already said when the interviewer is unsure about the answer or comment, in addition to checking information.

Drever (1995) claims that the environment for interviews should be relaxed and the interviews should be conducted in a neutral friendly place, away from disturbances. The first question should allow the interviewee to be comfortable and talk at length. Leading questions should be avoided and not limit the choice of the interviewee by statements like "Do you prefer this or that?"

Drever (1995) warns that the interviewee should be asked if they know the subject in question before they are asked what they think about it. Questions on

the schedule should be derived from the research but not the exact question and should be kept simple. The researcher seeks to obtain sound information and understanding of this local context.

These are procedures to help provide some standardization and rigor to this process. These procedures were designed not to be followed dogmatically, but rather to be used creatively and flexibly as the researcher deemed appropriate.

The recorded interviews were transcribed and the transcripts were duly coded using the themes that emerged. {See appendix (iii)}

When devising the questions for the interviews, it was considered important by the researcher, as a result of the literature reviewed, to ascertain the student teachers' beliefs about teaching and learning, upon entering the College, and their perception of what an effective teacher should be able to do and know. This would provide a base line to establish what potential teachers bring with them as prior knowledge, beliefs and attitudes. It was also important to establish whether they could identify the links between theory and practice and whether or not they felt the programme prepared them to teach in 'real' classrooms. The research would be enhanced if it could be established how the three student teachers perceived an effective teacher, and what qualities they valued in teachers from their own school days. Questions were designed to ascertain what the student teachers find helpful in preparation for teaching in the 'real' classroom situation. {See appendix (i)}

The literature review had given the researcher some insight into the opinions expressed by a number of other researchers and their publications. As a consequence, critical reflection, pedagogy and the balance of time spent in University and classrooms were debated, and subsequently included in the questions.

The researcher also sought to explore the concerns of these three student teachers, which in turn would contribute to devising the content of the questionnaire to inform stage two of the study. The interviews were transcribed and the researcher coded and collated interview coding units from the transcripts (Berg, 2001). The researcher coded themes and sub-themes that emerged from the transcripts and those will be identified in the results section of this research.

3.4 The reflective diary

The interviewees' reflective diary was intended at the beginning of the study to be multi-faceted and encourage the student teachers to develop reflection-in-action strategies concerning the nature of theory relevant to teachers' behaviour (Korthagen 2000). It was also desirable for the student teacher to be aware of the associate teacher's behaviour and the relationship between the teacher's thought processes and actual behaviour, and to record teachers' thinking and decision making in regard to planning and teaching (Bolin, 1989, Clark & Peterson, 1986, Zeichner & Liston, 1987.)

Another purpose was to establish the student teachers' perceptions, the responses to their thinking and feeling about actual teaching incidents that had happened to them, and where they had concerns or difficulties, and successes.

Student teachers cannot be prepared for every type of situation they will encounter, so it is important to help them develop the skills and open-ness to play an active role in reflecting and learning from their own experiences. This takes practice and experience (Korthagen, 2002).

Smyth (1991) believes that teachers need to be able to critically reflect, and agrees with Korthagen (2000) that it is more than simply looking back but rather a collaborative approach to working in schools, by teachers committed to improving their teaching for the benefit of all students.

These diaries, it is anticipated, may add another dimension to student teachers' learning experiences, and although these diaries will not be seen by the researcher, will provide the study with some valuable insights into the student teacher's perception of the links between theory and practice. The diaries would also assist the three participants to remember incidents especially if they were involved in them.

3.5 Some background about the student teachers who were interviewed

Three men volunteered and agreed to participate in the research project. Person One, Dan (not his real name) had been trained in the army as a Physical Training Instructor, and had risen to officer status. Dan felt confident in his knowledge of anatomy and physiology and had strong feelings about the role of the teacher and frequently mentioned discipline during his interviews. He expressed a belief in his ability to teach high school students and demonstrated strong self confidence.

The second, Neil (not his real name) had two PhD qualifications in chemistry from Asia and had lectured in an Asian University. Neil had decided that he wanted to teach in a secondary school in Aotearoa, New Zealand and felt very experienced and capable of teaching. He was concerned to develop a productive and positive learning environment and establish a good working relationship with the students. Neil had been strongly influenced by a chemistry teacher who had captured his interest with her passion for chemistry. He was dramatically affected by a female chemistry high school teacher because she was very knowledgeable and made learning fun. Neil placed a high value on learning, and was troubled by the high school students' apparent lack of willingness to listen and take advantage of his knowledge and teaching.

The third volunteer, Alan (not his real name) was a younger man who had left school, achieved a UCOL degree and immediately enrolled in the Diploma programme. He too was qualified in the area of physical education. Alan was eager to witness his Christianity and spoke at length about his own experiences at high school. He explained that he had not been very successful earlier on in school, but through perseverance had studied and qualified to be eligible to enrol in the GradDipTchg(Sec) course. He described being very affected by a particular teacher who had cared about her students and encouraged him at a crucial time in his life.

All three men were there primarily to obtain a qualification to legitimize their teaching in a New Zealand school. Alan was motivated to prove to himself and to significant others that he would be successful in achieving this qualification.

3.6 Limitations of the interview process

It is believed that the interviews might have yielded more useful data if the coding criteria used in the questionnaires, had been considered before the interviews were conducted. The interview questions did not cover some of the Learning Outcomes of the topics, in particular the "educational technology, current educational issues, gifted and talented and diversity" (A University College of Education 249.151, p. 3). The three interviewees did not raise these particular issues in any of their responses. However, at that stage in the study, case studies were being compiled and grounded theory methodology was being followed.

The research questions would obviously have had an effect on this outcome, but student teachers were asked open-ended questions in the interviews regarding

their observation and concerns. Grounded theory would have involved going back to the three interviewees but none were available.

3.7 Coding process of the interviews and rationale

In order to heighten the correlation between interviews and responses, the transcripts were coded using the numbered topics identified in the questionnaire, and the total number of code units recorded for each interviewee. The total coded units for each interviewee were then summated and grouped under each of the 'Learning Outcomes' criteria. All the coding units from the transcripts were then added together giving the total number of coding units across every interview transcript and for each question. It was then possible to identify the way each person rated each Learning Outcome as it was recorded. Each of the final totals was allocated a percentage of the total coding unit. {See appendix (ii)}

According to Minichella, Aroni, Timewell & Alexander (1995) coding builds rather than tests theory and provides researchers with analytical tools for handling masses of raw data. The coding also helps to maintain integrity and consistency when comparing one set of data with another. The process also assists analysts to consider alternative meaning of phenomena and allows systematical and creative systems to develop simultaneously. Coding is helpful in identifying and relating concepts that are the building blocks of theory and enables students to understand the purpose of procedures rather than memorize techniques for themselves (Minichella, Aroni, Timewell, Alexander, 1995).

3.8 Questionnaires: process and rationale

Towards the end of 2005, questionnaires were sent to all fifty internal students from the 2004 year group, the same year group as the interviewees. The questionnaire questions were derived from the Goals and Learning Outcomes from the two Integrated Teaching Studies course outlines 136.431 and 136.432. The questions chosen for the questionnaire aimed to establish to what degree the student teachers perceived that the programme had provided opportunities to meet the Learning Outcomes and subsequently how well prepared these students teachers felt to teach in the classroom.

This meant that these newly qualified teachers had been teaching for almost a year and would have had the time to reflect on their year at this College of Education and the relevance and the effectiveness of their teacher education programme.

The questionnaires were posted with stamped addressed envelopes for return and since they were anonymous it was not obvious who had returned the completed questionnaires and who had not. Consequently, the researcher could not tell whether or not the three interviewees had participated.

It was felt by the researcher that these questionnaires would yield a good balance of data by way of a comparison between the perceptions and opinions of the three interviewees as current students, and the student teachers from the same cohort, who had been teaching in schools for slightly less than one year. Data was collected from the 14 returned questionnaires. According to (Porter, 2004 p. 5) surveys are "one of the most important tools in the institutional toolbox".

According to Dey (1997) this 28% return response, though small, constitutes an acceptable response number when compared to the National Rates

of National ACE/CIRP student survey table as it is represented in Dey's (1997) article.

As previously indicated the list of questions for the questionnaire as they appear in the outline for the GradDipTchg(Sec) programme outlines 136.431 and 136.432 Integrated Studies were numbered and this became the basis of the coding scale. The course outlines were studied and notes were made of the course content in papers 136.431 and 136.432 including the theorists which were defined, and how the modules were described. The learning outcomes were taken from these documents and were the basis of the questions included in the questionnaire. It was anticipated that this would minimize the risk of being influenced by the findings from the interview transcripts.

A coding tool was developed using these numbered topics as the coding strategy to analyze both the questionnaire and subsequently was also applied to the interview data. It became apparent that this tool could be used to create a similar analysis of the data and later possibly used as a comparison. {See appendix (iii)}

The use of interviews and questionnaires allows the true meaning of what it is to be an effective teacher (Stronge, 2002) and, whether or not the student teachers' beliefs and perceptions of teaching changed during the course of a year in the College of Education. Their responses from the questionnaire should indicate what opportunities these student teachers perceive they were given to learn the knowledge and skills for managing and teaching and how well the integration of theory and practice was modelled in the year of the programme by lecturing staff at the College of Education. Both of these methods will provide data to contribute to the awareness of the importance of what Korthagen (2001) describes as the necessity of integrating theory and practice during pre-service education. It will also give those who teach in the GradDipTchg(Sec) the

opportunity to receive feedback on various aspects of the programme and the way it is taught.

It was considered that the interviews and questionnaires would provide different kinds of data, but data that would work well together and in fact compliment each other. It was believed that the interviews would provide greater depth and narrower information and the questionnaire would provide wider yet shallower information. The two together would give a more complete picture. The questionnaire also served to fill in some of the gaps in the data that emerged at the end of the 2004 year interview transcripts.

The questionnaire was an economical way of acquiring more data from the same cohort of student teachers who had classroom practice for almost a year and had some time to reflect on the content of the GradDipTchg(Sec). It was also a consideration that there would be some standardisation by using a common set of questions which would contribute to the research (Bressler & Kephart, 1956).

3.9 Limitations of the questionnaire

The questionnaire was sent to all fifty of the 2004 cohort of internal student teachers. It was sent to the schools where they were believed to be teaching but it is not possible to tell how many of the envelopes reached the right person. The end of term when the teachers were very busy and tired is not the best time to receive a questionnaire. Porter (2004) claims that it has become increasingly difficult to make contact with potential participants, and that since the 1960's the trend has been for the rate of responses to lessen. The response rate dropped from 60% and to 21% in the late 1980's. Another limitation (Groves 1989) as cited in Porter (2004) is the fact that the non-response is usually not random and in turn may bias the survey results. Any conclusions drawn from the

data may therefore be a little unreliable. It is also anticipated that it may be that those with strong feelings would respond and therefore the responses might not be truly representative of the feelings of the whole cohort.

Some of the letters were returned, "no longer at this address." Those envelopes that were returned unopened were re-posted to the home address on the College record, in the hope that the response level could be raised. Two recipients of the re-posted questionnaire rang the researcher and both expressed an opinion on the programme and their first teaching year. Only one of these teachers subsequently forwarded their completed questionnaire later, and requested that the comments be considered though they could not be included in the statistics, because of time factors.

It was noted during the coding process of the questionnaires that the number four at the top of the Likert scale had a negative implication rather than a positive. This scale did not apply to all questions, and few beginning teachers actually selected this number when it was an option. It is also acknowledged that this is a small sample number to make any radical claims.

3.10 Coding the questionnaires

The responses from the questionnaires were coded using the Goals and Learning Outcomes from the outlines of the Two Integrated teaching studies papers.

The research was based on how the student teachers perceived the theory that was taught in Colleges of Education and its relevancy to the reality of classroom practice. It was also a measure of how well the student teachers perceived that the Learning Outcomes stated in the course outlines had been met.

For the questionnaire, each of the Goals and Learning Outcomes were allocated a code number and using a rating of zero to four and comments were invited and also allocated a code which was subsequently applied to the transcripts, as were the frequency of similar comments where appropriate. The majority of the coded questions were asked in terms of what opportunities were experienced in the intended learning outcomes. Zero represented 'no opportunities', one represented 'insufficient opportunities' two represented adequate opportunities, three represented 'ample opportunities' and four 'too much opportunity'.

Several additional questions were included in the questionnaire regarding type of school and the decile rating, teaching subjects and teaching position, part time, full time etc. Participants were also asked to indicate when they left High School. This additional data was collected to pursue the possibility of making other observations about patterns in the coding and so the research had the potential to develop into a longitudinal study following the careers of Dan, Neil and Alan. It may also be that the age of the participants influenced some of the responses, or that the lower or higher decile schools played a significant part in the experiences of the beginning teachers.

4.0 RESULTS AND ANALYSIS

4.1 Interview results and analysis

The themes and sub-themes that emerged from the grounded research analysis were concerns relating to classroom management and behavioural management of adolescents and the feeling that this topic would have been better taken earlier on in the programme. (appendix ii) The classroom was identified as the best learning environment, and the students thought lecturers often taught theory with little practical linking. Student teachers reported that they found lecturers did not appear to have time for discussion during lectures, and they would have appreciated the opportunity to engage in this, particularly immediately after spending time in the classroom. They described what they perceived as an apparent lack of interaction between the University and schools. They referred to associate teachers as being very busy; often too busy to be able to act as mentors. All three felt not enough attention or time was given to NCEA.

Mention should be made of the fact that, when the questionnaire coding pattern was applied to the interview transcripts, eight of the thirty two topics made up almost 50% of the total number of topics in all the interview transcripts. They were in order of highest to lowest percentage order of the fifty percent;

C.10. Classroom Management; B.2. Adolescence; C.9. Teaching strategies; A.1. Theory; D.3.Teacher Preparation; C.14. NCEA; C.15. Equity; and D.5. Relationships with the students they teach.

The interviewer identifies that these topics, when taken in context from the transcripts, were of the most concern to the student teachers. When discussing the opportunities for learning about adolescents during their course of study, most of the concerns under this topic were regarding the management of this age level in the classroom and what types of punishment/discipline was

appropriate and acceptable to issue and implement. It was clear from the comments of all three interviewees that though the outcome was about adolescents and their issues, and their development, most of the comments were about how to motivate them, keep them on task and under control.

The question regarding classroom management (C.10: What opportunities did you have to learn about classroom management?) attracted forty responses and made up 6.47% of the total number of coding units overall in the interviews. It would appear from responses that preparation to be a beginning teacher and the question relating to the theoretical base were closely linked. For instance interviewees stated...

> *"When you begin teaching full time, you realize how a 12 month course could never fully prepare you for the realities of teaching".*

> *"The most valuable lessons learnt during my training were in practical teaching experience sections. The time constraints of the course mean that teaching theory is briefly touched upon, but valuable lessons are learnt by actually being exposed to a myriad of adolescent attitudes".*

> *"Classroom management should be vamped up. It should be the first book in the bible. I think it should maybe something that future students could make sure it keeps being poured into their heads".*

The question regarding skill acquisition coded (C.8: What opportunities did you have to learn sufficient knowledge, skills, processes and teaching strategies to develop a sustainable and positive learning environment?) accounted for 6.37% of the total and a selection of the comments follow:

> *"...but they don't actually teach that at College".*

> *"I have developed my own strategies, my own skills. I consult my teachers here so in many ways, I know them".*

The next question explored students' perceptions of the efficacy of the theory delivery they received (A.1: Did the GradDipTchg(Sec) programme provide an adequate theoretical base for the realities of teaching?) was the next ranked contribution. Frequently, respondents made comments about theory being projected as a separate entity from practice, and this is summed up in these comments ...

"unless you do it practically you don't see it being applied"

"Actually I don't feel that I learnt that much... they seem to cram it in."

"I still didn't have a thorough understanding of what to teach each day..."

"Theory is only theory until you put it into practice".

"without any experience you cannot teach theory".

"We should be practical but the theory goes out the doorway as soon as you get into a school because you have to adapt to the situation".

The next theme explored teacher preparation (D.3: How prepared did you feel to be a beginning teacher?) and drew 6.02% of the total and the following selected and representative comments ...

"Really, I think the stuff they're teaching us now, we won't really get to grips with until a couple of years teaching, by then you can look back and start to do the reflection and try this method and that method, but when you're a new teacher there's only one method and that's called survival".

"when we got back to University, we had heaps of questions, but we weren't allowed to ask".

"Some of the assignments were more useful than others, some just grab my heart and there's more passion .....we talked about it and I really learnt a lot".

"The way lecturers teach is how they want us to teach".....They are breeding us to be just like them".

Concerning readiness for NCEA applications (C.14. What opportunities did you have to become familiar with NCEA?) 5.68% of the responses were attributed to this topic. Typical comments were...

"We talked about NCEA. It was all assessment week. How to assess the NCEA lecture? We weren't allowed to ask questions or debate in class".

"Yes I got resources from the teacher, but I don't really get resources with an outline of the year or anything (for NCEA) like that."

"I know it (New Zealand Framework) is important but wish I had had more practice (in NCEA marking, feedback) in a supportive environment. Now I feel over my head and unable to effectively mark".

Concerning equity issues (C.15. Did the course offer opportunities to learn about equity issues?) this made up 5.68% of the total number. Comments were...

"Oh yes. If you felt friction from your peers, if you feel racial discrimination from your teachers, you wouldn't like it."

"I really learnt a lot about the Olympics and racism issues".

"But all teachers can do is to try their best to respect the student and treat them fair."

The last category D.5. was asking the participants to what degree they felt they had to develop relationships in schools with the students? And this scored 5.15 %. Some comments were...

"You know you're on there for three weeks. You only just built up a rapport by the time you have to leave."

"You've got to earn respect. You can demand loyalty, but you can't demand respect."

"Very close to the students (the teacher). Very friendly atmosphere in the classroom."

"But after a few weeks I built up a rapport with a few of them".

"I've learnt how close to get to students."

The results of these interviews would appear to indicate that these student teachers generally were prepared to discuss and reflect upon the classroom and student management, but only to a lesser extent comment on teaching strategies, theory, teacher preparation, NCEA, equity and the student teacher's relationship with the students taught. (These made up just under half of the coded themes and sub-themes, which had been identified in the original grounded theory analysis).

The overriding impression from the interviewees was that not only was theory separated from the practical but this disconnection did not adequately prepare the students to effectively manage a classroom of children, or teach.

4.2 Questionnaire results and analysis

The information directly from the questionnaire was analysed, formatted and several types of information displayed as bar graphs. (See figures 1 - 13) Appendix (iv) The median and mode, frequency of 'no reply', and individual ratings per question were shown along with the percentage of responses. The majority of topics were fairly evenly distributed as percentages greater and lesser than the neutral mark. There appeared to be no extreme responses. However, a number of the responses appeared to be skewed, and those with an uneven bias towards the positive or negative were noted and highlighted.

The number of respondents who judged that they had experienced less than adequate opportunity to feel competent when teaching, included strategies for their first teaching subject and the way the course was aimed at teaching for future classrooms.

Those with a higher than neutral score were the development of adolescents; the first teaching subject; an adequate theoretical base; how prepared they felt as beginning teachers; the feedback received from their associate teachers; and time spent in classrooms. Their comments from the participants of the questionnaires were abbreviated and paraphrased and are recorded in the grid Q.2 in the supplementary materials.

The following categories in the questionnaire produced negatively skewed outcomes, and can be viewed in the named figure; B.1. Figure 1: educational technology; C.2 Figure 2: strategies for teaching practical skills; C.5. Figure 3: critiquing curriculum documents; C.7. Figure 4: planning to meet the needs of individual students; C.12. Figure 5 learning about special needs; and C.13. Figure 6 teaching the gifted and talented.

Those questions to which the respondents commented that they were provided with adequate or positively skewed opportunities were in the following categories...

A.1.1 Theological base (Figure 7);

A.2.1 Practical base (Figure 8);

A.3.1 confident within the New Zealand curriculum (Figure 9);

B.3 Adolescence development (Figure 10);

B.4 reflection on professional responsibilities for student guidance and support systems (Figure 11);

C.6 reflecting on current educational issues (Figure 12);

D.1 teaching in an actual classroom (Figure 13);

D.2 receive feedback from associate teacher;

E.2 Questioned the beginning teachers' familiarity with the way the high school's department functions and question;

E.5 requested the participants to evaluate how they measured themselves as beginning teachers.

In addition to selecting a number on the Likert scale, the participants were invited to make written comments about any of the subjects in each section of the questionnaire. All the questions in Sections A, B and C were questions regarding the Goals and Learning Outcomes from the programme Study Guides. The questions in Section A addressed the theoretical base; the provision of adequate practical knowledge of the New Zealand Curriculum Framework, to what extent the GradDipTchg(Sec) Programme had helped them to be effective as a beginning teacher; and how they perceived they had been given opportunities to acquire a wide knowledge of student diversity. Most of the students wrote some comment in addition to indicating the figure on the Likert scale. The comments are categorised under each of the Sections in the questionnaire and in three divisions.

These divisions are identified as:

Category 1. Students were critical of the programme;

Category 2. Students were neither negative or positive of the programme and

Category 3. Students perceived value in the programme

Section A

Comments regarding the Theory component of the programme:

Category 1.

"It seemed to be too focussed on principles that we won't ever refer back to. No real relevance to actual classroom teaching".

"There was far too much theory and time spent covering content and situations we are unlikely to encounter...things that were interesting but of no practical impact. For instance, our unit on ICT spent ages covering background and theories of information technology, but no time at all demonstrating how to use a data projector".

Category 2.

"When you begin teaching full time, you realise how a 12 month course could not prepare you for the realities of teaching".

"It is useful to have an introduction to the various theories and try them on placement. You obviously grow familiar and comfortable with certain theories".

Category 3.

"The theory was taught in so many ways it was impossible not to learn".

"The reality which can not be trained for is nothing like classroom placements ever were. If assessed as excellent, reality in the classroom is adequate".

"I felt the theory of learning, cognition theory and teaching theory was well covered in the course. They made me aware of importance of presenting material to students in a variety of ways".

Comments regarding the practical component of the programme:

Category 1.

"The most valuable lessons learnt during my training were in practice teaching experience...valuable lessons are learnt by actually being exposed to a myriad of adolescent attitudes"

"Associate teachers varied in their willingness to share experiences, run teaching rosters. I had a minimum of 3 teachers at each school on TE. It was a juggling act to find time for useful conversation... My schools were all similar, high decile rating, co-ed. A 'culture shock' when I began teaching at a single sex, large roll school."

"It never becomes yours even for one lesson. Nowhere are you able to express this, so you sit, time passes and your placement ends".

"Three weeks teaching experience does allow you to experiment with strategies and develop your own skills however, the workload of lesson prep and assignments doesn't allow for us much application as would be desirable."

"The pressure of assignments during teaching experience means that lesson preparation and 'post mortem' analysis is not as thorough as you would like".

Category 2.

The course could not contain more practical due to its length. The practical was not adequate for teaching as it only gave a small insight into the responsibilities needed to be an effective teacher."

"Only on the job training is realistic, but five weeks practice would have been all I would have been happy with"

Category 3.

Three hour lectures, group work then assignments, all this to help you in the classroom"

"The course was balanced well, with enough theory and practical. However, nothing beats the real thing."

"Emphasis was placed on classroom management but I feel that this is the crucial part of teaching. No control, no teaching!

Section B.5

This section asked questions on educational technology; development and issues of adolescents; to be able to analyse a range of professional responsibilities for a school's guidance and support systems; and confidence in teaching in the New Zealand Curriculum Framework.

Category 1.

"I requested repeatedly for a placement at ....before the course began...to no avail. I feel this hindered my ability to experience 'a wide knowledge of student diversity...three placements were all similar sized, co-ed urban schools"

"Most of what we learned was interesting, but there was often little emphasis on applying it practically in situations. The most useless was the ICT unit, it was boring and irrelevant. Everything else at least was interesting."

Category 2.

"Pretty confident with my learning outcomes.

"Ability of teacher differs from school to school, different opportunities offered different results achieved."

"I feel the course can only offer a brief over-view of most areas as the course is required to cover so much material over a short period. This can be compensated by the life-skills (maturity) and exposure of the people doing the course."

Category 3. - There were no positive responses in this category which would indicate that the participants contributed no additional comments.

Section C

This section dealt with a number of issues and asked the participants to comment from their own experiences on the needs of diverse students, their ability to use a variety of strategies to teach practical skills; first and second teaching subjects; to critique curriculum documents; reflect on current educational issues; planning to meet the needs of individual students; sufficient knowledge and skills to teach, processes and strategies to maintain a sustainable and positive leaving environment; to learn about classroom and future classrooms and classroom management; to teach special needs and the gifted and talented; to be able to manage NCEA teaching; equity issues and socio-economic issues. Below is a selection of the comments:

Category 1.

"Lots of attention paid to diversity issues, etc for political correctness,

I suspect. Too little (time) spent on classroom management beginning teachers' number one issues."

"The worst lecture I was ever present at during tertiary studies or the grad course was NCEA assessment - a shambles of presentation.

An excellent lecture of gifted and talented, special needs, but reality a mile away from lecture."

Category 2.

"Although the course covered all areas listed above to an appropriate level, due to the length of the course these could not be covered in more depth. Again this could be compensated by using the students' life-skills and experiences.

The frequency of comments in each category were measured and it would seem that of the total forty two comments, eleven were classified as Category 1 and viewed by the beginning teachers as being a negative part of the programme.

Thirteen comments were perceived as Category 2 by the researcher to be neutral and eleven were seen as Category 3 and ranked as positive opinions.

4.3 Questionnaire analysis

It is important to consider that those beginning teachers who responded to the questionnaire probably had strong feelings about the course either positively or negatively, as can be evidenced by the written comments. A high number of written comments were somewhat negative, and did not always closely relate to the Likert scale number that was selected and indicated. However, students expressed some dissatisfaction with the timing and content in the area of classroom management and the fact that they found the theory disjointed and not closely linked to the practical. This would corroborate Korthagen (2002), who believes teacher education, should be aiming to model the integration of theory and practice, during the programme taught by teacher educators. The questionnaire responses indicated that the practical classroom learning was more highly rated than the lecture type presentation of theory and there was little

opportunity to engage in discussion. Time constraints appeared to mean lecturers more often that not communicated information by lecturing the whole group. This resulted in several comments about there being no actual relevance to the classroom. One student expressed some annoyance that the ICT module was delivered as a mixture of theories but no practical application for the classroom "How to use a data projector". Disappointment was also expressed at the lack of time to build up a productive relationship with the school students.

Strong comments were also made about the number of tasks, and assignments the student teachers had to work on during their teaching experience. It was generally felt that the programme was over-assessed.

The comments revealed some strong feelings about the wide variety of associate teachers with whom they were required to work. Further comment was also made about how little time these mentors had to answer questions and help the beginning teachers with planning to meet the needs of the children in their classes. NCEA was considered by most beginning teachers as being very inadequately covered and both group of students expressed a lack of competence and confidence in their ability to teach and assess the results.

5.0 DISCUSSION AND CONCLUSION

This study sought to explore the process of learning to teach as it is delivered in the one year Diploma of Teaching (Secondary) programme. Particular information was sought in the way the programme of theory and practice was integrated, and how the experience was perceived by student teachers of the 2004 year group, both during and after the programme was completed. In addition the research questioned how competent and effective these student teachers felt they were to teach in today's classrooms and to what extent their beliefs and values were affected by the programme.

The research findings throughout this study have revealed that although there were few very negative responses to the questions posed at the interviews or those included in the questionnaire, there was strong evidence of a perceived gap between theory and practice. The vast majority of Student teachers from both the interviews and questionnaire research placed greater value on the practical, and they also believed that their beliefs and values were not explored at the beginning of the programme or considered throughout the programme. Closely related to beliefs and values, the participants reported that not all their very different learning needs had been catered for. Some student teachers stated that their individual ability to develop the skills and knowledge to learn how to teach were not taken into consideration in the programme. In fact no prior learning appeared to have been taken into account.

Other issues of concern to the student teachers were occasionally very strongly reported. These were the lack of preparation for dealing with diversity among the students they were to teach. It was also apparent that there was a lack of support from some associate teachers and there were many comments about strong feelings of survival in the classroom for a number of reasons. The

researcher also noted that the participants' views of what makes a good and effective teacher influenced the kind of teacher these student teachers sought to emulate. There was disappointment at the standard of the information and delivery regarding NCEA. The research also revealed that the students felt stressed by the number of assignments they were given during teaching experience. During lectures at College there appeared to be little or no time to discuss any issues about teaching strategies they had tried, or critical incidents they had experienced during their practice time in schools. Some of the student teachers were also confused about how to critically reflect on their own practice. Recommendations from this research will need to be considered by teacher education providers if tomorrow's teachers are to meet the needs of today's and tomorrow's schools. When each of these concerns is identified in a cluster some alarm is sounded and they need to be addressed. Each of these critical comments will now be considered in turn in the following section of this study.

Responses to both the interview questions and the questionnaires generally indicated that the student teachers found it difficult to relate the theory they were offered as part of the teacher education programme, and that the theory taught had little relevance in the actual classroom. Many of the comments from beginning teachers indicated that the links between theory and practice in the programme were tenuous and that they had found the practical experience the most meaningful part of the programme. Their recommendations may well allow the student teachers' voices who took part in this research to change, to develop and improve both the content and delivery of teacher education programmes at Colleges of Education in the future.

The question remains an issue about how best to integrate, or at least relate theory and practice in different ways? The researcher believes more longitudinal research needs to be done to find the best way for individual student teachers to become effective teachers; teachers who can both care for and

educate their students and inspire a lifelong love of learning. Korthagen & Brouwer (2005, p. 159) promote the method of implementing a programme that develops interplay between theory and practice. They stress the need for "gradual increase in complexity" of student activities over the year of learning; the interaction and cooperation between the triad of the student teacher, the associate teachers and the university's visiting lecturer; and alternating the teaching experience episodes with the college based periods.

The aforementioned researchers, Brouwer & Korthagen (2005 p. 213) state that the "most prominent in the interplay' between theory and practice was "the gradual increase in complexity of student teachers activities, the cooperation among student triads, cooperating teachers and university supervisors, and the alternation of student teaching and college-based periods". It can be argued that Brouwer & Korthagen (2005) were advocating that student teachers be provided with scaffolding on which to build competency and confidence.

This study reveals a major concern that the transfer of knowledge in the form of theory taught by a process of transmission is not fully effective and is not necessarily linked to the actual happenings in the classroom. Whilst the research has discussed the technical skills and discrete knowledge required for effective teaching, Doyle (1990, p. 14) on the other hand, insists that the classroom processes are knowable and learnable and can also be "codified and systematised" for practical use. Doyle further claims that personal meanings and beliefs about teaching can be used to describe teaching as a combination of teaching practices, content knowledge, curriculum delivery and performance.

Many teacher education programmes are made up of a number of separate courses or papers where theory is presented to the student teachers with little or no connection to practice, and possibly no connection to other papers or modules (Tom, 1997). This appeared to be the impression of some of the student and beginning teachers in this research, and therefore worthy of consideration

and focus for teacher educators, and those in positions responsible for designing the one year teacher education programmes for graduates. It should also be noted that the responses may have been written by students still in the system, who considered themselves to be vulnerable. However, many of the results from Brouwer & Korthagen's (2005) research would seem to have revealed similar dissatisfaction.

To this end these researchers, Brouwer & Korthagen (2005, p. 162) believe that teachers should be able to go "beyond the transmitting of knowledge using a text book and should have a command of the knowledge structures that characterise the scientific disciplines that underpin their subject as well as the capacity to select, structure and present learning content in forms learnable by their specific groups of students." The student teachers in this study appeared to feel that the majority of the knowledge for most of the material, pedagogy and information, was imparted in lecture mode and used the transmission process. Integrating theory and practice would be more effective if university lecturers 'practiced what they teach'. It would be of great benefit to students if lecturers used different approaches to teaching, as they advocate in their lectures, and therefore meet the needs of the diverse learners amongst the student teachers.

It is indicated by this study that little attempt was made to establish a great deal about the beliefs, values and attitudes of student teachers. It would also appear that more attention could be paid to the prior learning level of knowledge and skills that student teachers in this programme already possessed on entry. This study confirmed that the values, beliefs and experiences of the incoming student teachers were well established and had great impact on the way they perceived the knowledge, skills, characteristics and behaviour of an effective teacher. In this research consideration was given to how the students' beliefs were affected by their individual educational experiences. Whilst it was not overtly questioned in the questionnaire it was indicated by one student teacher,

with a developmental psychology background, that the associate teacher's knowledge was "*old fashioned and outdated*".

It was obvious from the questionnaire and interviews that, giving incoming student teachers an opportunity to talk about and reflect on their own past experiences and beliefs may have given the teacher educators a good starting point in building a relationship and presented some indication of individual needs. To do so is to have the university teacher educators model the good teaching practice it expects its students to do in schools, particularly in terms of learner-centeredness.

The Oxford Internship model conducted in the United Kingdom, by McIntyre & Hagger (1992) provides an example of an interesting programme which begins by starting with, and building on, the student teachers' beliefs. It continues with a spiral of alternating University study with practical teaching in schools. The programme moves from introduction and observation in the school, teaching partial lessons, teaching whole lessons, and teaching a series of lessons. This allows the theory to be more closely linked with practice, and relevance to the individual student teacher, to cater for gradual and appropriate increases in complexity. Whereas, as previously stated, having had the practical experiences, student teachers benefit greatly from discussion of an incident or incidents and an opportunity to interpret these in relation to the theory studied in the course work.

Previous reference has been made in this research study of the attitudes and values that student teachers bring to the University. Brouwer & Korthagen (2005) make it quite clear that, having been allocated a group of students and having built a relationship with them, it was recommended that the student teachers be given an opportunity to make their needs explicit and to be able to discuss and negotiate their expectations of the institution with the teacher educators. Some of the student teachers reported that this did not happen.

Having had the practical experiences, student teachers benefit greatly upon their return to the University from discussion of the incident or incidents and interpreting these in relation to the theory involved in the course work. During this cyclic process, feedback would be given to the student teacher whom, it is believed, would encourage the development of integrating practical experience with theoretical understanding.

Very few questions were actually asked in this study about diversity. Those who did comment indicated that, although teacher educators recommended it, diversity was not modelled in class and that the minority groups were not questioned. Student teachers claimed that they had no knowledge of teaching Maori, Korean , Chinese or any other ethnic students and that the "course did not offer enough opportunity to gain wide knowledge through practical experience". The researcher understands the particular student teacher was referring to the lack of teaching experience in Kohanga Reo centres and schools. One wonders how competent and confident and well prepared student teachers feel to teach in a multi-cultural school, Kohanga Reo, or Kura Kapapa Maori schools and centres. It would seem that this would be a worthwhile topic for an additional research study.

This study revealed that some of the participants felt they had not experienced a very wide variety of schools, either in decile rating or diversity of culture. They subsequently believed that they had been given information about the "socio-cultural' aspect of teaching and learning but very little about authentic practice and understanding. One participant was disturbed at making several requests for experience in a variety of schools which were evidently not organised for them. Brouwer & Korthagen (2005 p. 154) affirm that in their opinion the philosophy that underpins teacher education should be "socio-culturally authentic learning experiences situated in diverse cultural and social contexts". These two researchers express a need to value a bicultural perspective which, in Aotearoa, New Zealand, validates both Maori and European knowledge and pedagogies, and

address the question about how the student or beginning teachers' competence to teach other cultures could best be developed over time.

This research demonstrates very clearly that those who responded to the questionnaire had felt abandoned by the University and expressed feelings of merely "surviving" in the first year. Both groups of participants described associate teachers as being very varied in their supervision. Many felt that associate teachers had been too busy to be of much help and did not offer adequate support both during teaching experience and in the first year of teaching. It is possible however, that those who had been placed with less than supportive associates were those who chose to respond to the questionnaire.

The relationship between the student teacher, associate teacher and the university visiting lecturer was an important reference point as to the outcomes of the teaching practical experience practice. The researcher wonders how many associate or mentor teachers are aware of this intervention and support structure. This question could also be asked of those involved in teacher education.

Although student teachers often expressed a great desire to have their own classes, they also made it clear that they quickly became isolated and socialized by the school culture. In other words they adopt the usual code of behaviour of that particular school culture in order to survive at least the first year. This is what has previously been described as "wash out" or "transition shock". It was evident that the beginning teachers who responded to the questionnaire experienced very real feelings of simply needing to "survive". The younger teacher is possibly more vulnerable and more susceptible to being influenced by the general environment than the more mature beginning teacher. Some beginning teachers reported a need for more input in the form of mentoring during both teaching experience and at least the first year of teaching.

The results from the research, more recently undertaken by Brouwer and Korthagen (2005, p. 155), seem to confirm the 'washed out' effect on beginning teachers and describe it as 'reality shock' or 'practice shock' and believe that this occurs when the struggle for control causes frustration. Beginning teachers describe experiencing a rift between idealistic notions that are nurtured during teacher education, and the pressure from schools to utilise traditional patterns of behaviour. It is also very difficult for one person to have very much influence in established practices in the classroom, especially beginning teachers. This period of adjustment suggests that a longitudinal study into the extent to which students' perceive, after another year of teaching, whether or not the programme adequately prepares teachers. It may be that when survival becomes less of an issue in their second year, beginning teachers may be able to identify the links between theory and practice. This would yield useful data for further longitudinal research.

A number of research findings have already been expressed in this study regarding the definition of an effective teacher and the transcripts revealed that the three student teachers who were interviewed, had a clear memory of a teacher who had had the most influence on them as school students, so were subsequently confident in articulating the qualities they valued in a teacher. For example *"She was just really cool and caring and from then on I decided I wanted to be a PE Teacher"*. They all had a clear idea of how an effective teacher looked, sounded and behaved.

Each of these student teachers responded differently to the material, ideas and concepts contained within the GradDipTchg(Sec) programme. Dan had firm beliefs about discipline and did not change his belief that students needed immediate discipline for misbehaviour and used physical activity as a means of punishment 'they understood.' Dannf's use of direct teaching strategies, his desire to control the students and his choice of press-ups and running as

immediate punishment options indicated this choice of teaching and management were still his preference. He reported during his last interview that his associate teacher informed him that *"I was still teaching them like soldiers"*, but that he still found his strategies to be successful.

Neil had expressed a very high value on learning during his first interview and although he became a little disillusioned, he stayed firm in his belief. The third participant, Alan who had ideas about changing the world acknowledged that he could not. He developed more confidence and became more open-minded. In view of his teaching experience Alan lost his desire to be a 'missionary' and commented that:

"I realized I could not be superman and save the world"

The three interviews also revealed that some student teachers felt the programme took little account of their own incoming beliefs, and the teacher education programme certainly did not start by establishing what these student teachers possessed in the way of knowledge and skills to determine what they needed to do to become effective as a teacher.

By recommending a cyclic programme of teaching practice and a college based preparation and reflection stage, Brouwer & Korthagen (2005) believe that teachers starting competence will be developed more effectively. They also describe in their study how students were posted in groups of four for support, individual learning processes and feedback, and that this proved to be very productive. They described a competent teacher as one who could stimulate pupils' activity during lessons, use problem solving strategies and achieve by authentic experiences and materials, to nurture co-operative learning. A number of the responses from this study stated that on many teaching experience blocks it was often a matter of keeping to the same pattern and established environment created by the associate teacher. It was obviously difficult for some associate teachers to release their classes to the student teacher and step back, and

because frequently these releases were for such a short time, this compromised the student teachers' ability to develop their personal growth or be very creative.

NCEA was a topic of concern to a few of the students. One student teacher thought that the NCEA assessment was "*the worst lecture I was ever present at...a shambles of presentation*". The responses to this particular question were evenly balanced by the beginning teachers, who perceived the NCEA coverage to be either 'inadequate' or 'adequate' with few 'ample opportunities' recorded. It was evident that those students who were interviewed felt insecure and in need of more support.

Many of the comments from the interview transcripts and the questionnaires expressed a desire for student teachers to be engaged in discussion upon their return to the University, and were disappointed to be faced with more lectures. This was particularly important to them when they returned from a block of teaching experience, and they felt the need to discuss real incidents that they had experienced and which were meaningful to them personally. This would confirm again that the student teachers were disappointed not to be able to discuss with their university lecturers matters of concern, or allowed to share and discuss other incidents experienced by their fellow student teachers at least during class time.

An unsolicited factor that emerged from the research was the fact that student teachers recalled that they felt the pressure of having to do assignments and tasks during teaching experience. Two respondents of the questionnaire commented that:

"15 weeks practical experience does allow you to experiment with strategies and develop your own skills, however the workload of lesson preparation and course assignments doesn't allow you as much application as would be desirable" and ...

"The pressure of assignments during teaching practice means that lesson preparation and 'post mortem' analysis is not as thorough as you would like. Experiences

that occur during teaching experience become benchmarks for experiences early in your career and are most valuable. Failures in TE (dealing with behaviour) are hard learned and help you focus on more effective strategies".

However, it is evident that these student teachers when under pressure adopted survival strategies and clearly identify the need for more and repeated authentic practice in real situations during the course of the one year programme. They would have appreciated more support in the form of modelling, coaching, scaffolding in the classroom and a gradual withdrawing of expert feedback to develop their own teaching strategies (Gore 2001). It would be important for associate teachers and teacher educators to provide expert feedback as soon as possible. If left entirely alone, as were some of the student teachers, they have only their own knowledge and skills to draw upon.

Comments were frequent from all participants about the need for knowledge and skills to be able to facilitate self reflection. Some student teachers also appeared not to understand for themselves, the reasons behind decisions and actions underpinning a number of teacher behaviours during teaching experience. These observations would suggest that the work of Korthagen (2002) be taken into consideration and that teacher education should be aiming to model the integration of theory and practice during the programme. It would be of great benefit for associate teachers and lecturers to voice some of their thought processes whilst making decisions 'on the run' during teaching. A number of respondents expressed that the associate teacher was often too busy to be of much help during teaching experience and in the first year of teaching.

The Education Review Office (2004) research into the 'Quality of Year 2 beginning teachers' investigated the extent to which the beginning teachers possessed knowledge and skills for effective teaching and for the quality of guidance and support they received from the schools. The research concluded that, whilst the majority of Year 2 beginning teachers demonstrated good

practice, there was cause for concern for the teaching of a significant minority, about the quality of their teaching, and about the school support they receive.

This claim that student teachers found the scaffolding very effective was born out in this study by the vast majority of the participants who identified the lack of conscious linking of university learning and theory material and the all too infrequent opportunities to discuss actual practical experience with the teacher educators. This lack of discussion is contrary to the supposed ideal teacher education processes as expressed by Brouwer & Korthagen (2005 p. 156) when he claims the evidence clearly shows that "integrative approaches in teacher education" strengthen the links between theory and practice and have a highly positive effect on "innovative teaching competence."

Brouwer & Korthagen (2005) addressed the extent to which teacher education has an influence over the outcome and profile of teachers, and discussed the characteristics of a programme that will develop competence in teachers. Their study made the following observations: that it was their belief that teacher educators may not display the best examples of teaching and learning and there was a lack of practical relevance or the transition to real life classrooms or early childhood centres.

Furthermore, teachers should have "a command of the knowledge structures characteristic of the scientific disciplines underlying their school subject as well as the capacity to select structure and present teaching content in forms learnable by the specific groups of the pupils they teach" (Shulman cited in Brouwer & Korthagen 2005 p. 163).

Although student teachers were encouraged to reflect on their teaching, management, and the students' learning, they reported that they were given no structure to implement this. This study would seem to indicate there are some lessons to learn from research of this nature.

6.0 RECOMMENDATIONS

The study revealed that some of the student and beginning teachers did perceive a gap between theory and practice and at this stage in their careers felt the most effective learning took place in the school classroom whilst on placement. However, it was very clear that they felt the benefit of good associate teachers, who provided sufficient feedback to allow them to grow. It would make sense to have teacher educators encouraged to integrate theory and practice in their teaching in universities, and to speak aloud some of their thought processes.

Korthagen (2002) describes his concerns about the knowledge transmission applied in education and confirms that something is wrong when our current programmes do not appear to provide good examples of effective teaching, or result in beginning teacher competence. He uses the analogy of a novice skipper on board a ship. The educators, with the experience of negotiating the waters give advice and a few broad tips, and then encourage the novice to take the boat out by themselves. The novice will probably have had the opportunity to first participate in some observation of the expert. This system is often described as being practice based, and probably creates the gap between theory and practice.

Korthagen (2002) goes on to describe a different approach. He suggests that the expert look for a small safer waterway with less traffic, but one that will, in the judgement of the expert, still challenge the novice. Guided by this expert, the novice tries to navigate and manage the ship with room to make small experiments. Now and then the expert comes on board to discuss the questions, problems and concerns that the novice has actually experienced. Hence, the novice reflects on their own experiences and under the guidance of the expert discovers and reinvents the best approaches to navigate the ship and take care of

all those on board. After weekly visits of discussion and support the novice will be able to manage to steer the ship safely on her or his own.

This metaphorical narrative is an excellent illustration of how Korthagen feels teacher education programmes should be developed in order to serve the student and beginning teacher well. According to Brouwer & Korthagen (2005 p.158) the aim of teacher education is to develop in beginning teachers a "starting competence"; teachers who can "stimulate pupil activity, problem-based learning and adapt to change".

With regard to the student teachers entry into the university, if we want our teachers to value diversity in their students then the university system needs to value diversity amongst the student teachers in the training process. Cultural, ethnicity, gender, personal experience, previous learning, learning preferences, beliefs, feelings, self concept are amongst the individual needs to be taken into account. This can be done by a project set on a topic of the student teacher's choice including some information about their values and beliefs. The recommendation the researcher would make would be a 'mandala' or a short autobiography. This would then also allow teacher educators to have some insight into, and take account of the prior learning of the incoming students. It would be good modelling. Teacher educators would then be valuing the process of learning with the content of learning. This would be the practical experience of theory and practice joined in Praxis.

The reality is that the demographics of the population of Aotearoa New Zealand is changing and there will be more people from different countries and cultures being educated in our education system. Inclusive education strongly advocates for all children, some of whom will have physical and/or mental difficulties being integrated in regular classrooms. It is therefore important that we give student teachers knowledge, skills and support to be, and feel competent and confident when teaching such a diversity of children.

It would be valuable for student teachers to be exposed to a number of teaching strategies and assessment criteria for the way the university checks for understanding, and that they have opportunities to discuss some of these with teacher educators and associate teachers. It is helpful to establish what kind of teacher is valued as an effective teacher and this could be done if the expectations were transparent and agreed upon between student teacher, associate teacher and college educator.

Almost all student teachers believed that class management has to be developed before any teaching can take place, and almost all participants in this research suggested that they found this to be pivotal to being a successful teacher. The management topic would be more appropriately placed before the school culture module of the paper outline, and at the beginning of the programme. More organised and specific lessons from an expert in NCEA would have been more satisfactory as would reducing the number of tasks imposed on teaching experience.

This research shared the belief that the school and tertiary partnerships should be closer, and other responses from the beginning teachers indicated that, when student teachers graduated with the Graduate Diploma and were employed as beginning teachers, they were left to 'get on with it'. There were several comments which seemed to surprise the student teachers that many experienced teachers who supervised these teaching experience episodes appeared not to prepare or use formal lesson plans. The study revealed that there was also a difference in the ability and willingness of associate teachers to mentor, support and give feedback to the student teacher placed in their classes.

This is in line with Korthagen (2004) who claims that mentor teachers would help student and beginning teachers if they created an environment that provides and implements what Korthagen defines as the six stages of intervention.

These are modelling; contingency management; giving feedback; instructing; questioning and cognitive constructing.

However, the concerning news is that Aotearoa New Zealand has one of the world's widest gaps between our highest and lowest achievers. Teachers need to be able to provide progressively challenging opportunities for students and an opportunity to become confident and successful learners (Fancy, MOE 2004).

Grudnoff & Tuck (2005 p. 13) maintain there are a number of factors that contribute to the demands of beginning teachers, many of them related to the culture of the school, and the inexperience of prioritising tasks. These researchers indicate that the first few weeks of teaching are critical and that a good relationship between the mentor teacher and the novice teacher is paramount in helping the novice who may otherwise suffer from stress which they name "practice shock" or "task overload".

Evans, Lomax & Morgan (2000) in keeping with Korthagen (2000) stress the benefits and value of a partnership involving all members of the triad; the beginning teacher, the associate teacher, and the teacher educator. These researchers like other researchers mentioned earlier, claim that a trust and openness needs to be the basis of any triad of this nature, and requires sustaining and nurturing. The research indicates that it is important for teacher educators, experienced teachers and schools to work together collegially to achieve the best outcome for all parties, but especially our student and beginning teachers. Teacher educators need to explore the idea of integration within teacher education programmes without compromising the content knowledge required to be an effective teacher.

In the light of this study, if the lines of communication between the student teacher, the associate teacher and the university lecturer were more open, a sense of trust and respect could be developed, and this would improve the opportunity for the student teacher to develop a more productive link between

theory and practice. The researcher informally spoke with a number of associate teachers during a recent teaching experience and these teachers generally expressed willingness, even enthusiasm for receiving some guidance from teacher educators, before, during and after teaching experience. It would seem desirable for there to be some other benefit to experienced teachers for being associate teachers or mentors, by being supported to continue their ongoing learning to advanced degrees or further education studies. It would also be beneficial for practicing teachers to spend time in Colleges of Education working with pre-service student teachers. Teacher educators may also be required to spend some time back in the classroom for short periods.

This study suggests that there is not an effective 'one size fits all' approach to teacher education and that provision has to be made to accommodate as many learning styles as one might provide for school students and that some work has to be done to improve inclusive education for all students in Aotearoa, New Zealand.

At this crossroads in time, teacher education is much in the public eye as a result of pressure coming from many quarters, including parents, Boards of Trustees, politicians, educational reformists and the media. The debate about the characteristics of effective teachers and teacher education, and teacher status add to the issue, and it would seem very important that empirical evidence drive the changes in the content and processes of teacher education.

The researcher would recommend that this Graduate Diploma of Teaching (Secondary) programme and delivery be reviewed in the way it is taught and structured and that teacher educators be encouraged to maintain good communication links with schools. One practical action may be to develop the partnership by involving the associate teachers more in the assessment of teaching experience for them to be acknowledged as equally valuable and respected members of the triad.

It may well be true that it is not possible to integrate theory and practice and cater for the individual student in a classroom. It may well be that school teachers are required to teach a whole class in a school and that in fact student teachers are actually being taught to teach in today's real classroom. If this is true then it would be unwise to stop asking the questions about integration of theory and practice and seek to understand how the discussion can be continued. As Korthagen (2005, p. 213) declares "Teacher education can make a difference in regard to the kind of teacher competence graduates develop."

The researcher would agree very strongly with Hamachek (1978) that when creating programmes for teacher education we must offer the best that we are able because

'Consciously we teach what we know, and

Unconsciously we teach who we are'.

7.0 REFERENCES

Alrichter, H., & Posch, P., (1989). Does the grounded theory approach offer a Guiding paradigm for teaching research? *Cambridge Journal of education* 19 (1) 21-31.

Anderson, S. R. (1982). Acquisition of cognitive skills. *Psychology review*, 89 (4), 369-406.

Bell, J. (1996). *Doing your research project: A guide for first-time researchers in Education and Social Science*: Buckingham: Open University Press.

Ben-Peretz, M., (1995). Curriculum of teacher education programmes. In L. W. Anderson (Ed.) *International encyclopaedia of teaching and teacher Education (pp. 543-547)*. Oxford/New York/Tokyo: Elsevier Science/Pergamon.

Biddulph, F., & Biddulph F., (1999). The legacy of schooling: Student teachers' mathematical feelings and competence. *Mathematics teacher education and development*, 1, 64-71.

Bolin, F. S. (1989). Helping student teachers think about teaching: Another look at Lou. *Journal of teacher education*. 41(1) 10-19.

Bouma, G.D., (1996). *The research process*: Australia: Oxford University Press.

Bressler, M. & Kephart, W., (1956). An experience with the use of the mail Questionnaire. *Nursing Research* 5 (1)35-39.

Brouwer, C. N., & Korthagen, F. A. J, (2005). Can teacher education make a difference: *American Education Research Journal*. 42(1) 153-224.

Brock, P. (1999). *Quality teaching and professional teaching standards - A New South Wales context* (Supplement to the NSW chapter newsletter) Sydney: Australian College of Education.

Calderhead, J. & Robson, M. (1991). Images of teaching: student teachers' early conceptions of classroom practice. *Teaching and Teacher Education,* 7(1), 1-8.

Calderhead, J., Shorrocks, S. B. (1997). *Understanding Teaching.* London: Future Press Cameron, M., & Baker, R. (2004) Research on initial teacher education in New Zealand 1993-2004*: Literature review and anecdotes bibliography* New Zealand Teachers' Council.

Cameron, M. & Baker, R., Ministry of Education New Zealand (2004) *Research on Initial Teacher Education in New Zealand.*

Carr, W. & Kemmis, S., (1986). *Becoming critical: Educational knowledge and action research.* Victoria, Australia: Deakin University.

Chen & Emmis (1996) Professional accountability and the education of teachers. *Delta* 50 (2), 149 162.

Clarke, C. M. & Lampert, M. (1986). The study of teacher thinking: Implications for teacher education. *Journal of teacher education,* 37(5) 27-31.

Clarke, A., & Jarvis-Selinger (2004). What the teaching perspectives of Co-operating teachers tell us about their advisory practices. *Teacher Education* (2005) (21)65-78.

Clark, C. M. & Peterson, P. L. (1986). Teachers' thought processes. In M. C. Whittrock (Ed) *Handbook of research on teaching* (3) 255-296. New York: Macmillan.

Clark, J., (1998). The Capable teacher: An inadequate model for teacher education *Delta* 50(2) 187-200.

Chi, M. T. H. & Glasser, R. (1985). Problem solving ability, in R. J. Stember (Ed) *Human abilities: An information processing approach*, 227-250, New York: Freeman & Co.

Codd, J. A. (1998). Professional accountability and the education of teachers. *Delta* 50(2), 149-162.

Codd, J. A. (2004). Teachers as managed professionals in the global education industry, in the New Zealand experience. *Education Review*, 52(2).

Cole, A. L. & Knowles, J. G. (1993). Shattered images: Underlying expectations and realities of field excellence. *Teacher & Teacher Educator* 9, 437-471.

Collins, C. (2004). Envisaging a new educational studies major; what are the core educational knowledges to be addressed in pre-service teacher education? *Asia Pacific Journal of Teacher Education.* 32, (3) Australia. Deacon University.

Coolahan, J. (2002). *Teacher Education and the teaching career in the era of Lifelong Learning*: OECD Education Working paper No.2, OECD Paris; 27.

Cowan, J. (1998). *Discovering an innovative university teacher.* Philadelphia: SHRE, Open University,

Curham, T. (1996). *'What happened to them?" A long term study of building career patterns of graduates from the secondary training course at Auckland College of Education.* Paper presented at the New Zealand Association for research in education conference Nelson, 5-8 December.

Daniels, H. (2001). *Vygotsky and pedagogy.* London New York: Routledge Falmer.

Danielson, C., (1996). *Enhancing professional practice: a Framework for teaching.* USA: ASCD Publications.

Dann, H. D., Muller-Fohrbrodt, G., & Cloetta, B. (1981). *The socialisation of Beginning teachers. Three years after the transition shock.* 13,251-262.

Darling-Hammond, L. (2000). How teacher education matters. *Journal of teacher education,* 51, 166-173.

Day, C., Fernandez, A., Hague T. E., (2005). The life and work of teachers: International perspectives and changing times. Moller, J.

Dewey, J., (1968). *The school and society.* Chicago: University of Chicago Press.

Dey, E. L. (1997). Working with low survey response rates: The efficacy of weighting adjustments. *Research in higher education.* Vol 38 No. 2.

Doyle, W. (1990). Themes in teacher education research. In W. R. Houston (Ed.,), *Handbook of research on teacher education* (3-22). New York: Macmillan.

Drever, E. (1995). *Using semi-structured interviews in small-scale research: A teachers' guide*: Glasgow, Scotland SCRE publications.

DuBois, J. M., (2002). When is informed consent appropriate in educational research?: Regulatory and ethical issues. *IRB Ethics and human research.* 24(1) pp 1-8.

Elbaz, F. (1991). Research on teachers' knowledge: The evolution of a Discourse. *Journal of Curriculum studies,* 23, 1-19.

Eraut, M. (1994). *Developing Professional knowledge and competence.,Basingstoke,* Great Britain: Burgess Science Press Education Review Office (1990) Pre-employment training for teachers.

Education Review Office (2004). *The quality of Year 2 beginning teachers.*

Evans, M., Lomax. P., & Morgan, H. (2000). Closing the circle: action research towards better learning and teaching in schools. *Cambridge Journal of education,* 30 (3).

Francis, D., (1997). Reconceptualising micro-teaching as critical inquiry as Cited in *Asia-Pacific Journal of Teaching Educator*: Abingdon 25 (3)207-223

Feiman-Nemser, S. & Buchmann, M. (1989). Describing teacher education: A framework and illustrative findings from a longitudinal study of six students. *Elementary school journal*, 89(3), 365-377.

Feiman-Nemser, S. (1990). Teacher preparation: Structural and conceptual Alternatives. In W. R. Houston, (Ed.) Handbook of Research on Teacher Education, 212-234. Macmillan. 253-285.

Fitts, P. M., (1964). Perceptual motor skill learning. In A. W. Melton (Ed) *Categories of Human Learning.* New York: Academic Press.

Gibbs, C. (2003). Explaining effective teaching: Self-efficacy and thought control of action. *Journal of Educational enquiry*, 4. (2).

Giddens, A. (1984). *The constitution of society.* Cambridge, Polity Press

Giddens, A. (1991). *Modernity and self identity in society in the late modern life of Polly Press.*

Glaser, B., & Strauss, A. (1967) *The discovery of grounded theory.* Chicago: Aldine.

Goodland, J. I., (1983*). A study of schooling*: Some implications for school Improvement. Phil Bates Kipper, 64 (8) 552-558.

Goodland, J. I. (1990). *Places where teachers are taught.* San Francisco, Jones Bassey.

Goodland, J. I. (1993). School-University partnerships. *Educational Policy* 7(1), 24-39.

Gore, J.M. (2001). Beyond our differences; A reassembling of what matters in teacher education, *Journal of Teacher Education*, 52, (2) March/April, 124-135. University of Newcastle, Australia.

Groves, R. M., (1989). *Survey errors and survey costs.* New York: Wiley.

Grudnoff, L. & Tuck, B. F. (2001). The adjustment of beginning teachers in New Zealand. *European Educational Research Association annual conference.* Lille, France.

Grudnoff, L & Tuck, B. F. (2005). Beginning teaching: stress, satisfaction and resilience. SET Research Information for teachers No3. NZCER Press.

Haigh, M., & Ward, G., (2004). Problematising practicum relationships: Questioning the "Taken for granted" *Australian journal of Education*, 48 (2) 134-148.

Hamachek, D., (1978). *Effective teaching: What they do and how they do it and the importance of self-knowledge.* In Lipka, R.P. & Brinthaupt (Eds)

(1970, pp 189-224). *The role of self in teacher development.* Albany, NY.: State University New York Press.

Hargreaves, A. (1998a). *The emotional practice of teaching and teacher education, 14*(8), 835-854.

Hargreaves, A. & Evans, R. (1997). *Beyond Education Reform: Bringing teachers back.* U.K. Open University Press.

Hattie, J. (1990). Teacher effectiveness. Teacher competence; Performance indicators in education. *Australian Journal of Education.* 34 (3) 249-276.

Hattie, J., (2002). What are the attributes of excellent teachers? Teachers make a difference: What is the research evidence? *New Zealand Council for educational research.*

Hatton, N., & Smith, D., (1995). Reflection in teacher education: Towards definition and implementatioin. *Teacher and teacher education* 11, (1)33-49.

Heylighten, F., (1993). Philosophy Introduction/*Epistemology Copyright* Principal Cybrenetica.

Hill, J., & Hawk, K. (2000). *Effective teaching practice in low decile, multicultural schools.* Report prepared for the Ministry of Education and the AIMHI forum by the Institute for Professional development and Educational research, Albany, New Zealand: Massey University.

Hinsch, R., (1979). *Attitudinal change and transition shock in beginning teachers: An empirical longitudinal study.* Weinhern, Beltz.

Hoban, G. F. (2004). Seeking quality in teacher education design: A four-Dimensional approach. *Australian Journal of Education.* 48 (2) 117-133.

Joyce B. R. & Shower, B., (1988). *Student achievement through staff development. Fundamentals of school renewal.* Second edition White Plains, N.Y: Longman.

Kagan, D. M. (1992). Professional growth among pre-service and beginning Teachers. *Review of Educational Research*, 62(2), 129-169.

Kahn, R. L., & Cannell, C. F. (1957). *The dynamics of interviewing* (New York: Jon Wiley & Sons. 189-196.

Kane, R. (2005). *Initial Teacher Education Policy and Practice.* Wellington Ministry of Education & New Zealand Teachers Council, 56 p. 56.

Kippen, S. (2003). Teacher reflection & theories of learning online. *Journal of Education*, 4 (1) 2003.

Korthagen, F. A. J. (1992). Techniques for stimulating reflection in teacher education seminars. *Teaching and Teacher Education*, 8(3). 265-274.

Korthagen, F. A. J. (2000). Practice, theory and person in life-long professional learning. *New Directions in teacher's working and learning environment.* Dordrecht, Kluwer Academic Publishers.

Korthagen, F. A. J. (2001). *The realistic approach: Its tenets, philosophical background and future.* Linking Theory and Practice and theory: The Pedagogy of Realistic Teacher Education.

Korthagen, F. A. J, & Kessels, J. P. A. M., (1999). Linking theory and practice: Changing the pedagogy of Teacher Education. *Educational Researcher*, 28(4) 4-17.

Korthagen, F. A. J., (2004). In search of the essence of a good teacher: towards a more holistic approach in teacher education. *Journal of Teacher and Teacher education,* 20 .77-97 Netherlands.

Leedy, P.D., & Ormrod, J.E., (1985). *Practical Research: Planning and Design.* Ohio: Merrill Prentice Hall.

Lave, J. & Wenger E., (1991). *Situated learning legitimate peripheral participation.* Cambridge, U.KC. Cambridge University Press.

Lind, P. (2005). Board of Teachers Council. Report.

Liston, D. & Zeichner, K. M. (1990). Reflective teaching and action research in pre-service education. *Journal of education for teaching*, 16(3), 235-253.

Luckner J. L. & Nadler R. S. (1992). *Processing the experience: Stategies to Enhance and generalize learning:* Dubuque, Iowa Kendall/Hunt Publishing Company.

McIntyre.D. & Hagger, H., (1992). Professional development through the Oxford Internship model. *British journal of Educational studies* 40.264-283

Ministry of Education, (1988). *Tomorrow's Schools.* Wellington: Government printer.

Ministry of Education (Draft consultation document, 2004). *A strategy for preparing teacher education graduates to teach diverse learners effectively:* Government actions in initial teacher education (2004-2006): a coordinated interagency approach.

New Zealand Council for educational research (2002). *Teachers make a* difference: What is the research evidence? Wellington N.Z. NZCER Longman Printing, Ltd.

Nolinske, T., (1999-2000). Creating an inclusive learning environment: Lincoln Park Zoo and Consultants in Professional development. *Teaching Excellence toward the best in the academy.* 11, (4).

Oakeshott, M., (1962). *Rationalism in Politics: And other essays.* London: Methuen.

O'Neil, J. (1998). ERO's capable teacher: A science of teaching. *Delta* 50 (3) 201-224.

Pajares, F. (1992). Teachers beliefs in educational research. Cleaning up a messy construct. *Review of Educational Research* 62 (3) 207-12.

Pajares, F., & Bengston, J. K., (1995). The psychologizing of teacher education: Formalist thinking and pre-service teachers' beliefs. *Journal of education*, 70 (3).

Palmer, P. J. (1998). *The courage to teach*. San Francisco: Jossey-Bass Readers Digest Dictionary (1998) U.K: Oxford University press.

Porter, S. R., (2004). Raising response rate. *New directions for institutional research*. No. 121.

Poskitt, J. (2004). *Making a difference in the classroom: Effective Teaching Practice in low decile schools*. www.minedu.govt.nz/index.efm?layout

Ramsey, G. (2000). Quality matters: *Revitalising teachers - critical choices* (Executive summary). Sydney, NSW, Department of Educational training.

Ramsden, P., (1993). Managing the effective university. *Higher education Research and development*, 17, 347-370.

Readers Digest Oxford English Dictionary (1993). UK., Oxford University Press.

Russell, T. (1988). From pre-service teacher education to first year of teaching: A study of theory and practice (pp. 13-34) in J. Calderhead (Ed) *Teachers' professional learning*. London, The Falmer Press.

Sachs, J., (2003). Teaching professional standards: controlling or developing Teaching: *Teachers and teaching Theory and practice, 9* (2)175-179.

Schempp, P. G., & Graber, K. C. (1992). Teacher socialization from a dialectical Perspective: Pre-training through induction. *Journal of Teaching in Physical Education*, 11, 329-348.

Shulman L. S., (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1-22.

Smith, A. & Zeichner, K., (2003). *Influences of Initial Teacher Education on quality processes and outcomes for children in Early Childhood Education: Report to the Ministry of Education,* Dunedin: Children's Issues Centre.

Smyth, J. (1991). *Teachers as collaborative learners.* Buckingham, UK: Open University press.

Snook, I., (1998). Teacher education. Preparation of a learned profession. *Delta* 50 (2) 135-147.

Snook, I., (2005). Graduation address, *Are teachers important?* Massey University College of Education. QUEP.

Strauss, A., & Corbin, J. (1990) Basics of qualitative research: Grounded theory procedures and techniques. Thousand Oaks, D.A: Sage.

Stronge, J. H. (2002). *Qualities of effective teachers.* Association of Supervision and curriculum development. Alexandra Vicapre, USA.

Tinnings R. (2004). Rethinking the preparation of HPE teachers: Ruminations on knowledge, identity, and ways of thinking. *Asia-Pacific Journal of Teacher Education.* 32 (3) 135-143.

Tom, A. R., (1997). *Redesigning Teacher Education.* Albany, NY: State University of New York

Veenman, S. A. M., (1984). Perceived problems of beginning teachers. *Review of educational research,* 54(2), 143-178

Watson, L. (2005). Quality Teaching and School Leadership. A scan of Research findings. Canberra: NIQTSL at www.nitsl.edu.au' vii.

Wideen, M., Mayer-Smith, J. & Moon, B. (1998). A critical analysis of the research on learning to teach: Making the case for an ecological perspective on inquiry. *Review of Educational Research*, 68(2), 612-618.

Zeichner, K., & Liston, D. P., (1987). Teaching student teachers to reflect. *Harvard Educational Review*, 57(1), 23-48.

Zeichner, K., (1999) The new scholarship in teacher education. *Educational Researcher* 28 (9) 27-34.

Zeichner K., & Tabachnick, B. R., (1981) Are the effects of university teacher Education "washed-out" by school experience? *Journal of teacher education*, 32, 7-13.

7.1 Bibliography

Berg, B. L., (2001). *Qualitative research methods for the social sciences.* Needham Heights, M. A. 02494, U.S.A., Allyn & Bacon.

Fink, A., (2002). *How to conduct surveys: A step by step guide.* USA, California, Sage Publications, Inc.

Mills G. E., (2000). *Action research: A guide for the teacher researcher.* Southern Oregon University, Prentice Hall.

Kleinhenz, E. & Ingvarson, L. (2005). *Standards for Teaching: Theoretical underpinnings and applications.* Wellington, New Zealand Teachers Council, unpublished reports 53 and 55.

Minichiello, V., Aroni, R., Timewell. E., & Alexander L. (1995). *In depth interviewing.* second edition: Melbourne, Australia, Addison Wesley Longman.

Salkind, N. J. (2000). *Explaining research* (4th ed). New Jersey: Prentice Hall Inc.

Terch, R. (1990). *Qualitative research: Analysis types and software tools.* New York , Philadelphia: The Falmer Press.

APPENDICES

(i) Sample of Interview questions

(ii) Themes that emerged from the interviews and % of total number

(iii) Coded Questionnaire

(iv) Graphs and Analysis of Responses to questionnaire.

Appendix (i)

A sample of the questions from the three semi-structured interviews:

First Interviews:

- Tell me something about yourself. (allow them to relax and talk)
- What qualities do you think makes a good/effective teacher?
- What qualities do you have to be a good/effective teacher?
- How would you describe your own school experience?
- Can you describe a good/effective teacher who taught you at school?
- Can you recall a teacher you found difficult to relate to and learn from?
- What do you believe teachers have to do?
- Can you describe what the teacher can do to help children learn?
- How do you learn?
- Describe a time when you had done well at school? Who contributed?
- What do you want to learn from this programme?
- How do you feel about the programme so far?
- Why did you come to this College?
- How did your first teaching experience go?
- Looking for a starting point to establish the hopes and expectations of teacher preparation at this College to help the student teacher and the researcher to evaluate their growth and development

Second Interviews:

- Tell me about your last (second) teaching experience?
- Respond to answers.....Clarify, probe, challenge
- How, what, why, when, who? Etc.

- Describe a critical incident and discuss responses (ALACT. Korthagen)

Third Interviews:

- Check on their third and last teaching experience:
- Ask questions about the teaching experience:
- Ask for reflection on any critical incident
- Associate teacher
- Visiting lecturer
- Environment
- Behavioural system
- Cultural issues
- Critical incident analysis
- College programme positive and negative

Appendix (ii)

The themes that emerged from the recorded interviews:

The major themes revealed as a result of the grounded theory research analysis were

- control or the environment and management of the students (behaviour)
- The diversity of associate teachers
- The lack of connection between theory and practice
- Experience is the best teacher
- The need to simply survive
- Imbalance of the programme
  (School culture too early - management too late)
- Insufficient time spent on NCEA
- Lack of discussion opportunities
- No account taken of prior knowledge

Appendix (ii) continued

Total Coding units from Interviews

Code number and topic		No coding units	% of total units
A.1	Theory	35	6.02%
A.2	Practical	17	3.00%
A.3	Teaching NZ Curr.	15	2.58%
A.4	Diversity	3	0.52%
B.1	Ed Tech	0	0.00%
B.2	Adolescence	53	9.12%
B.3	Ad Issues	24	4.13%
B.4	Guidance school	14	2.41%
C.1	Diverse learners	1	0.17%
C.2	Practical skills	11	4.13%
C.3	Ist Teaching Sub	19	3.27%
C.4	2nd Teaching Sub	10	2.41%
C.5	Critique curr.	8	1.38%
C.6	Current Ed Issues	0	0.00%
C.7	Planning Ind needs	7	1.20%
C.8	Pos lng environt.	22	3.79%
C.9	Teaching strategies	37	6.37%
C.10	Classroom Management.	61	10.50%
C.11	Future classrooms	7	1.20%
C.12	Special needs	7	1.20%
C.13	Gifted and talented	0	0.00%
C.14	NCEA Assessment	33	5.68%
C.15	Equity	22	5.68%

C.16	Socio-economic	23	3.96%
D.1	Classroom practical	25	4.30%
D.2	Associate feedback	12	2.07%
D.3	Teacher preparation	35	6.02%
D.4	Ass students work	6	1.03%
D.5	Relation/students	30	5.16%
D.6	Relations/staff	19	3.27%

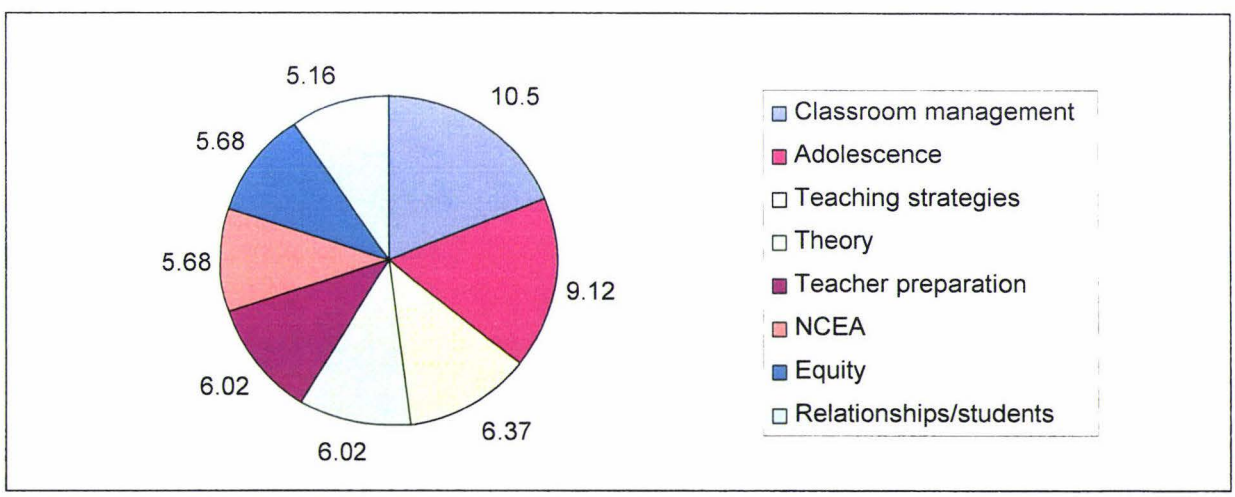
Other information on the coding

E.1	commmit to teaching	5	0.86%
E.2	schol despt function	12	2.07%
E.3	When left school	0	Information only
E.4	qualifications	4	0.69 Information
E.5	Begin tchr confide	4	0.69
E.6	1st Subject		Information only
E.7	2nd Subject.		Information only

The following are the main contributors to 50% of the course according to the interviewees' transcripts using all coded units from each and every interview.

Classroom management	10.50%
Adolescence	9.12%
Teaching strategies	6.37%
Theory	6.02%
Teacher preparation	6.02%
NCEA	5.68%
Equity	5.68%
Relationships/students	5.16%

FIGURE 1: Main Contributors to 50% of the Course According to the Interviewees' Transcripts



Appendix (iii)

14 September 2005

Graduate Diploma of Teaching (Secondary) 2004

Date: _____

CODED QUESTIONNAIRE

Please contact Anne Kingsley if you need clarification or additional information.

Telephone: 063569099, extn 8734
Email: A.R.Kingsley@massey.ac.nz
Department of Health and Human Development

Please RSVP by **23 September 2005**, using the supplied prepaid reply envelope.

Completing and returning this questionnaire will indicate your consent to participate.

Please note: *statements in quotation marks are quotes from the material for 136.431 and 136.432 Integrated Teaching Studies., Massey University College of Education.*

SECTION A: Viewpoints about the Course Goals

SOURCE

A.1 Consider this statement carefully

136.432 Paper Outline, MUCE

"The programme, Graduate Diploma Teaching, including Teaching Experience has provided me with **an adequate theoretical** base for the realities of beginning to teach."

A.1.1 **Please circle** the rating point that reflects your present viewpoint.

Circle one digit only.

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

A.1.2 Please comment about your rating.

A.1.3

A.1.4 Please be specific.

And, give some support for your view with an **anecdote or illustration**.

A.1.5

A.2 Consider this statement carefully

SOURCE

"The programme, Graduate Diploma Teaching, including Teaching Experience has provided me with **<u>an adequate practical</u>** base for the realities of beginning to teach."

136.432 Paper Outline, MUCE

A.2.1 **Please circle** the rating point that reflects your present viewpoint.

Circle one digit only.

0	**1**	**2**	**3**	**4**
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

A.2.2 Please comment about your rating.

_____

_____

_____

_____

A.2.3

Please be specific.

A.2.4 And, give some support for your view with an anecdote or illustration.

_____

_____

_____

_____

A.2.5

A.3 Consider this statement carefully SOURCE

"The programme, Graduate Diploma Teaching, including Teaching Experience has provided me with **adequate experiences that make me confident of teaching within the New Zealand Framework."** 136.432 Paper Outline, MUCE

A.3.1 **Please circle** the rating point that reflects your present viewpoint.

Circle one digit only.

0	**1**	**2**	**3**	**4**
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

A.3.2 Please comment about your rating.

_____

_____

_____

_____

A.3.3

Please be specific.

A.3.4 And, give some support for your view with an anecdote or illustration.

_____

_____

_____

_____

A.3.5

A.4 Consider this statement carefully

SOURCE

"The programme, Graduate Diploma Teaching, including Teaching Experience has provided me with **a wide knowledge of student diversity**."

136.432 Paper Outline, MUCE

A.4.1 **Please circle** the rating point that reflects your present viewpoint.

Circle one digit only.

0	**1**	**2**	**3**	**4**
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

A.4.2 Please comment about your rating.

_____

_____

_____

_____

A.4.3

Please be specific.

A.4.4 And, give some support for your view with an anecdote or illustration.

_____

_____

_____

_____

A.4.5

SECTION B: Learning Outcomes From Your Course Outline for Paper 136.432

SOURCE
136.432

B.1 What opportunities did you have to learn to use **educational technology**?

Circle one digit only.

p 3

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

LO1

B.2 What opportunities did you have to learn about the **development of adolescents**?

Circle one digit only.

p 3

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

LO2

B.3 What opportunities did you have to learn **about adolescent issues**?

Circle one digit only.

p 3

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

LO3

B.4 What opportunities did you have to learn how to **analyse** a range of professional responsibilities for a school's **guidance and support systems**?

Circle one digit only.

p 3

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

LO4

B.5 What opportunities did you have to gain **confidence in teaching within the New Zealand Curriculum Framework**?

SOURCE 136.432

Circle one digit only.

p 3

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

LO5

B.5.1

B.6 Please comment about learning outcomes from your viewpoint:

_____

_____

_____

_____

_____

_____

B.7

SECTION C: Issues and Views

SOURCE
136.432

What opportunities did you have to learn a number of teaching strategies?

C.1 What opportunities did you have to learn a number of teaching strategies to **support the needs of diverse students**? p 2

Circle one digit only.

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.2 What opportunities did you have to learn a number of teaching strategies for teaching **practical skills**? p 3

Circle one digit only.

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.3 What opportunities did you have to gain confidence in **teaching your first teaching subject**? P 3

Circle one digit only.

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.4 What opportunities did you have to gain confidence to **teach a second subject**? P 3

Circle one digit only.

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.5 What opportunities did you have to become confident about your skill for **critiquing curriculum documents**?

SOURCE 136.432

Circle one digit only.

p 3

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.6 What opportunities did you have to **reflect on current education issues**?

Circle one digit only.

p 3

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.7 What opportunities did you have to (gain confidence) in **planning to meet the needs of individual students**?

Circle one digit only.

p 3

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.8 What opportunities did you have to (gain confidence) in **learning sufficient knowledge, skills, processes and strategies to develop a sustainable and positive learning environment**?

Circle one digit only.

p 3

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.9 What opportunities did you have to learn a number of **teaching strategies appropriate for your curriculum area**?

Circle one digit only.

p 3

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.10 What opportunities did you have to learn about **classroom management**?

SOURCE 136.432

Circle one digit only.

p 3

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.11 What opportunities did you have to consider **how the course was aimed at teaching for future classrooms**?

Circle one digit only.

p 3

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.12 What opportunities did you have to learn about **special needs teaching**?

Circle one digit only.

p 3

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.13 What opportunities did you have to learn about **teaching the gifted and talented**?

Circle one digit only.

p 2

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.14 What opportunities did you have to **become familiar with the NCEA assessment**?

Circle one digit only.

p 2

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.15 Did the course offer opportunities to learn about **equity issues**?

SOURCE 136.432

Circle one digit only.

p 2

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.16 Did the course offer opportunities to learn about **socio-economic status issues**?

Circle one digit only.

p 2

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

C.17 Please comment about issues and views from your own experiences:

_____

_____

_____

_____

_____

_____

SECTION D: School Practice Questions

D.1 What opportunities did you have to spend **teaching in an actual classroom**?

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

D.2 What opportunities did you have to **receive good feedback from your Associate Teacher on Teaching Practice**?

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

D.3 How prepared did you feel to be a beginning teacher?

0	1	2	3	4
Not well prepared	Poorly prepared	Adequately prepared	Well prepared	Very well prepared

D.4 What opportunities did you have in **Teaching Experience** to develop your **ability to assess student's work**?

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

D.5 What opportunities did you have to develop **relationships in the school with students**?

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

D.6 What opportunities did you have to develop **relationships with the staff in schools**?

0	1	2	3	4
No opportunities	Insufficient opportunities	Adequate opportunities	Ample opportunities	Too much opportunity

D.7 Please comment on your school practice:

_____

_____

_____

_____

_____

_____

SECTION E: Perspectives on Your Diploma Preparation and Some Background Information

E.1 Are you committed to teaching as a long-term career?

Circle one digit only.

0	1	2	3	4
Not committed	A little committed	Moderately committed	Very committed	Fully committed

E.2 To what extent are you familiar with the way a high school department functions?

Circle one digit only.

0	1	2	3	4
Not familiar	Slightly familiar	Adequately familiar	Very familiar	Fully familiar

E.3 How many years ago did you graduate from high school?

Please circle.

3 - 5 years	6 - 10 years	11 - 15 years	16 - 20 years	over 20 years

E.4 What university qualifications do you hold?
Please list

_____

_____

_____

E.5 What is you own assessment of your competence as a beginning teacher?

Circle one digit only.

0	1	2	3	4
Not competent	Marginally competent	Adequately competent	Very competent	Fully competent

E.6 My first teaching subject at the College of Education was:

_____.

E.7 My second teaching subject at the College of Education was:

_____.

E.8 Please comment on the preparation, background:

_____

_____

_____

_____

_____

_____

SECTION F: Current Status

F.1 Present teaching position

F.1.1 School _____ School student population: _____
F.1.2 Area / Contributing (*please circle*)
F.1.3
F.1.4 Teaching Title _____

(*Please circle one of the following.*)

F.1.5 Full time Part time Reliever Other

F.1.6 Teaching Subject/s _____

F.2 School Details - please *circle all appropriate options*

F.2.1 (i) Fully comprehensive
F.2.2 (ii) Single sex - Male / Female
F.2.3 (iii) Co-ed - (mixed sex)
F.2.4 (iv) Private
F.2.5 (v) Country
F.2.6 (vi) Catholic
F.2.7 (vii) Contributing
F.2.8 (viii) Years 9 - 12
F.2.9 (ix) Independent
F.2.10 (x) Other: _____

F.2.11 Decile Rating _____

F.3 If not in any teaching position, please state your current status in respect to teaching intentions.

_____

_____

F.4 Please add any other comments you would like to make about the Graduate Diploma programme.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

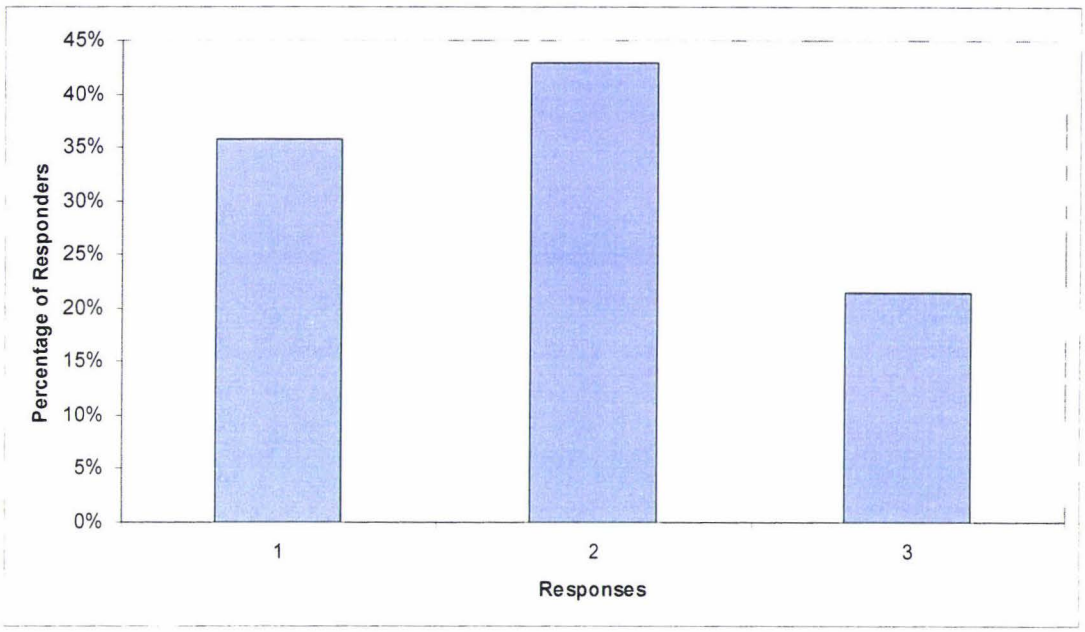
_____

_____

~~ Thank you for your feedback and cooperation ~~

Appendix (iv) GRAPHS

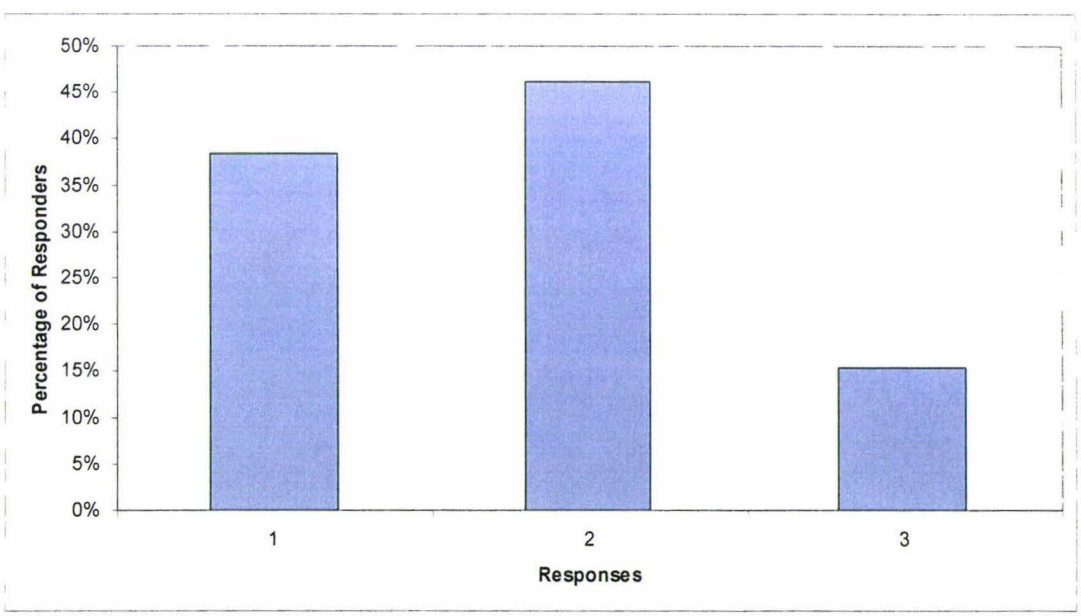
FIGURE 2: Distribution of Responses to B.1 (educational technology)



1 = responded 0 or 1 **2** = responded 2 **3** = responded 3 or 4

Likert Scale:
0 = No opportunities 1 = Insufficient opportunities 2 = Adequate opportunities 3 = Ample opportunities 4 = Too msny opportunities

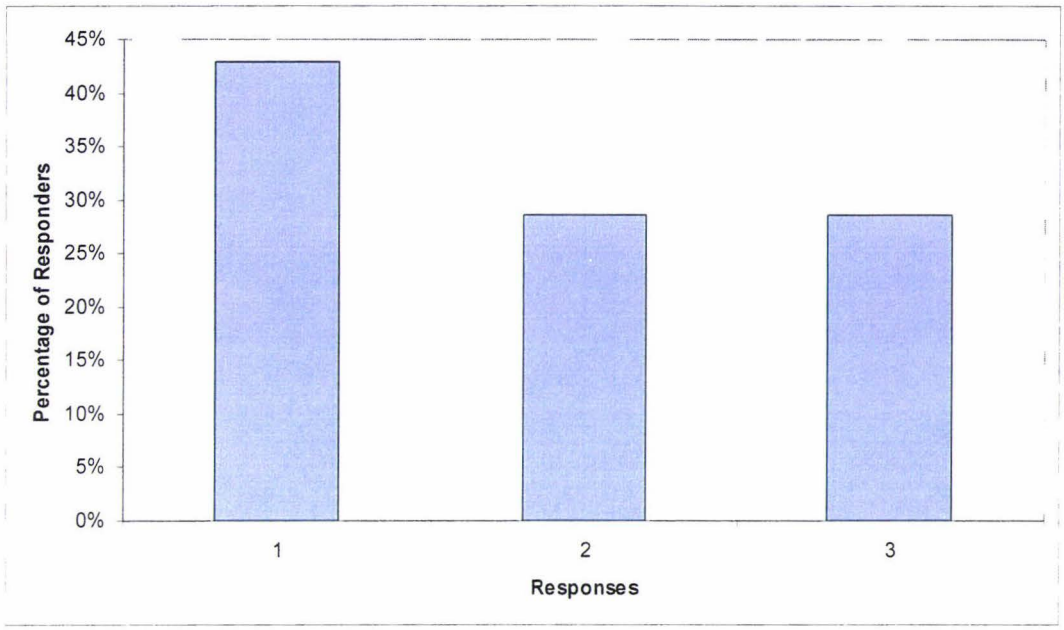
FIGURE 3: Distribution of Responses to C.2 (strategies for teaching practical skills)



1 = responded 0 or 1 **2** = responded 2 **3** = responded 3 or 4

Likert Scale:
0 = No opportunities 1 = Insufficient opportunities 2 = Adequate opportunities 3 = Ample opportunities 4 = Too many opportunities

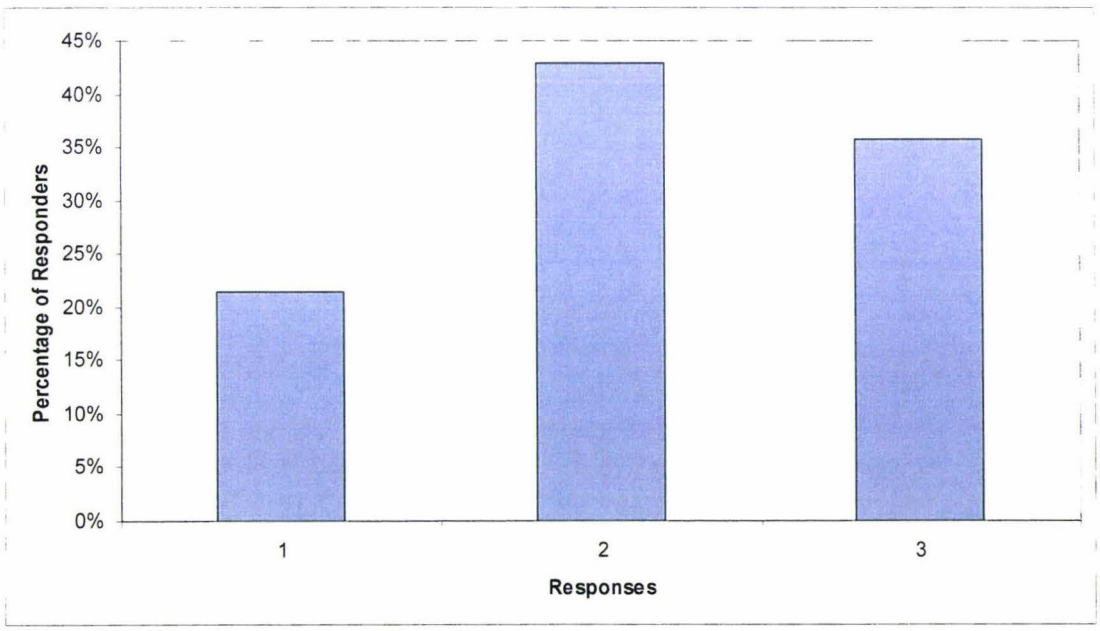
FIGURE 4: Distribution of Responses to C.5 (to be confident about your skill for critiquing curriculum documents)



1 = responded 0 or 1 **2** = responded 2 **3** = responded 3 or 4

Likert Scale:
0 = No opportunities 1 = Insufficient opportunities 2 = Adequate opportunities 3 = Ample opportunities 4 = Too many opportunities

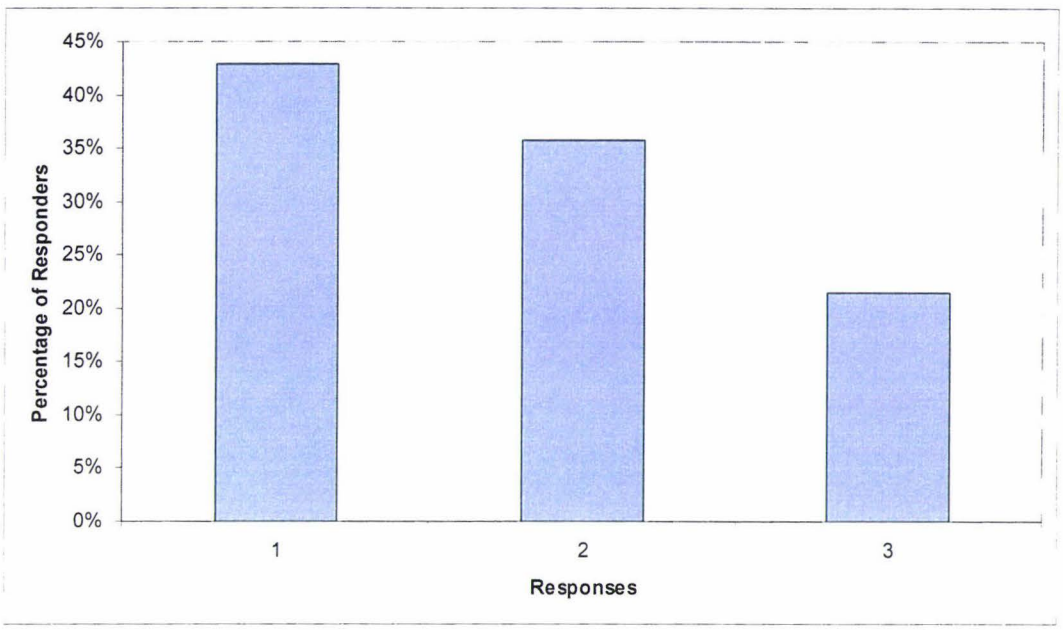
FIGURE 5: Distribution of Reponses to C.7 (planning to meet the needs of individual students)



1 = responded 0 or 1 **2** = responded 2 **3** = responded 3 or 4

Likert Scale:
0 = No opportunities 1 = Insufficient opportunities 2 = Adequate opportunities 3 = Ample opportunities 4 = Too anyh opportunities

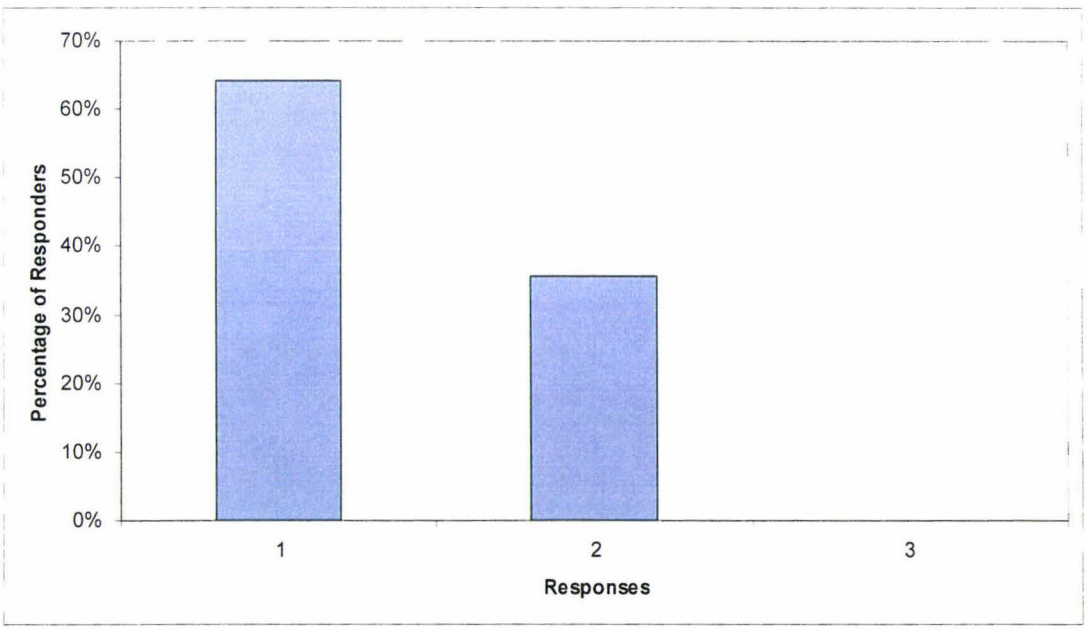
FIGURE 6: Distribution of Responses to C.12 (to learn about special needs teaching)



1 = responded 0 or 1 **2** = responded 2 **3** = responded 3 or 4

Likert Scale:
0 = No opportunities 1 = Insufficient opportunities 2 = Adequate opportunities 3 = Ample opportunities 4 = Too many opportunities

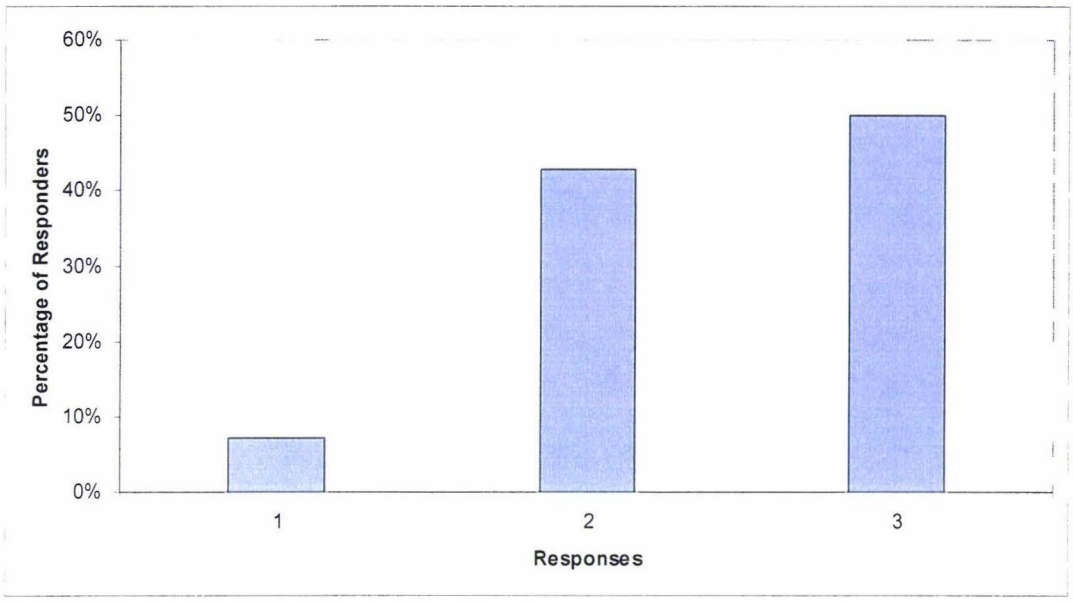
FIGURE 7: Distribution of Responses to C.13 (to learn about teaching gifted and talented)



1 = responded 0 or 1 **2** = responded 2 **3** = responded 3 or 4

Likert Scale:
0 = No opportunities 1 = Insufficient opportunities 2 = Adequate opportunities 3 = Ample opportunities 4 = Too many opprtunities

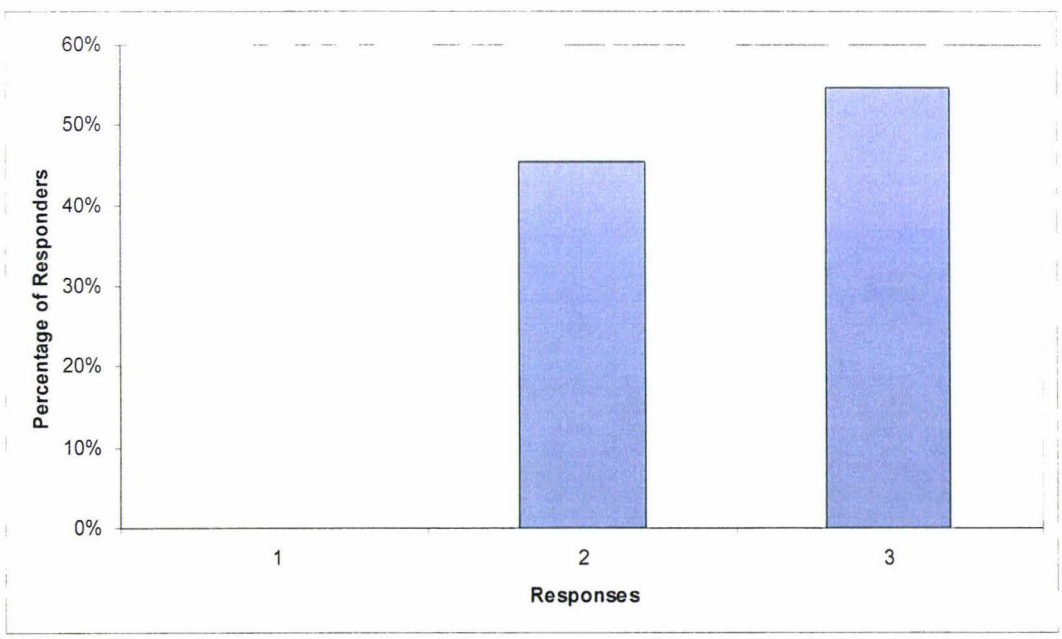
FIGURE 8: Distribution of Responses to A.1.1 (present view point - programme provided adequate theoretical base)



1 = responded 0 or 1 **2** = responded 2 **3** = responded 3 or 4

Likert Scale:
0 = No opportunities 1 = Insufficient opportunities 2 = Adequate opportunities 3 = Ample opportunities 4 = Too many opportunities

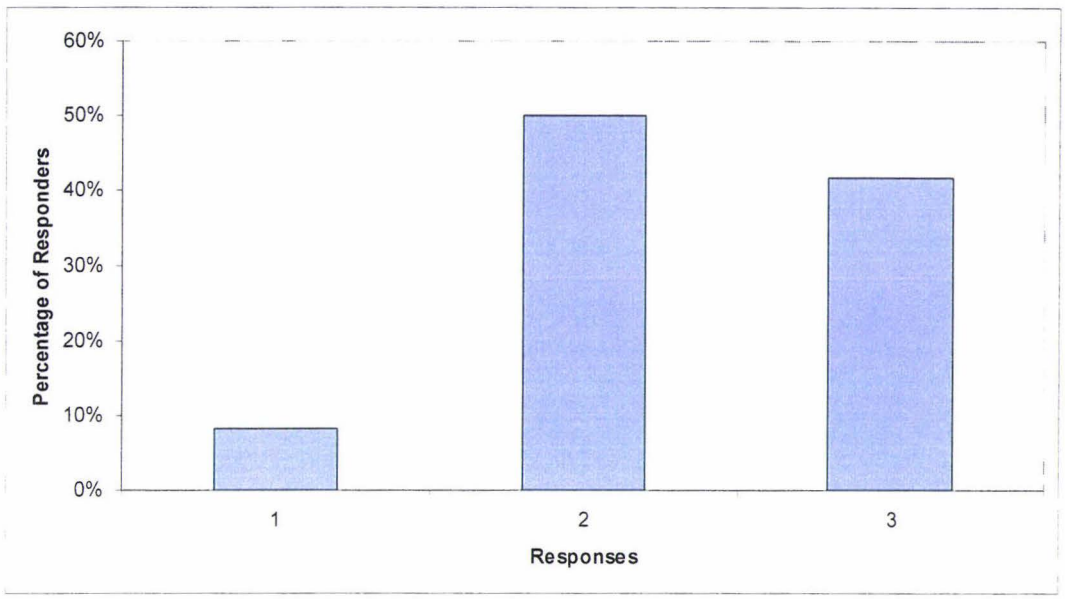
FIGURE 9: Distribution of Responses to A.2.1 (present viewpoint - programme provided adequate practical base)



1 = responded 0 or 1 **2** = responded 2 **3** = responded 3 or 4

Likert Scale:
0 = No opportunities 1 = Insufficient opportunities 2 = Adequate opportunities 3 = Ample opportunities 4 = Too many opportunities

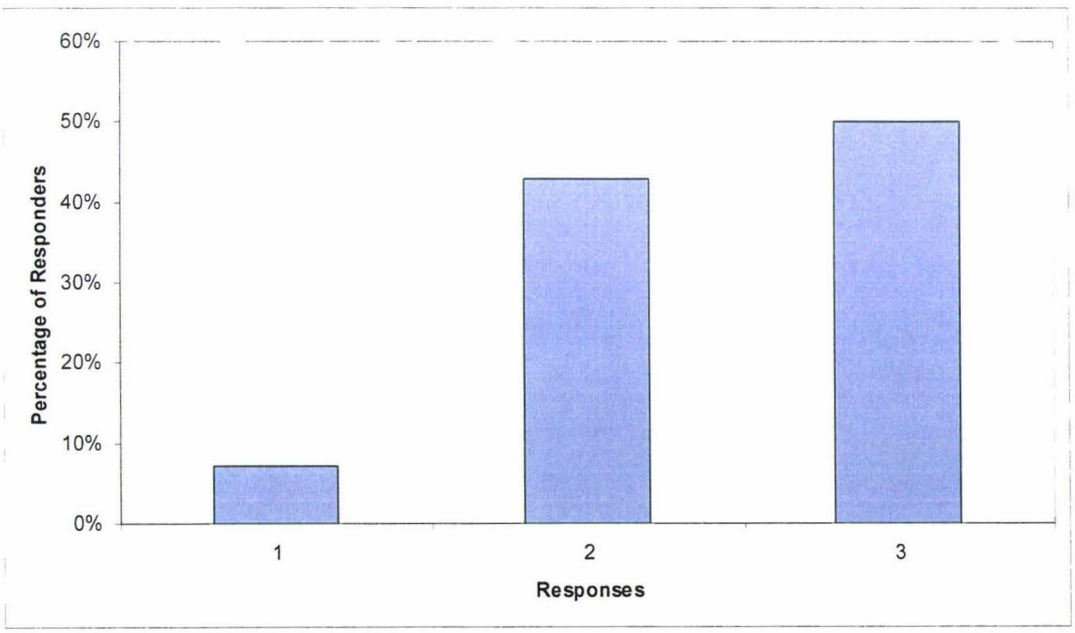
FIGURE 10: Distribution of Responses to A.3.1 (confident with the New Zealand Curriculum)



1 = responded 0 or 1 **2** = responded 2 **3** = responded 3 or 4

Likert Scale:
0 = No opportunities 1 = Insufficient opportunities 2 = Adequate opportunities 3 = Ample opportunities 4 = Too many opportunities

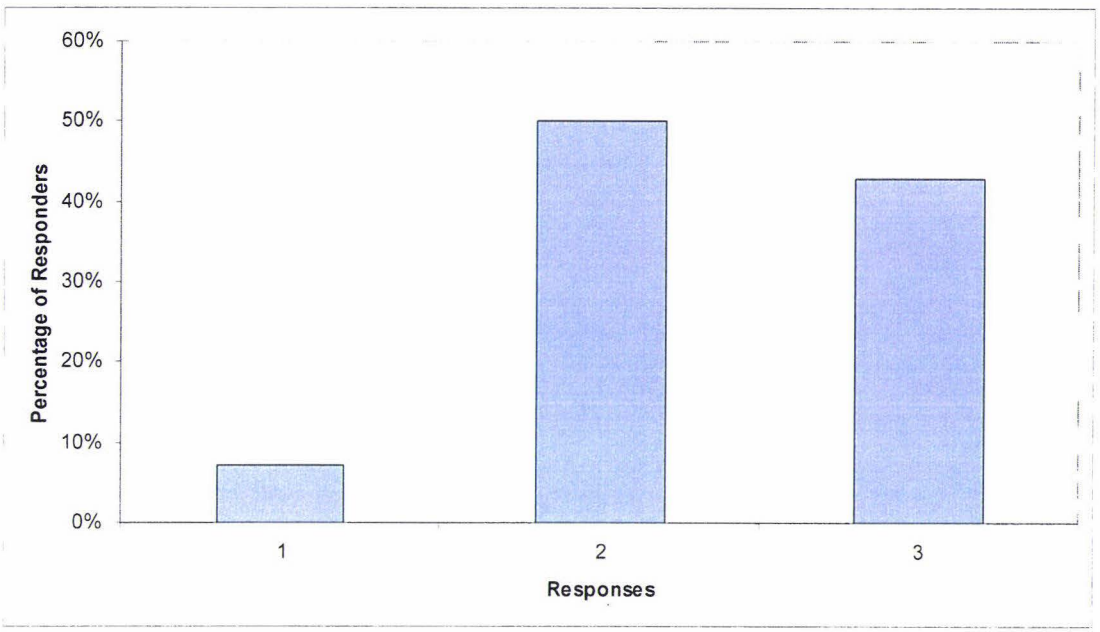
FIGURE 11: Distribution of Responses to B.3 (to learn about adolescent issues)



1 = responded 0 or 1 **2** = responded 2 **3** = responded 3 or 4

Likert Scale:
0 = No opportunities 1 = Insufficient opportunities 2 = Adequate opportunities 3 = Ample opportunities 4 = Too many opportunities

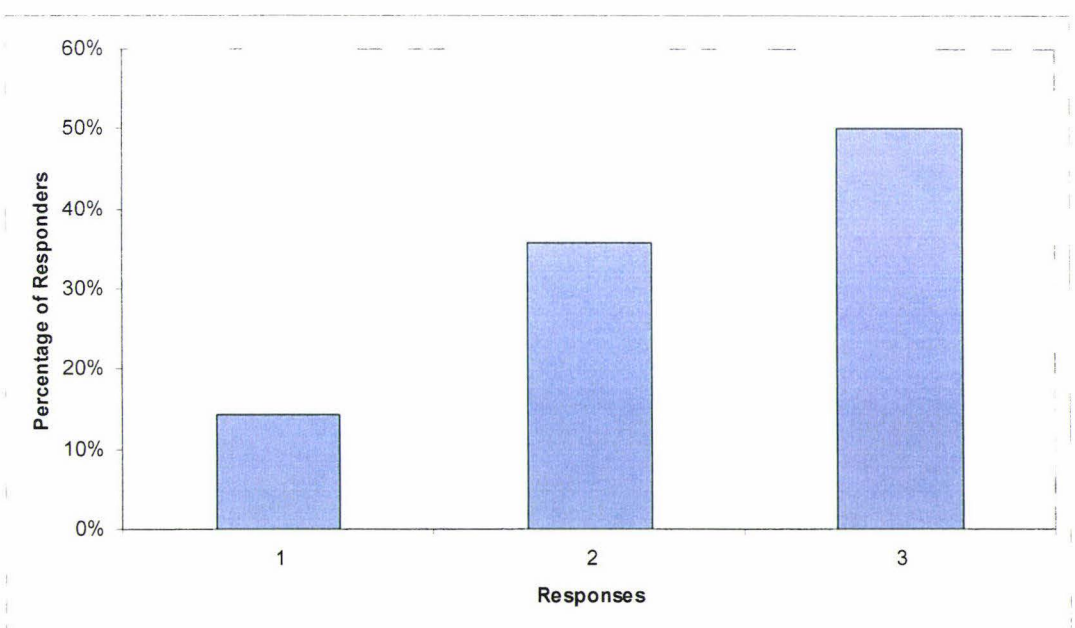
FIGURE 12: Distribution of Responses to C.6 (reflecting on current educational issues)



1 = responded 0 or 1 **2** = responded 2 **3** = responded 3 or 4

Likert Scale:
0 = No opportunities 1 = Insufficient opportunities 2 = Adequate opportunities 3 = Ample opportunities 4 = Too many opportunities

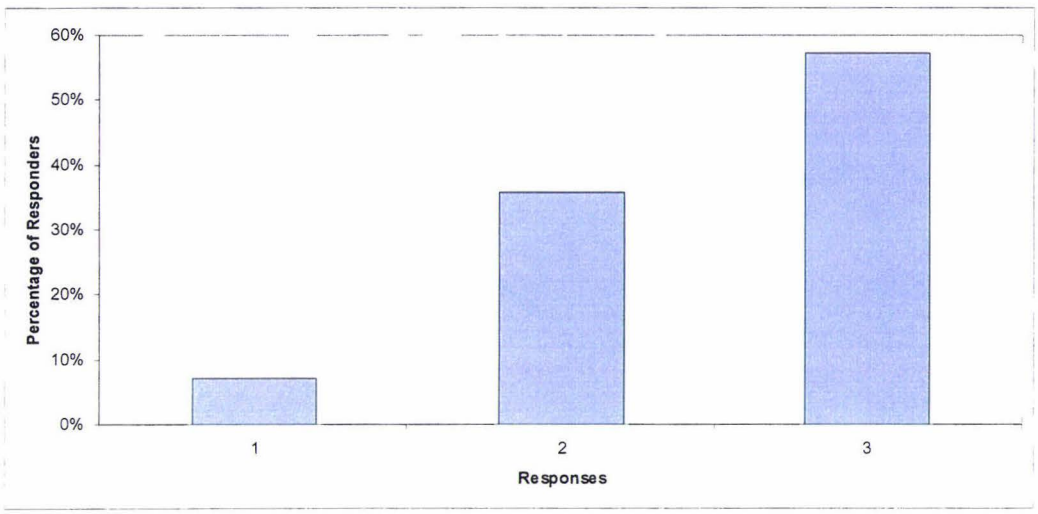
FIGURE 13: Distribution of Responses to D.1 (to spend teaching in an actual classroom)



1 = responded 0 or 1 **2** = responded 2 **3** = responded 3 or 4

Likert Scale:
0 = No opportunities 1 = Insufficient opportunities 2 = Adequate opportunities 3 = Ample opportunities 4 = Too many opportunities

FIGURE 14: Distribution of Responses to D.2 (to receive good feedback from your Associate Teaching on Teaching Practice



1 = responded 0 or 1 **2** = responded 2 **3** = responded 3 or 4

Likert Scale:
0 = No opportunities 1 = Insufficient opportunities 2 = Adequate opportunities 3 = Ample opportunities 4 = Too many opportunities

Appendix (iv) continued

Analysis of Data and Graphs from Questionnaire

Analysis of data from questionnaire

Figure 1.1

The above analysis spread sheet indicates the distribution of ratings from the 14 returned questionnaires as they appear under the coding for the learning outcomes of the Grad.Dip.Tchg (sec) programme

Also shown is the median and mode of each of the codes and the frequency of each rating.

It is clear from the percentage distribution that some of the learning outcomes were skewed. Those with a low percentage in the 7% or less than 7% appear to be those that were considered provided with adequate or ample opportunities. They are

A.2.1 ' adequate practical base',

B.2.'development of adolescence',

B.3. 'adolescent issues'

B.4. 'schools guidance and support systems'

B.5. 'teaching within the New Zealand Curriculum'

C.1. 'supporting the needs f diverse students'

C.3. 'teaching first teaching subject'

D.2. 'Feedback from Associate teacher'

D.3. 'how well prepared for a beginning teacher'

D.5. 'relationships with school students'

E.1. 'committed to long term career'

E.2. 'familiarity with high school department functions'

Those ratings that were recorded at less than 7% in the more than 2% ratings were:

C.7. Planning to meet individual needs'

C.11 'course aimed at future classroom teaching'

C.13 'teaching the gifted and talented'

The vast majority of ratings were around the median

The study revealed that the rating scale described the number 4 in each case as a negative comment and this led to the scale probably being reduced by one. In hind sight it may have been confusing to the participants.

However, very few number 4's were circled. This I assumes was because the participants actually read the description and decided whether or not they wished to make this as a statement. One person recorded a '4' for question A.1.1. indicating that they had been provided with 'too much theoretical base for the realities of beginning to teach.'

In the cases of question E.1 and E.5 the 4 rating is a positive statement and in the case of E.1 'are you committed to teaching as a long term career' the rating of 4 is 'fully committed', and in the case of E.5 a rating of 4 is described as fully competent.