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**Psychologists' Intentional use of Reflection as a Tool for  
Inquiry**

A thesis presented in partial fulfilment of the requirements for the  
Degree of  
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### Abstract

A growing body of research indicates that reflective thinking is an important element of professional practice. At the heart of the concept of reflective thinking is the belief that professionals must maintain an open mind to different perspectives in order to challenge their own knowledge, values, beliefs and understandings of any situation they encounter. The present study examined how Ministry of Education, Special Education MOE (SE) psychologists use reflective thinking in their practice, how the use of reflective thinking can be enhanced, the effect of enhancing reflective thinking on practice, and the effect of the psychologist's reflective thinking on the services they provided to nominated clients. The study was undertaken in two phases.

Phase 1 involved identifying individual and organisational factors that enhanced or restricted reflective thinking by psychologists. This phase involved a literature review and a questionnaire completed by MOE (SE) psychologists. The questionnaire identified the factors that psychologists believed enhanced or restricted their use of reflective thinking.

Phase 2 used an action research approach to examine the effect of providing scaffolding to assist psychologists to engage in reflective thinking, the influence of reflective thinking on their practice, and the

outcomes of their reflective thinking for nominated clients. This phase of the study involved two psychologists working through three cycles of action research and completing weekly reflective journal exercises, based on the Gibbs (1988) model of reflective thinking. Additional data on the psychologists' reflective thinking processes and their practice were collected through semi-structured interviews with the psychologist, parents/caregivers, and classroom teacher who were involved with a nominated student.

The results of Phase 1 identified the factors that the MOE (SE) psychologists believed enhanced and restricted their reflective thinking processes. A thematic map of the key factors identified as enhancing reflective thinking was developed and the concept of reflective thinking used in the questionnaire was defined as:

An adaptive metacognitive and emotional process, which is facilitated through social dialogue, within the context of multiple environments that support, value, and promote opportunities for reflective thinking.

The results from Phase 2 found that when appropriate scaffolding was put in place to enable opportunities for reflective thinking at the individual, peer, and organisational level, the psychologists' reflective

thinking could be rapidly enhanced. This was observed within a relatively short timeframe of only twelve weeks.

The study found that through providing opportunities to engage in reflective thinking, psychologists were able to reflect at different levels depending on the situation. In addition, that psychologists' reflective thinking influenced their future thoughts, actions, beliefs, and emotions, which lead to a more client focused service.



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## Chapter One: Introduction to the Thesis

The notion of reflective practice is becoming increasingly important in all therapeutic traditions: that is, the necessity of being aware of one's own thoughts, feelings and reactions, as a therapist as well as one's own position in terms of professional status, gender, class, ethnicity and so on, and how these impact on the therapeutic process (Johnstone & Dallos, 2006, p.2).

Reflective thinking is the stepping back from personal experience in order to gain a measure of perspective. A process that encourages the educational psychologist to recognise how their own personal values and beliefs influence their understanding of the situation and their practice.

### Reflective Thinking and Practitioner Effectiveness

There is an extensive body of research that indicates an important relationship between reflective thinking and practitioner effectiveness across professional domains including: engineering (Carroll, Markauskaite, & Calvo, 2007), management (Gray, 2007), medicine (Mamede, Schmidt, & Penaforte 2008), nursing (Taylor, 2007), teaching (Harnett, 2007), and psychology (Cropley, Miles, Hanton, &

Niven, 2007; Sheikh, Milne, & MacGregor, 2007). This focus on enhancing reflective thinking to improve practitioner effectiveness is founded on the belief that many of the most important aspects of professional practice lie, as Schön (1987, p.7) has argued “beyond the conventional boundaries of professional competence.”

The importance of reflective thinking, particularly when working with complex situations, is widely supported in the literature. A little over twenty years ago, Donald Schön (1987) used the analogy of the high, hard ground overlooking the swamp of real-life problems to emphasize the important role of reflective thinking for professionals, particularly when working with real-life or complex situations. Schön (1987) wrote:

On the high ground, manageable problems lend themselves to solutions through the application of research-based theory and techniques. In the swamp lowlands, messy, confusing problems defy technical solutions. The irony of the situation is that the problems of the high ground tend to be relatively unimportant to individuals or society at large, however great their technical interest may be, while in the swamp lie the problems of greatest human concern (p.1).

More recently, Mamede, Schmidt, and Penaforte (2008) found that when medical doctors were required to work with complex cases, reflective thinking increased their diagnostic accuracy. This finding supports earlier research with sports psychologists that found that reflective thinking improved their self-awareness, leading to gains in practitioner knowledge and improved services for clients (Cropley, Miles, Hanton, & Niven, 2007).

New Zealand Registered Psychologists

In New Zealand, The Psychologists' Board administers the registration of psychologists under the Health Practitioners' Competence Assurance Act of 2003 (HPCA Act). Under the Act, psychologists are required to demonstrate ongoing professional learning and reflective practice as part of maintaining professional competency. In accordance with the HPCA Act, The New Zealand Psychologist Board has introduced a Continuing Competence Programme (CCP) to ensure that all registered psychologists are competent to practice. The CCP states that:

Self-reflection encompasses a number of levels of activity. At its core is the notion of awareness of one's own knowledge, assumptions and past experience. It involves the ability to look at the self, and the self in relation to others and to the world at large. Self-reflection

embraces the ability to ‘stand back from the self’ and examine critically one’s own thinking patterns (New Zealand Psychologist Board, 2009 p.2).

New Zealand psychologists can register under one or two scopes of practice. There are currently four separate scopes of practice: Psychologist, Trainee/Intern Psychologist, Educational Psychologist, and Clinical Psychologist.

Registration under these scopes of practice is based on the psychologist’s training, experience, and current practice. Although each scope of practice identifies a slightly different knowledge and skill set, all scopes of practice identify reflective thinking as a core competency of a practising psychologist.

At the time this thesis was written there were one thousand two hundred and eighteen registered psychologists in New Zealand. Of this group 58% (n = 706) were in the 45-60+ age group. Seventy percent of New Zealand’s psychology workforce was female. Sixty-seven percent (n = 811) were identified as New Zealand European and 18.1% (n = 219) as other European, with only 3.9% (n = 47) identifying as Māori and 0.8% (n = 10) as Pacifica. Seventy-six

percent (n = 921) reported that they gained their qualifications in New Zealand (Ministry of Health Annual Health Workforce Survey, 2008).

Traditionally, psychology training programmes in New Zealand and internationally have been based on the scientist-practitioner model, which emphasises an empirical approach to data collection and applied research carried out in the scientific tradition (Evans & Fitzgerald, 2007). However, reflective thinking is now a core competency of a registered educational psychologist in New Zealand (New Zealand Psychologist Board, 2009).

The promotion of a reflective practice model is based on the belief of many experts in the area of psychology, who argue that:

...a critical approach to formulation should involve reflection on the value base as well as the evidence base (Prilleltensky & Nelson, 2002, p26).

At the time the present study was undertaken, the Massey University Educational Psychology Training Programme was the only educational psychology training programme established in New Zealand. The pathway to registration as an educational psychologist involved students with an undergraduate degree in education,

psychology or teaching, enrolling in a Postgraduate Diploma in Education (EdPsych). On completion of the PGDipEd (EdPsych) students enrolled in the Masters of Educational Psychology, before graduating on to the Postgraduate Diploma in Educational Psychology. This programme involved a year-long internship. The internship year included academic study, work place supervision from university-accredited supervisors and an end of year oral examination. Upon successful completion of the internship year, graduates were qualified to apply for registration as an educational psychologist. In March 2004, I interviewed the senior lecturer of the Massey University Educational Psychology Training Programme and asked how important reflective thinking was to the training of educational psychologists in New Zealand?

The emphasis on reflective thinking is huge. The training programme has twelve different domains however; it is whether the intern can demonstrate in practice and in their oral exam that they are a reflective practitioner that really counts. We need to be assured that they are going to continue to develop into competent psychologists after completing their internship year and reflective thinking is a critical part of that ongoing development (J. Annan, personal communication, March 22, 2004).

The Ministry of Education, Special Education  
The Ministry of Education, Special Education is one of the largest employers of registered psychologists in New Zealand (n = 193), the majority of whom are educational psychologists. The MOE (SE) works with schools, early childhood education services, families, and other agencies to provide services to children and young people with special education needs. The MOE (SE) has a national office in Wellington, four regional offices, and sixteen district offices throughout New Zealand that are supported by a number of local offices.

In December 2008, 52% (n = 99) of Ministry of Education psychologists were in the 50-60+ age bracket with only 4% (n = 8) below 30 years of age. Males made up 25.9% (n = 50) of the Ministry of Education's psychology workforce. Sixty percent (n = 115) of Ministry of Education psychologists identified as New Zealand European, 6.2% (n = 12) identified as Māori, thirty-four percent (n = 66) identified as other (Ministry of Education, Special Education, 2009).

### Focus of the Present Study

As a MOE (SE) registered educational psychologist, I have been privileged over many years to work alongside some extremely skilled and reflective practitioners; however, there have been occasions when I have witnessed colleagues make mistakes in the ways they have approached a situation, due to an apparent inability to reflect on their own experience. These incidents have given rise to my questions about the role of reflective thinking in the practice of educational psychology: What are the individual and organisational factors that enhance or restrict reflective thinking? How can psychologists be supported to reflect on their practice? Does reflective thinking influence practice? What impact does reflective practice have on the outcomes for clients?

The present study set out to examine the use of reflective thinking by MOE (SE) psychologists. Phase 1 explored factors that enhance or restrict the ability of psychologists to use reflective thinking. Phase 2 focused on the practice of two psychologists and the use of an action research approach to enhance their reflective thinking to improve their practice and achieve better outcomes for their clients.

### Significance of the Topic

Although the view that reflective thinking enhances practitioner effectiveness is widely accepted across professional domains (Carroll, Markauskaite, & Calvo, 2007; Copley, Miles, Hanton, & Niven, 2007; Gray, 2007; Harnett, 2007; Sheikh, Milne, & MacGregor, 2007; Taylor, 2007) there is still limited empirical evidence supporting this view (Moon, 2007). Relatively little research has been undertaken on the process of reflection or on how reflective thinking can be enhanced (Ruth-Sahd, 2003), and even less on the outcomes of professional reflection for clients (Mamede, Schmidt, & Penaforte, 2008). Furthermore, although there are several recent studies examining the role of reflective thinking in the practice of psychology (Copley, Miles, Hanton, & Niven, 2007; Sheikh, Milne, & MacGregor, 2007), these studies have not been undertaken in the field of educational psychology in the New Zealand context.

Finally, in recent years, there has been a clear move towards Evidence-Based-Practice (EBP) in the Ministry of Education, Special Education however, the role of the reflective practitioner within an EBP framework remains unclear. This thesis aims to advance the current body of knowledge on the reflective thinking by educational psychologists within the New Zealand context.

### Research Goals

The present study had three main goals: The first was to examine the factors that enhanced or restricted the use of reflective thinking by educational psychologists. The second was to support educational psychologists to develop their reflective thinking skills, and the third was to examine the impact of reflective thinking on the service provided to nominated clients. Somehk (2006) argued that:

There is much to be gained by adopting a dual approach: generating contextual knowledge on the basis of careful, systematic inquiry, and evaluating this through action oriented towards improvement (p. 27).

The first goal required a research approach that would provide a detailed picture of the current use of reflective thinking by MOE (SE) psychologists. To explore the first question, a quantitative self-completion questionnaire was used.

The self-completion questionnaire had the advantage of collecting descriptive data from a large population in an effective and economical manner (Nachmias & Nachmias, 1997).

The second and third research questions required a research design that was collaborative and flexible enough to support the collection of a rich source of qualitative data, through reflective journal exercises as

well as interviews with participating psychologists, parents, and the classroom teachers of nominated students. The chosen approach needed to be supportive of educational psychologists' developing their reflective thinking skills without being an arduous or time-consuming activity and for these reasons, an action research methodology was chosen.

Action research necessarily is a participatory form of inquiry, knowing is practical, embodied in the moment-to-moment action of research collaborations, and based on the sensing, feeling, thinking, and attendance of the research participants (Brun, 2009, p.202).

Phase 2 of the present study used a participatory action research approach. In this phase, I was an outside researcher who facilitated a collaborative action research partnership with the two MOE (SE) psychologists.

The overarching aim was to examine the use of reflective thinking in their practice, although each psychologist identified a more specific area of focus for their individual action research projects. As an outside researcher, I initially guided the two action research projects, but as the participants' knowledge of participatory action research

increased, so did their ownership of their projects and a more authentic participatory action research model developed.

#### Structure of the Thesis

Chapter Two reviews the current literature on reflective thinking and learning in relation to reflective practice. Chapter Three outlines the philosophical influences that informed the research design and the methods used to accomplish the research objectives. This chapter also discusses the development and implementation of the self-completion questionnaire and an electronic portfolio, which included a reflective journal exercise.

Chapter Four presents the substantive findings of Phase 1 and discusses the results in relation to the planning for Phase 2 of the study.

Chapter Five presents a detailed picture of the planning and implementation and the three cycles of action research undertaken by participating MOE (SE) psychologists during Phase 2 of the present study. The main findings of each cycle of action research are presented along with my reflections on the process.

Chapter Six discusses the significance and the implications of the findings of the present study for educational psychologists and the organisations that employ educational psychologists.



## **Chapter Two: Review of the Literature**

Reflection is the throwing back of thoughts and memories, in cognitive acts such as thinking, contemplation, meditation and any other form of attentive consideration, in order to make sense of them, and to make contextually appropriate changes if they are required (Taylor, 2006, p.2).

Reflective thinking is often conceptualised as a relatively straightforward process of an individual thinking back over an experience in order to learn from that experience. In reality the concept of reflective thinking is quite complex and there is no single definition that fully captures the essence of reflective thinking (Moon, 2007; Ruth-Sahd, 2003). Furthermore, terms such as reflection, reflectivity, reflective thinking, reflective learning, reflective practice, self-reflection, self-review, and critical reflection are often used interchangeably throughout the literature to describe what is essentially the same phenomenon.

There are two main reasons for this diversity of definitions of reflective thinking across the literature. Firstly, researchers tend to develop their definitions based on the work of specific theorists. Secondly, studies on reflective thinking often have a different focus

depending on the professional domain the researcher represents. For example, reflective research in the area of nursing tends to focus on enhancing individual nursing practice, whereas reflective research in teaching often focuses on enhancing student learning opportunities and outcomes.

#### Reflective Thinking as a Concept

Reflective thinking is a process that supports practitioners to make informed and logical decisions and to assess the outcomes of those decisions (McTaggart & Wilson, 2005). One of the seminal pieces of work in the area of reflective thinking is John Dewey's (1933) treatise "How We Think." Dewey's focus was on the role of reflection in education and how learners process new information (Ruth-Sahd, 2003). Dewey identified two types of human mental processes: one is the random collection of uncontrolled ideas, which is largely automatic and unregulated; the other is a focused and controlled mental process growing out of a feeling of doubt or uncertainty. It is this controlled mental process that Dewey labelled reflection.

"only when the succession is so controlled that it is an orderly sequence leading up to a conclusion that contains the intellectual force of the preceding ideas, do we have reflective thought"

(Dewey, 1933; p. 47).

Dewey (1933) argued that reflective thinking is an intra-personal process, which has three attributes: Open-mindedness, Whole-heartedness, and Responsibility (Dewey, 1933). Open-mindedness is the ability to consider problems from different perspectives; whole-heartedness refers to the act of being committed to the subject in a cognitive way; and responsibility is the ability to look at one's own actions and understand the importance of these in the context of the situation under investigation. According to Dewey (1933), reflective thinking is not an inherent human skill; it must be learned.

Dewey identified five phases of reflective thinking, which he believed did not necessarily follow any set order or automatically require the same level of consideration from the learner. These five phases are: (1) thinking about possible solutions to a concern, (2) reframing the concern into an identified problem that can be solved, (3) hypothesis development to guide data collection, (4) mental exploration of a possible solution, and (5) hypothesis testing through action (Dewey, 1973).

Dewey (1933) argued that there were two thought processes involved in learning from experience; empirical thinking, and scientific thinking. Empirical thinking, Dewey argued, is concerned with forming cause and effect relationships, whereas scientific thinking

focuses on “breaking up the coarse or gross facts of observation into a number of miniature processes not directly accessible to perception” (Dewey, 1933, p.195). Dewey believed that an over reliance on empirical thinking led to dichotomous thinking and a tendency to repeat the same actions of the past.

Van Manen’s (1977) work complemented the work of Dewey. His hierarchical model categorised reflective thinking under four areas: day-to-day common sense thinking; reflection focused on specific events; reflection on personal experience aimed at gaining understanding; and self-reflection on the nature of knowledge, or meta-cognition. In this model, there are three stages in the reflective thinking process: application of skills and technical knowledge; evaluation of actions and beliefs; and critical reflection involving the challenging of ethical and moral elements in relation to political and economic forces (Van Manen, 1977).

Schön’s (1983; 1990) model of reflective thinking identified three types of thinking: reflection-in-action, reflection-on-action, and reflection for action. Reflection-in-action involves thinking about one’s actions while involved in that action. He argued that although this is normally a conscious process, professionals might be unable to explain reflection-in-action verbally. In contrast, Schön argued that

reflection-on-action is the orderly and purposeful process of thinking back over one's actions. Schön (1983, 1990) also referred to reflection for action, which is the outcome of reflection-in-action and reflection-on-action; when it is used to guide future actions (Ruth-Sahd, 2003).

Schön and Argyris (1974) in their work on professional practice identified two types of theory, which guides professional practice: 'espoused theory' and 'theory-in-use'. Espoused theory is the professional's abstract and generalised theoretical knowledge, whereas 'theory-in-use' is the professional's experiential knowledge (Schön & Argyris, 1974). Schön (1983; 1987) argued that the adjustments professionals make to their actions while in action, based on theory and experience, are inseparable. He called this process "knowing in action," referring to this as "professional artistry" (Schön, 1987, p. 22).

The work of Schön (1983; 1987) is widely cited in the professional practice literature, although some of his theories have been criticised because of his use of dichotomies to explain complex concepts (Moon, 2007). For example, Moon suggested that if reflection in action involves a moment of pause, then it is the same process as reflection-on-action. McNamara (1990) and Van Manen (1991) also

question the existence of reflection-in-action, arguing that reflective thinking cannot take place during action because there is neither the time nor the opportunity for this to occur.

Teekman (2000) is a New Zealand researcher who developed a three-tiered model of reflective thinking: reflective thinking-for-action, reflective thinking-for-evaluation, and reflective thinking-for-critical inquiry. Reflective thinking-for-action focuses on problem solving and making sense of the 'here and now situation'. Reflective thinking-for-evaluation involves practitioners trying to understand the situation by clarifying the experiences, meanings, and assumptions that others give to that situation. It also involves practitioners looking at their own role in the situation. Finally, reflective thinking-for-critical inquiry relates to Habermas' (1972) concept of 'emancipatory interest' and is concerned with the "underlying structures and systems that control and influence/shape every aspect of social and professional life" (Teekman, 1997, p. 176). The Teekman (2000) model of reflective thinking will be used in the present research to evaluate the levels of reflective thinking demonstrated by the psychologists participating in Phase 2 of the study. It was chosen as the model for the present study because it is a New Zealand model with a strong theoretical base and it is well cited in the international

literature. It has also been used in New Zealand in recent years to investigate the use of reflective thinking by teachers (Hutton, 2008).

Taylor's (2006) model of reflective thinking, like Teekman's (2000), also proposes three main types of reflection: technical, practical and emancipatory reflection. Technical reflection draws on empirical or scientific knowledge to improve day-to-day work practices and procedures. Practical reflection is interpretative in nature and focuses on making sense of human interactions. Finally, emancipatory reflection is focused on critiquing power relationships to bring about positive political and social change. A key element of Taylor's (2006) model, relevant to the present study, is Taylor's argument that no one type or level of reflection is superior to another, as each serves a different purpose.

Moon (2007) suggested that reflection is a mental process that occurs between the inputs and the outcomes of practice. She argued that the purposes and outcomes of reflection should be viewed as additional details rather than characteristics of the reflective thinking process itself. Moon (2007) contends that the input of reflection comes from theories, knowledge, and emotions, whereas the outcome of reflection is learning, which is used to guide future actions, beliefs and emotions. Moon's (2007) distinction between inputs, process, and

outcomes of reflection is of relevance to the present study, which will examine factors that enhance or restrict the process as well as the outcomes of reflective thinking.

Johns (2009) extended the typology of reflective thinking further with a five stage model of reflective practice: (1) reflection-on-experience, (2) reflection-in-action, (3) the internal supervisor, (4) reflection-within-the-moment, and (5) mindfulness. Johns' use of the terms reflection-on-action and reflection-in-action are consistent with the work of Schön (1983; 1987). The internal supervisor refers to the internal dialogue that practitioners engage in when in conversation with clients, in order to make sense of the situation. Reflection-within-the moment is concerned with the practitioner paying attention to the way they are "thinking, feeling and responding within the particular moment, whilst holding the intention to realise one's vision" (p.11). Johns (2009) identifies his highest level of reflective practice as mindfulness. He defines mindfulness as "seeing things for what they really are without distortion, whilst holding the intention of realising desirable practice" (p. 10), as "being vigilant against unskilful actions and negative mental events that are constantly trying to distract the mind for example anger, arrogance, resentment, envy, greed and so no" (p.12).

### Reflective Thinking and Learning

Theories conceptualising how individuals advance their reflective thinking through graduated levels of learning have been proposed by two of the above mentioned theorists: Argyris and Schön (1996) and Habermas (1973). These authors argued that at the lowest level of learning, individuals focus on trying to achieve a goal without giving any serious attention to learning anything new from the experience. At the intermediate level of learning Habermas (1973) argued that the focus is primarily on trying to make explicit the norms of the environment in order to understand and interact with the individuals in that environment. At the highest level of learning Argyris and Schön (1996), and Habermas (1973) propose that reflective thinking occurs with the focus being on the generation of alternative actions outside the learner's current body of knowledge. Habermas (1973) argued that emancipation is a goal at the highest level of learning. He contended that at this level the learner examines the social, cultural, and political nature of the situation through reflecting on the broader context.

### Key Theories of Learning Relevant to the Present Study

Three key theories of learning that are particularly relevant to the present study are constructivist theory, social cultural theory and self-regulated learning theory. Constructivist theory is relevant because of

a strong relationship between experiential learning and reflective thinking. Social cultural theory is relevant because of the important role that social interaction plays in reflective thinking. Self-regulated learning theory is concerned with how theory and learning strategies can be integrated in order to improve practice.

### Constructivist Theory

Constructivist theories of learning argue that learners interact with their physical and social environment to construct meaning (Gredler, 2001) and that the learner's existing cognitive structure, knowledge, beliefs, theories and emotions affect their understanding of a situation (Nichol, 1997). Eraut (1994) claimed that in order for the learner to learn they must be actively involved in the learning process.

New knowledge is "meaningful" and more readily accommodated if there is a strong link between the new information and existing knowledge (Nichol, 1997). Piaget (1929) argued that cognitive development occurs through interactions with the physical and social environment. He proposed that the learner feels a state of "disequilibrium" when there is a discrepancy between their existing knowledge and new information, and that humans have a biological drive to achieve a state of cognitive equilibrium between themselves

and their environment. Although Piaget primarily focused on the individual's internal process, he acknowledged the role of social interaction in learning, arguing that social interaction can be a trigger for disequilibrium, which leads to new learning (Palincsar, 1998).

One of the best-known constructivist models of learning is Kolb's (1984) experiential learning cycle (See Figure 2.1). Kolb and Fry (1975) argued that the learning process often begins with an action 'experience' followed by an attempt to understand this action within a specific context 'reflection'. Kolb's third step, 'abstraction', involved an increased level of understanding of the general principles of the experience and finally, "experimentation" which leads to new actions being taken in similar situations based on what has been learnt. Kolb and Fry (1975) stressed that the experiential learning cycle should be conceptualised as a continuous spiral rather than a closed circle, which the diagram below suggests.

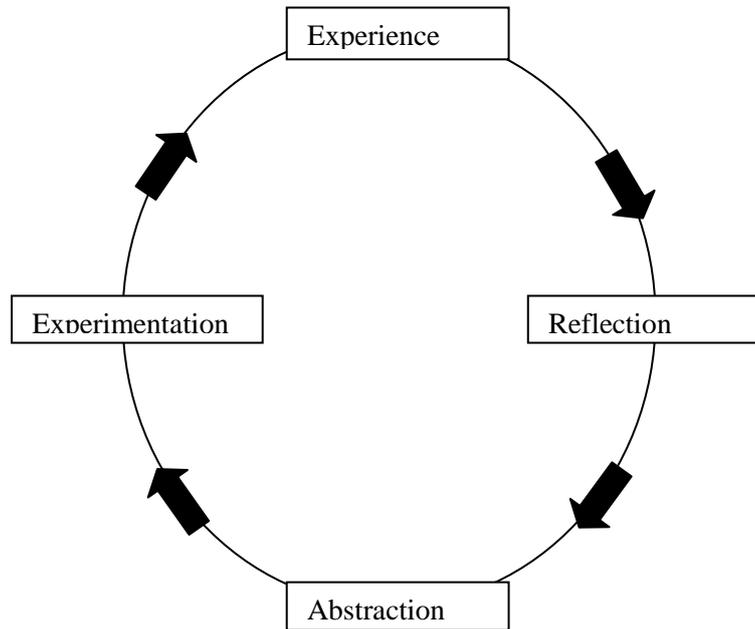


Figure 2.1: Experiential Learning Cycle (Kolb, 1984)

Kolb's (1984) experiential learning cycle used Piaget's (1979) concepts of assimilation and accommodation to explain how new knowledge is acquired. Kolb (1984) refers to assimilation as the process involved in learning new information and accommodation as the process of modifying what is already known, based on the new information. The Experiential Learning Cycle is widely cited in the reflective literature as the model identifies the relationship between reflection and learning. Boyd and Fales (1983) argued that reflection is the component that determines whether learners will re-engage in the same experience repeatedly or learn from the experience and change their future actions.

One of the criticisms of Kolb's (1984) experiential learning cycle is that it does not make any distinction between the process of learning and reflection (Boyd & Fales, 1983). Moon (2007) argued that reflection is a process of mentally returning to an experience rather than processing an experience at the time it is occurring. However, the Experiential Learning Cycle does not distinguish between these two processes. Moon (2007) contends that the processing of an experience as it is occurring is a sense-making process, whereas the process of returning to an experience in order to improve future actions is a reflective thinking process.

### Socio-cultural Theory

Vygotsky's (1978) socio-cultural theory emphasises the importance of social interaction to learning. Vygotsky (1978) argued that mental activities develop through social interactions and participation in shared cultural activities first (between people), and then at the individual level (Dufficy, 2005). Vygotsky (1978) conceptualised the "zone of proximal development" (ZPD) to conceptualise how learners can learn from peers that are more knowledgeable. Vygotsky, (1978) defined the ZPD as:

The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving in ... collaboration with more capable peers (p.86)

Wood, Bruner and Ross (1976) first used the metaphor of scaffolding to explain how appropriate instructional support within the ZPD can be used to enhance the learning process. Scaffolding can take a variety of forms; the goal is to extend the range of tasks that the learner can perform through providing support within the learner's ZPD. Dufficy (2005) defined scaffolding as "mediation in the zone of assisted performance" (p.17). This definition refers to mediation as a "process of intervention between the [individual] and their surroundings, either by another human, or some kind of physical, or symbolic tool" (p.17), Dufficy (2005) maintained that language was a primary symbolic tool of the mediation process. The present study uses the term scaffolding as defined by Wood, Bruner and Ross (1976), and the concept of mediation as defined by Dufficy (2005), in examining the systems and processes used during Phase 2 to support the participants to facilitate opportunities for active engagement in reflective thinking.

Cullen (2001) combined the constructivist view of the learner as an active constructor of knowledge, with Vygotsky's (1978) concept of the learner learning within the ZPD, referring to this as co-construction. Cullen argued that individuals construct their knowledge through interacting and collaborating within a social context. Consistent with this view, James (2006) proposed a merging of individual and social constructivist approaches into what he called "social constructivism," to explain how practitioners learn new practice (p.59).

#### Self-regulated Learning Theory

Self-regulated learning theory comes from a constructivist framework. It looks at how self-regulated learning can be used to integrate theory and learning strategies in order to improve practice. Self-regulated learning theory suggests that both cognitive (critical thinking) and metacognitive (reflective thinking) skills are necessary to develop effective clinical practice and that the two processes are inextricably linked (Kuiper & Pesut, 2004). Cognitive skills are the:

...purposeful, self-regulatory judgment that results in interpretation, analysis, evaluation, and inference as well as the explanation of evidential, conceptual, methodological, criteriological or contextual considerations upon which that judgement is based (Facione, 1990, p.2).

Metacognitive skills are a practitioner's knowledge about their own cognitive processes. Reflective thinking is a metacognitive process that is strongly linked to the cognitive skills of "self-monitoring, self-evaluation, and self-reinforcing goal-orientated behaviours" (Kuiper & Pesut, 2004, p. 385). The self-regulated learning theory suggests that reflective thinking skills can be enhanced through the development of cognitive and metacognitive knowledge and processes (Kuiper & Pesut, 2004).

#### The Reflective Practitioner

Taylor (2007) believed that three attributes were vital to reflective thinking: commitment, courage, and humour. Taylor argued that practitioners need to see the value of reflective thinking before they will make the time commitment to incorporate reflective thinking into their practice as there will always be competing demands for the practitioner's attention. Practitioners also need courage to reflect on their practice as examining one's beliefs, values and practices requires them to go outside of their comfort zone at times. Finally, Taylor (2007) suggested that humour played an important role in reflective thinking, arguing that humour helps the practitioner to maintain a sense of perspective when reflecting on experiences that the practitioner may find emotionally uncomfortable. Johns (2009) adds the qualities of "energy, passion, discipline and playfulness" arguing

that these qualities enable practitioners to counter the more “negative qualities of the mind associated with defensiveness, habit, resistance, laziness, and stress” (p13). The attributes identified by Taylor (2007) and Johns (2009) are of interest to the present study, which aims to identify the affective factors that psychologists perceive as influencing reflective thinking.

Wildman and Niles (1987) identified three main factors that enhance a professional’s ability to reflect on their practice: (1) support to understand reflective thinking and how it relates to the profession, (2) sufficient time and space to reflect, and (3) a collaborative and supportive environment that encourages reflection. Taylor (2006) also emphasised the importance of time for reflective practice, arguing, “The first quality you need to have as a successful reflective practitioner is the willingness to take and make time in your life to make a commitment to the process” (p. 48). The factors described above (i.e. commitment, courage, humour, support to understand reflective thinking, time and space to reflect, and a collaborative and supportive environment that encourages reflection), will be integrated into the development of the self-completion questionnaire for use in Phase 1 of the present study.

**Practitioner Inquiry as a Feature of Professional Practice**  
Contemporary research in the area of professional practice emphasises the importance of practitioner inquiry as a means of enhancing practice (McCormack, 2009). In recent years practitioner inquiry has gained momentum, particularly in the areas of teaching and nursing. Lewison (2003) argued that:

Although known by many names, teacher research, action research, practitioner research, insider research, teacher inquiry involves ...cycles of inquiry, reflection, and action. In this cycle, teachers question common practice, approach problems from new perspectives, consider research and evidence to propose new solutions, implement these solutions, and evaluate the results, starting the cycle anew (p.100).

In the present study, two MOE (SE) psychologists worked through three cycles of inquiry using an action research approach to systematically explore an identified area of their practice and the impact of their practice on a nominated client group, and then shared their reflections with the researcher and their colleagues.

### Communities of Practice

Zeichner (1996) criticised the emphasis of many professional development programmes on individual reflection, arguing that professional practice needs to be de-privatised and collaborative communities of practices promoted. Collaborative communities of practice assist practitioners to “translate ideas into practice” (Zorfass & Keefe Rivero, 2005, p.59). In the present study, a community of practice approach was used to encourage the participants to share their action research projects and reflective thinking with each other, myself as the researcher, and with their supervisors.

Social cultural learning theory underpins how communities of practice enhance professional development, through contextualised learning (Akkerman, 2006, May, 2009). When professionals collaborate with each other in order to learn, communities of practice are formed.

Fontainha and Gannon-Leary (2007) argued that:

A community of practice is a network of individuals who share a domain of interest about which they communicate. The practitioners share resources (for example experiences, problems and solutions, tools, methodologies). Such communication results in the improvement of the knowledge of each participant in the community and contributes to the development of the knowledge within the domain (p.20).

### Facilitating Reflective Thinking

One of the goals of the present study was to enhance Phase 2 participants' use of reflective thinking. There are a number of different models, which have been developed to facilitate reflective thinking including: Johns (1994) and Smyth (1989). Johns (1994) developed a set of guided questions that could be used as part of a reflective journal to assist nurses to reflect on their practice. The Johns' model for structured reflection had five core headings: (1) cue questions, (2) reflection, (3) influencing factors, (4) could I have dealt better with the situation, and (5) learning. Each core heading has a number of prompt questions to guide the practitioner through the reflective process. However, one of the limitations of the Johns' model is that it primarily focuses on the 'lower' levels of reflective thinking rather than looking at issues related to empowerment and emancipation. Smyth (1989) developed a guided reflection model that focuses on the meta-cognitive elements of reflection with questions related to underlying assumptions or beliefs of the practitioner, power relationships, and factors that constrain the practitioner's thinking.

Bulman and Schutz (2004) argued that the Gibbs Reflective Thinking Cycle (1988) is an appropriate model for enhancing professional reflection (Figure 2.2). This reflective cycle has six stages: (1) description, (2) feelings, (3) evaluation, (4) analysis, (5) conclusion,

and (6) action plan. Each heading has a number of prompt questions, which can be used to guide the practitioner through the reflective process. The Gibbs' model will be used in Phase 2 of the present study, as part of the electronic portfolio aimed at supporting participants to enhance their reflective thinking.

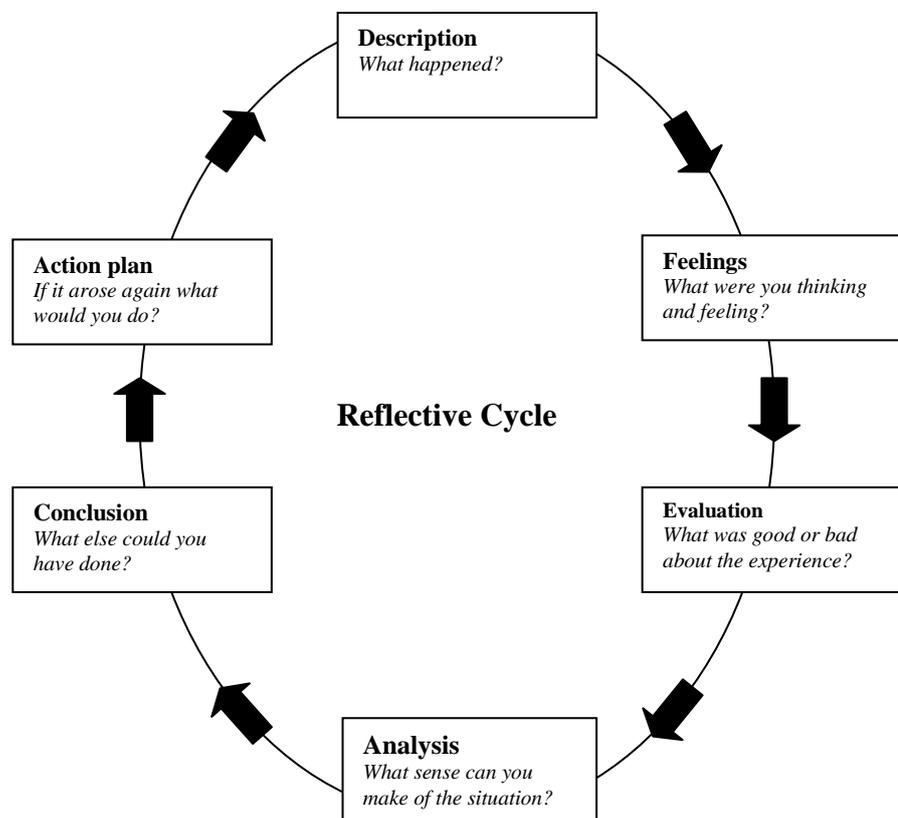


Figure 2.2: The Reflective Cycle (Gibbs 1988 in Bulman & Schutz, 2004, p.166)

### Clinical Supervision and Reflective Thinking

Professional practice is unlikely to change in isolation as practitioners find it difficult to objectify their own values and beliefs without collegial support (Freshwater, Taylor, Sherwood, 2008). Fresh et al., (2008) argued that it is the relationship between self-reflection and clinical supervision, which results in reflective practice. Bishop (2006) defined clinical supervision as:

A designed interaction between two or more practitioners within a safe and supportive environment, that enables a continuum of reflective, critical analysis of care, to ensure quality services, and the well-being of the practitioner (p. 17)

Johns (2009) identified five key aims of clinical supervision: (1) to develop practitioner competence, (2) to sustain practitioner competency, (3) to safeguard standards of care, (4) to promote practitioner responsibility for ensuring effective performance, and (5) to promote self-assessment of one's practice (p.22). Although there is a tension between the learning goals of supervision and the monitoring role the supervisor, Johns (2009) argued this conflict is mediated if the primary goal of clinical supervision is to support practitioners to be self-reflective and to monitor their own practice against service standards, within a learning framework.

### Evaluating Reflective Thinking

Hatton and Smith (1995) developed a reflective thinking evaluation tool, which they used as part of a teacher education programme. The evaluation tool drew on a number of different approaches including seminars, the use of a practicum environment, microteaching, and written tasks to promote reflection. An evaluation of this tool found that the written tasks provided the best evidence of reflection (Hatton & Smith, 1995). In the present study, evaluation of written reflective exercises using Teekman's (2000) three levels of reflective thinking will be used as one of the tools for evaluating the participant's levels of reflective thinking during Phase 2 of the study.

### Environments that Enhance Reflection

Constructive reflection occurs in environments where reflective thinking is valued, supported, and promoted (Knott & Scragg, 2007; Yip, 2006). Although the importance of the environment to reflective thinking has been highlighted in the literature, relatively little research has been undertaken to identify the key environmental factors that enhance reflective thinking. Identifying the important elements, which make the work environment of the educational psychologist a supportive environment for reflective thinking, is a key focus of Phase 1 of the present study. In addition, evaluating the influence of the

identified supports on psychologist's reflective thinking is one of the goals of Phase 2 of the present study.

Reflective Thinking and Evidence-Informed Practice  
Evidence-informed practice (EIP) was established initially in medicine where it is known as Evidence-Based Practice (Gambrill, 2005). The American Psychological Association defines Evidence-Based Practice (EBP) as "the integration of the best available research with clinical expertise in the context of patient characteristics, culture and preferences" (2006, p.273)

There has been ongoing debate in recent years over the place of reflective thinking in an EBP model (Johnstone & Dallos, 2006). In their extreme forms, EBP and reflective thinking can be seen to be mutually exclusive, as they promote different ways of developing and using theory in practice (Knott & Scragg, 2007). For example, the term EBP implies that research evidence is the primary driver in decision-making, whereas reflective practice emphasises the importance of practitioner knowledge. A more moderate position to take on the relationship between EPB and reflective thinking is to acknowledge the value of both approaches in enhancing practitioner effectiveness.

Practitioners need to take a balanced approach when gathering the information that will inform their practice. If the data are based solely on their subjective reflections, then there is a need for the practitioner to be more informed by research evidence. If the data are based solely on the available research evidence, then the practitioner needs to reflect on the available research and contextualise it to the individual and the setting (Knott & Scragg, 2007).

In recent research on the relationship between reflective thinking and EBP, terms such as “informed reflective thinking” and “evidence informed practice” (EIP) have been used.

Evidence informed practice is defined as:

“A philosophy and process designed to help practitioners to gain needed information and to become lifelong learners. It is a process (not a collection of truths) in which the uncertainty in making decisions is highlighted, we make efforts to decrease it, and clients are involved as informed participants” (Gambrill, 2005, p.253).

The concept of EIP highlights the need for reflective thinking to be informed by the research evidence (Evans & Fitzgerald, 2007).

Equally, EIP encourages “effective use of professional judgment in integrating information regarding each client’s unique characteristics, circumstances, preferences, actions and external research findings” (Gambrill, 2005, p.284).

#### Outcomes of Reflective Thinking

Limited research has been undertaken on the outcomes of reflective thinking for the practitioner. However, Moon (2004) identified eleven possible outcomes of reflective thinking for the practitioner: increased knowledge, better informed action, critical review, ongoing learning, meta-cognition, theory building, improved decision-making, empowerment, creative solutions, emotional commitment and identification of the need for further reflection. In the present study, the practitioner outcomes that will be evaluated are increased knowledge; better informed action, ongoing learning and improved decision making.

The outcomes identified by Moon (2004) are largely related to changes within the practitioner and their practice. However, a key focus of reflective practice is the outcome for clients. Although a great deal of research has been undertaken on promoting reflective

practice, studies identifying the outcomes for the client are rare (Moon, 2004). Van Manen (1991) also highlighted the importance of identifying outcomes for the learner in his definition of “mindfulness” which, he argued, is the linking of the thoughts and actions of the teacher with the outcomes for the learner. One of the goals of Phase 2 of the present study was to evaluate the outcomes of the psychologists’ reflective thinking process on the identified learners parents/caregivers, and classroom teachers. This was evaluated through semi-structured interviews with the nominated learners, parents/caregivers, and classroom teachers at the beginning and end of the psychologists’ action research projects.

#### Risks of Reflective Thinking

When undertaken in the context of a trusting relationship, self-reflection can be constructive and result in improved practice (Johns, 2009). However, under inappropriate or stressful conditions self-reflection has the potential to be destructive (Knott & Scragg, 2007). Yip (2006) argued that reflective thinking could be unhelpful under conditions such as an oppressive social or work environment, a highly critical supervisor, apathetic colleagues or a very demanding work environment. Knott and Scragg (2007) also raised concerns that self-reflection has the potential to uncover unresolved past traumas or self-esteem and resilience issues. In the present study, I was aware of the

potential risks of reflective thinking to the participants and monitored their emotional wellbeing throughout their involvement in the study. Participants also continued to have regular supervision and were encouraged to discuss their projects with their supervisors.

#### Summary of the Reviewed Literature

The way reflective thinking has been defined in the literature varies according to the theorists on which the researcher has based their work, and on the topic under investigation, such as the role of reflection in professional practice or promoting emancipation. Papers focusing on professional practice tended to concentrate on the process of reviewing experiences in order to improve future practice, whereas papers that focus on emancipation discussed issues of personal consciousness-raising and agency (Moon, 2007). The wide range of reflective thinking definitions is primarily due to the different emphasis placed on key elements of reflection and the broadening or narrowing of the definition to suit the research goals.

The literature review identified the link between reflective thinking and learning, particularly the higher level learning processes.

Constructivism, social cultural learning theory, and self-regulated learning theory were identified as significant learning theories, which underpin reflective thinking. The role of cognitive and metacognitive

skill development were discussed and a position taken that both are necessary to enhance reflective practice.

The key role of clinical supervision in promoting self-reflection through providing a safe learning environment for practitioners to discuss practice issues; including their adherence to the organisations policies and procedures was discussed. In addition, the use of communities of practice as a professional development tool to promote collegial dialogue was identified as important in the development of reflective thinking.

Models for evaluating reflective thinking were reviewed, with the Gibbs (1988) model being identified as an appropriate model for evaluating participants' levels of reflective thinking in the present study. The importance of the environmental context in enhancing reflective thinking was stressed and links were made to the goal of the current study with regard to the identification of the key environmental factors that enhance reflective thinking for educational psychologists.

The relationship between Evidence Based Practice and reflective thinking was briefly discussed, and an argument made that these are not mutually exclusive positions, as both are necessary to enhance

professional practice. Finally, the outcomes of reflective thinking for the practitioner and the client were discussed as well as the possible risks of reflective thinking for practitioners.

In conclusion, the review undertaken for the present study highlighted a number of common themes in the literature. Integrating the concepts and theoretical positions identified within the literature, the definition for reflective thinking in this thesis is:

Reflective thinking is an adaptive metacognitive and social activity by which the individual purposefully engages with self and others in an attempt to critically analyse his or her own understanding of past, current, and future experiences and events, leading to a change in perspective that influences future thoughts, actions or beliefs (Rae, 2005, Adapted from Teekman, 1997, p. 41)

### **Chapter Three: Philosophical Influences**

A participative perspective asks us to be both situated and reflective, to be explicit about the perspective from which the knowledge is created, to see inquiry as a process of coming to know, serving the democratic practical ethos of action research (Reason & Bradbury, 2001, p.7).

The process of conducting research from problem identification through to the interpretation and the reporting of findings is driven by the philosophical assumptions of the researcher. Crotty (1998) proposed that there are four elements of the research process: epistemology, theoretical perspective, methodology, and methods. Chapter Three identifies the philosophical influences that have informed my research methodology and the methods used in the present study to accomplish the research objectives.

#### **Epistemology**

Epistemology explores theories of knowledge, what we know and how we know it as well as how we communicate what we know.

Epistemological assumptions range from knowledge being something real, which has tangible properties, to knowledge being something based on individual experience and insight (Clark, 1997).

Between the seventeenth century and the middle of the twentieth century, the prevailing philosophical view in Western society was modernism. Modernism was closely associated with positivism. Positivism focused on identifying absolute truth and rational planning (Clark, 1997). Around the middle of the twentieth century, the postmodernist view of the world started to emerge. Postmodernism drew a distinction between the world as it exists and our interpretative experience of the world (Reason & Bradbury, 2001). A number of research paradigms developed out of the postmodernist view of the world including the interpretive or constructivist paradigm (McNiff, 2002). The interpretive paradigm argued that individuals understand situations based on their personal history and share their understanding through language. The collective meaning individuals give to their actions and social practices make up a group's social reality. In this view, social reality does not exist outside of the community in which it is formed. To understand individuals we need to understand the motives, values, and attitudes of the community to which they belong (Clark, 1997).

Critical theory developed out of the "Frankfurt School" in the early twentieth century, between the two world wars. A key element of critical theory was to attempt not only to understand situations or phenomena; it was to promote change by seeking "*to emancipate the*

*disempowered, to redress inequality and to promote individual freedoms within a democratic society”* (Cohen, Manion, & Morrison, 2000, p.28). Critical theory is dialectical, emphasises discourse and analytical skills and is often associated with participatory action research (Kemmis & Taggart, 2000).

Towards the latter part of the twentieth century, a participatory worldview emerged. The participatory worldview sees individuals and their communities as part of and co-creating their own world. This paradigm argues that there is an objective reality, but that an individual’s interpretation of that reality is subjective and culturally framed (Reason & Bradbury, 2001). Participatory research is primarily practical in nature and involves participation in collaborative action and inquiry. The present study is guided by the participatory worldview.

### Methodology

Methodology refers to the philosophical and political positioning of the research and informs decisions about which methods will be used, why and how. There are two main categories of research methods: quantitative (or nomothetic) and qualitative (or idiographic). Quantitative and qualitative research methodologies both have important roles to play in social science research, although each

methodology generally has different objectives and tends to use different methods to collect data (Mertens, 2010).

The present study is qualitative in nature as its purpose was to identify and explore which factors that MOE (SE) psychologists perceive as enhancing or restricting their use of reflective thinking. This objective fits well with one of the key elements of qualitative research, which is that it is undertaken in natural settings (Bogdan & Biklen, 1997).

Qualitative research also suits the explorative nature of the present study because it accepts the complex and dynamic nature of the social setting, and sets out to understand the phenomena under investigation without trying to control the context in which the phenomena is occurring (Mertens, 2010).

#### Methodology Phase 1

Research methods are the “activities we engage in so as to gather and analyse our data” (Crotty, 1998, p.6). The research setting, procedures for recruiting participants and obtaining informed consent, and the methods used to collect data in Phase 1 of this study are discussed below.

### Research setting

The Ministry of Education is a government department. Its role is to advise the Minister of Education and the wider government of New Zealand on the education system. It is responsible for shaping the direction of education for the ministry, other government agencies and education providers. The Ministry has six divisions: (1) Early Childhood and Regional Education, (2) Group Māori, (3) Business and People Capacity Group, (4) Schooling Group, (5) Strategy and System Performance Group, (6) Special Education. The role of Special Education staff is to work alongside schools and early childhood education services to provide services to children and young people with special education needs. At the time this research was undertaken, the service employed 193 registered psychologists, the majority of whom were educational psychologists. The role of the Special Educational psychologist is to work with parents, caregivers, teachers and other specialists to support children and young people with special education needs. The MOE (SE) has a national office in Wellington, four regional offices, and sixteen district offices throughout New Zealand.

### Recruiting participants and obtaining informed consent

The present study used a multi-layered approach to gain informed consent from prospective participants in both Phase 1 and Phase 2. In Phase 1, consent was gained from the MOE (SE) National Manager, Regional Managers, and District Managers, prior to Service Managers and individual psychologists being contacted to participate in the present study.

### Participants

All MOE (SE) psychologists employed during April 2005 ( $n = 193$ ), were mailed an Information Sheet (Appendix A), a Letter Requesting Participation (Appendix B), and a Self-completion Questionnaire (Appendix C). The self-completion questionnaire included a statement on the front page explaining that completion and return of the questionnaire in the reply-paid envelope constituted the individual providing his or her informed consent to participate in the research. Demographic details of participating psychologists involved are discussed in Chapter Four.

### Self-completion questionnaire

The goal of Phase 1 was to develop a detailed picture of the factors that MOE (SE) psychologists believed enhanced or restricted their reflective thinking. To collect these data a self-completion questionnaire (Appendix C) was mailed to all MOE (SE) psychologists employed during April 2005. The self-completion questionnaire was developed in January 2005 and piloted with seven MOE (SE) psychologists in February 2005. As a result, minor modifications were made to the pilot questionnaire during March 2005. Anderson (1998) argued that a pilot-test is critical to a successful survey instrument because it identifies any ambiguities in the instructions or questions and identifies any unanticipated difficulties.

The self-completion questionnaire was designed to answer the following questions:

1. What factors do MOE (SE) psychologists identify as restricting their ability to reflect on their practice?
2. What factors do MOE (SE) psychologists identify as enhancing their ability to reflect on their practice?
3. What affective factors do MOE (SE) psychologists identify as enhancing their ability to reflect on their practice?

A self-completion questionnaire is an appropriate method to answer the research questions as it allowed descriptive data to be collected from a large population in an effective and economical manner. In addition, the self-completion questionnaire method was chosen due to the extensive geographical area to be surveyed, the potential cost of accessing this information through other means such as interviews, and the ability of this method to provide an opportunity for participants to consider their answers before completing and returning the questionnaires to the researcher.

Mertens (2010) suggested that it is necessary to follow up postal surveys with reminders in order to achieve an acceptable response rate. This was done in the present study by three e-mail reminders at intervals of two, four, and six weeks. E-mail reminders invited psychologists to contact the researcher if they had misplaced their original questionnaire. In total eighty-five completed questionnaires were returned between April and August 2005.

## Methodology Phase 2

### Action Research

Many strategies developed through research are never implemented in practice because practitioners do not see them as socially valid or 'do-

able'. Wolf (1978) maintained that if research findings violated the beliefs held by practitioners, or were beyond their capability to implement, there was little chance that these findings would be adopted, regardless of their potential for success. Action research is designed to address the theory into practice gap; it is "a process of systematic reflection, enquiry, and action carried out by individuals about their own practice" (Frost, 2002, p.25 from Costello, 2003, p.4). According to Reason and Bradbury (2001):

Action research is a participatory, democratic process concerned with developing practical knowledge in the pursuit of worthwhile human purposes, grounded in a participatory worldview...It seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people (p.1)

Although most action research projects go through two or more cycles in an iterative process, there are variations in the number of stages within the action research cycle across authors. For example, Bassey (1998) has a nine stage model involving: defining the question, describing the situation, collecting and analysing data, reviewing data to find contradictions, introducing change to address the contradiction,

monitoring, analysing, reviewing, and planning future actions.

Whereas the Deakin model of action research involves identifying a thematic concern before working through the four stages of: Planning, Action, Observation, and Reflection (Kemmis & McTaggart, 1992).

The Deakin model was selected for the present study because the model recognises the importance of environmental and social factors, which is essential when undertaking practitioner research.

Under the Deakin model of action research, a thematic concern is identified. A plan is developed to address this concern. This plan is implemented in the action stage and data collected on the effect of the intervention during the observation stage. The reflection stage focuses on the action researcher looking at what changes have occurred, with the aim of enhancing their understanding of events and looking forward to plan for the next cycle of action research (Kemmis & McTaggart, 1992).

#### Types of Action Research

Carr and Kemmis (1986) identified three types of action research:

Technical or Scientific, Practical, and Critical or Emancipatory.

Technical action research focuses on changing the work place to improve the conditions of workers.

Practical action research focuses on understanding and problem solving immediate practice issues in order to improve practice.

Critical or emancipatory action research is directed at exploring social and political forces. Although the focuses of the three types of action research are different, they are all concerned with everyday practical issues and aim to bring about positive change or improvements in the current situation. They are all cyclical in nature and encourage the active participation of those affected by the research (Denscombe, 2007).

#### Participatory Action Research

Action research is "...embedded in concrete practice situations; is geared to knowledge-construction, finding meaning, and transformation of practice; and is strongly focused on the local character of problems and issues (Ponte & Smit, 2007, p.4). Therefore action research is concerned with changing and improving practice.

One of the defining characteristics of the participatory action research methodology is that the practitioner is actively involved in the research process at an early stage of the research (Meyer, Park, Grenot-Scheyer, Schwartz, & Harry, 1998). Actively including practitioners at each stage of the research process has the potential to make conducting research more complex, due to different

interpretations of the same phenomenon. However, doing so increases the validity of research findings and brings about a greater change in professional practice (Meyer et al., 1998).

Participatory action research is an appropriate methodology to use when the focus of the research is changing or enhancing professional practice (Ponte & Smit, 2007). The research process starts by building a relationship between the participants and negotiating each participant's roles and responsibilities (Stringer 1996). All participants have input into the definition of the problem or issue to be researched and the results of the study (Dick, 1997).

Participatory action research was seen as an appropriate research methodology for Phase 2 of the present study, to answer the following questions:

1. What types of reflective thinking do educational psychologists use to support their practice?
2. What scaffolding do educational psychologists report as helping them to reflect on their practice?
3. What are the outcomes of reflective thinking for the educational psychologist?
4. What are the outcomes of reflective thinking for the clients of the educational psychologist?

### Insider-Outside Action Research Partnerships

In participatory action research, the outside researcher acts as a research facilitator, who encourages the research participants to see themselves as co-researchers (Ponte & Smit, 2007, p.4). Phase 2 of the present study began when I initiated a collaborative action research partnership with the two MOE (SE) psychologists. Initially, I guided the two psychologists' action research projects as an outside researcher, but as the projects progressed and the two participants gained a greater sense of ownership of them, a more participatory action research model developed and their role as co-researchers increased.

Elliott (1991) identified a number of challenges in conducting collaborative action research. These will be discussed in relation to the present study in the following paragraphs.

In the present study, I was both a colleague and an outside university researcher undertaking my Doctorate of Education. As a researcher, I needed to ensure that there was a systematic data collection and analysis process, and that my findings would stand up to academic examination. However, the primary goal of the two participants was to enhance their practice and to improve their services to clients.

Therefore, it was important that the research questions were meaningful for the participants and that they did not find the data collection too time consuming.

One of the main challenges confronting an outside researcher is the need to understand the practice environment of the participants or inside researchers (Elliott, 1988). In the present study, I was also a current employee of the MOE (SE) and worked in the same district as the two participants; this meant that I was very familiar with the practice situation and the role of the educational psychologist.

Another challenge of conducting collaborative research is to recognise and address any power issues between the outside researcher and the inside researchers (Elliott, 1988). In the present study, my collegial relationship with both participants helped to provide a sound platform on which a collaborative research partnership based on a history of equality, mutual trust, and respect, was built.

Elliott (1991) also argued that one of the key roles of outside researcher is to be a critical friend, which involves taking on a supportive, facilitative, and reflective role with the insider researchers. Carrington and Robinson (2004) suggested that the outside researcher could support inside researchers in the following ways: facilitator, dialogue developer, collaborative planner, self-reflection advocate,

research consultant, and colleague. In the present study, support was provided to participants through the development of the electronic portfolio with a guided reflective exercise, semi-structured interviews, and through providing guidance in the process of action research when required.

## Methods Phase 2

### Research setting

The MOE (SE) District selected for Phase 2, employed thirty-four specialist staff including six psychologists at the time Phase 2 was undertaken between July and December 2008.

### Recruiting participants and obtaining informed consent

Phase 2 used a layered approach to gain informed consent from prospective participants and their clients. The nominated student was only confirmed as the focus for the psychologist's action research project after consent had been gained from the Board of Trustees/principal, the classroom teacher, and the parents/caregivers of the learner.

If at any stage an invited participant did not give written informed consent, the next individual in the research layer was not approached and the psychologist was asked to nominate a new learner.

### Participants

All psychologists employed within the selected MOE (SE) District were approached by the researcher and given the opportunity to participate in Phase 2, with three psychologists agreeing to take part in the study. However, due to unforeseen circumstances one of the three psychologists needed to go overseas for an extended period, shortly after starting Phase 2, which reduced the number of psychologists involved in Phase 2 to two.

### Data Collection Phase 2

A range of data collection methods are appropriate for action research studies, which makes it a particularly appropriate methodology for practitioner-based research. Practitioners are generally able to use data collection tools they are familiar with (McCormack, 2009). In the present study, the following methods were used.

### Semi-structured interviews

Interviews are used as a primary data collection tool in action research to identify participants' experiences, knowledge, opinions, beliefs and feelings (Best & Kahan, 2006). Interviews have the advantage of allowing the researcher to collect descriptive data using the participant's voice (Hoepfl, 1997). There are three types of interviews commonly used in qualitative research: conversational, semi-structured, and standardised (Mertens, 2010). Less structured interviews allow participants to express their views more freely (Elliott, 1991), however the wider variation in responses can make comparing responses, data organisation, and analysis more complex (Best & Kahan, 2006).

I used semi-structured interviews as they allowed me to probe the participants' understanding around predetermined areas of inquiry while still maintaining a degree of standardisation across interviews and participants (Mertens, 2010). All interviewees were asked the same basic questions, which were guided by an interview schedule to keep the interviews focused although there was some flexibility depending on whether the psychologist or their client was being interviewed and to allow interviewees to express their thoughts freely (Appendix X).

Lofland and Lofland (1984) identified a number of advantages in using interview schedules. These included maintaining a level of consistency across interviewees, ensuring good use of interview time, making the interviewing of multiple subjects more systematic and comprehensive. It is also preferable to audio record interviews, although participant consent needs to be gained first and confidentiality assured before audio recording is undertaken (Kember, 2000). In the present study, I listened to all audio-recorded interviews at the time, and made notes in relation to any non-verbal behaviour observed during the interview process. Each interview was transcribed verbatim, and then the transcripts were returned to participants to be checked for accuracy. Although transcribing interviews is time consuming, it allowed me to re read the transcript many times and to concentrate on the information recorded (Kember, 2000).

**Electronic Portfolios and Guided Reflective Journal**

A portfolio is a collection of evidence, which demonstrates the continuous acquisition of skills, knowledge, attitudes, understanding, and achievement (Brown, 2002). Portfolios support the development of reflective thinking skills (Wenzel, Briggs, & Puryear, 1998). In the present study, I developed an electronic portfolio using the Microsoft Access programme as the platform, which included a guided reflective

journal based on the Gibbs (1988) model of reflective thinking. The electronic portfolio was developed between February and July 2006, and piloted with three psychologists in August through to October 2006. Following feedback from the pilot, minor changes were made to the portfolio before it was used in Phase 2 of the present study. The electronic portfolio used in the present study was based on the New Zealand Psychologists' Board's scopes of practice framework, which identifies general and additional competencies for each scope of practice and specific knowledge and skill areas for each competency area. Following, is a brief description of how the profile was organised and operated as a data collection tool.

The front page of the portfolio asked the psychologists to identify their chosen scope of practice by clicking on one of three options: General Psychologist Competencies, Educational Psychologist Competencies, or Clinical Psychologist Competencies (Figure 3.1).

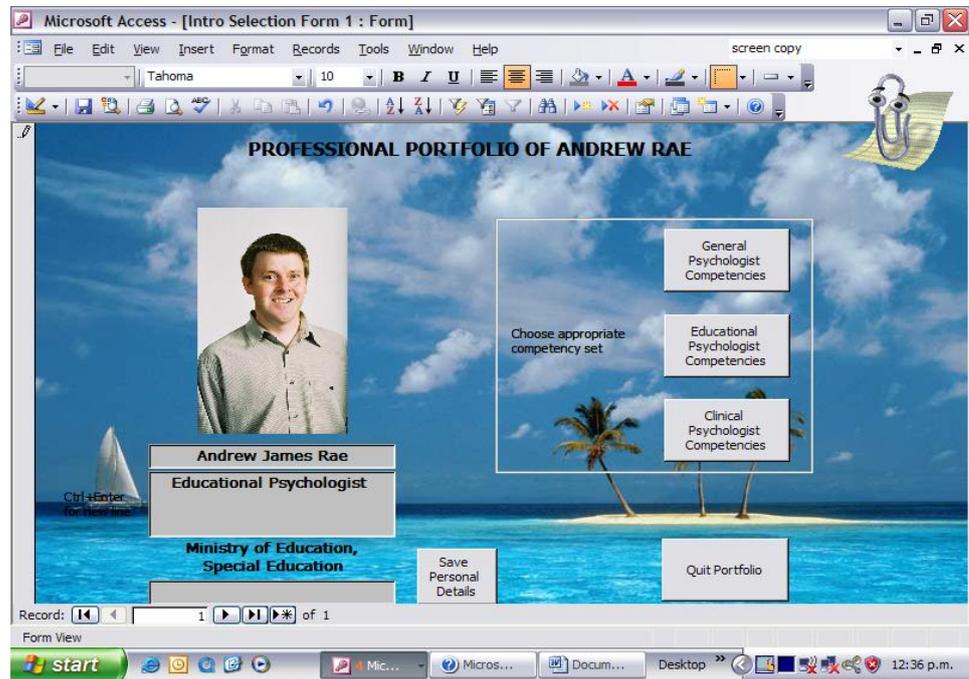


Figure 3.1: Electronic Portfolio Front Page

When the psychologist clicked on the appropriate competency button, a second page opened with buttons for all general competencies and the additional competencies specific to their scope of practice (Figure 3.2). Figure 3.2, displays the competencies for the educational scope of practice. This page also had a button called “Open Report Section Form.” If psychologists clicked this button, options for different types of reports including: individual case, a specific competency, or all competencies appeared (Figure 3.3). On the Report Section page, there was also the option to e-mail reports. In the present study, the participants used the individual case report option to send their completed reflective exercises to the researcher each week.

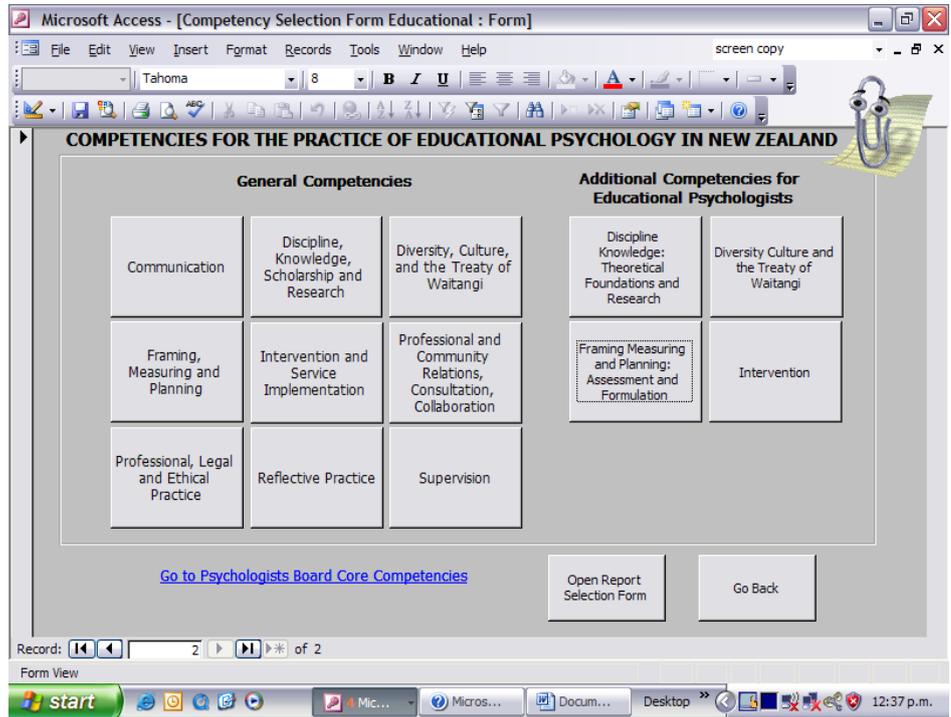


Figure 3.2: Competencies for Educational Psychology in New Zealand

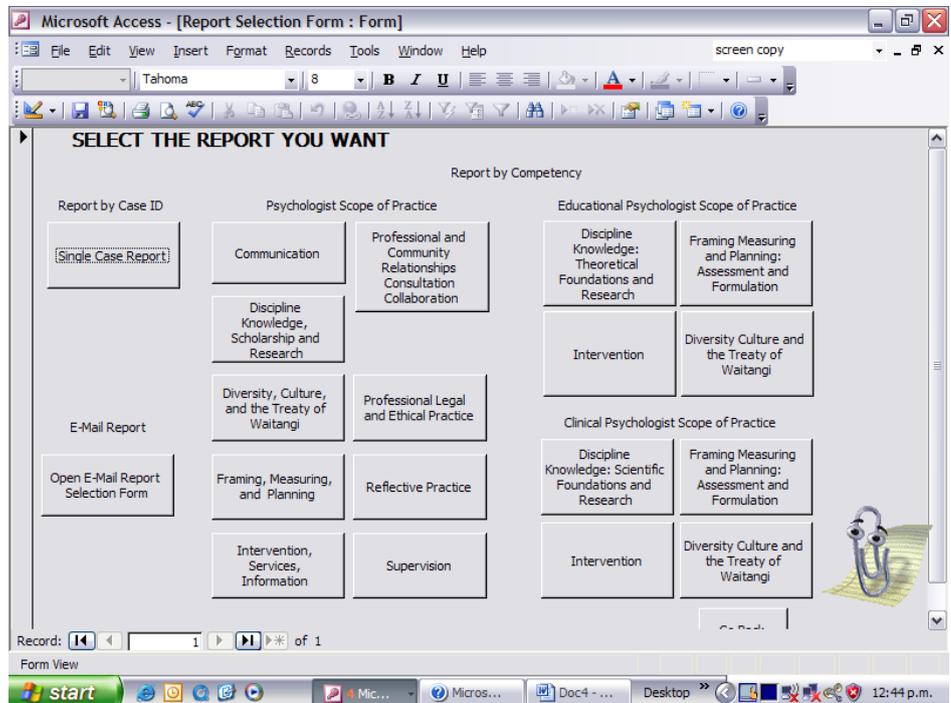


Figure 3.3: Report Section

If the psychologist clicked on one of the identified competencies when they were on the “Competencies for the Educational Scope of Practice” page (Figure 3.2), a page identifying the specific skills and knowledge areas for that competency area opened (Figure 3.4).

Figure 3.4 below, lists the knowledge and skills for the competency area of “Framing, Measuring, and Planning: Assessment and Formulation”. This page allowed the psychologist to identify the specific knowledge or skill area, which they wanted to reflect on. It also gave the option of identifying the activity they were reflecting on through a drop down menu in the lower right hand corner of the page. At the top of this page there was a button named “Reflective Journal,” if the psychologist clicked on this button the reflective journal page opened (Figure 3.5). The reflective journal page is based on the Gibbs (1988) cycle of reflective thinking. If the psychologist clicked on any of Gibbs’ eight headings, a prompt question appeared to help guide their reflective thinking. Figure 3.5 illustrates the prompt question for the heading “Description.”

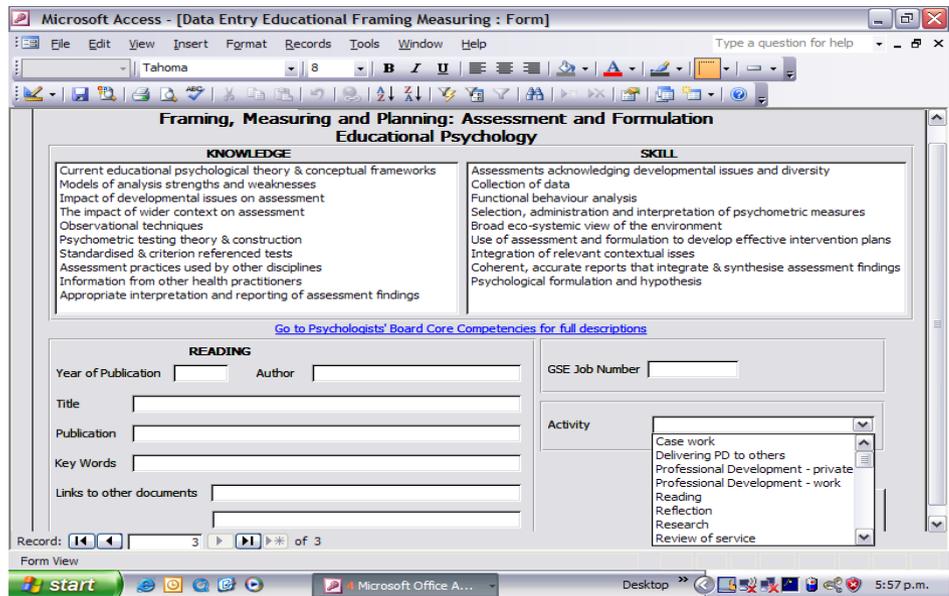


Figure 3.4: Knowledge and Skills for Framing, Measuring, and Planning

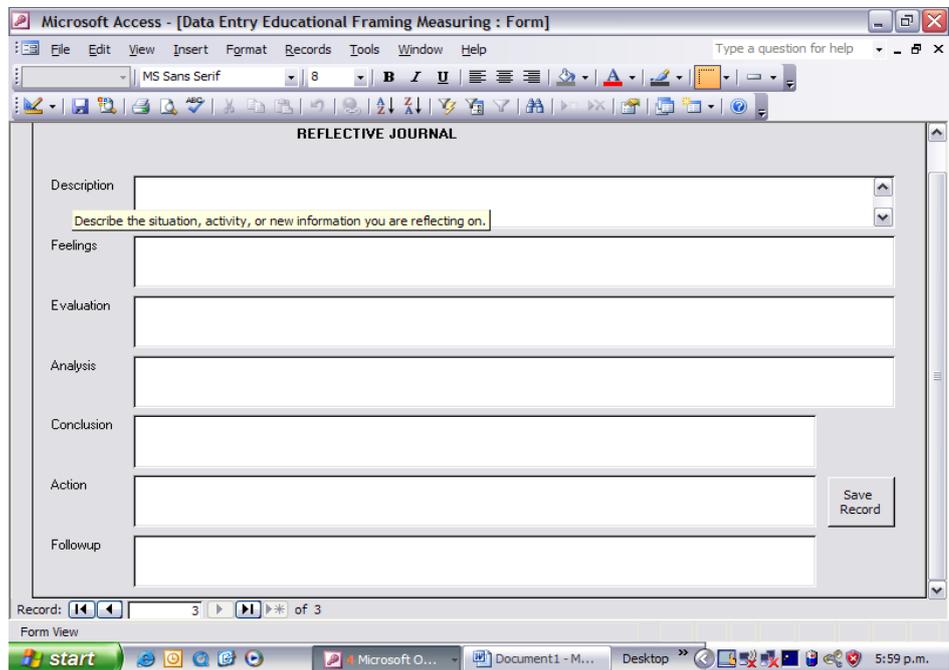


Figure 3.5: Reflective Journal

Reflective journals can be used to record participants' actions as well as their reflective development (McNiff & Whitehead, 2005). They are also excellent tools for collecting, analysing, and interpreting data (Archer, Holly, & Chasten, 2001). In the present study, each time the participant completed a reflective journal entry and saved the record, the date was automatically recorded in the database. Participants emailed me their reflective journal entries using the report function of the portfolio. Having an electronic copy of each completed journal entry gave me the opportunity to re read the entry many times and use thematic analysis to look for themes. The themes helped me to evaluate the participant's level of reflective thinking using Teekman's (2000) three levels of reflective thinking. In addition, I was also able to act as a critical friend and provide electronic and verbal feedback on the reflective journal entry to the participant. McNiff (2002) highlights the importance of maintaining confidentiality with reflective journals. However, as in the present study, researchers may negotiate with participants as to how reflective journals are used as part of the research process.

#### Analysis of Data

Qualitative analysis is "the non-numerical assessment of observations made through participant observations, content analysis, in-depth interviews, and other qualitative research techniques" (Babbie, 2010,

p. 393). The aim of qualitative analysis is to place raw data into logical, meaningful categories so that it can be examined holistically and then communicated to others (Hoepft, 1997). An important part of qualitative analysis is identifying the coding structure. There are two approaches: deductive and inductive coding. Deductive coding is based on the researcher's theoretical knowledge and therefore codes are independent of the data. With inductive coding, categories are derived from the data, which allows the critical themes to emerge (Altrichter, Posch, & Somekh, 1993). In the present study, both the deductive and inductive methods were used.

Qualitative data were coded using a Thematic Analysis approach, which followed the six phases recommended by Braun and Clarke (2006, p.87): (1) Familiarisation with your data, (2) Generating initial codes, (3) Searching for themes, (4) Reviewing themes, (5) Defining and naming themes, and (6) Producing the report. A more detailed description of the coding process is included in Chapter Four.

In the present study, the qualitative computer programme NVivo 2 was used to support the analysis of the data. Although there are later versions of NVivo, I decided to use NVivo 2 because it was appropriate for the level of analysis involved, I had been trained in the use of NVivo 2, and I had recent experience using NVivo 2 to analysis

qualitative data as part of another study. NVivo allows the researcher to manage and analyse large volumes of rich qualitative data.

Qualitative computer programmes also reduce some of the manual tasks associated with analysis, like classifying, sorting, and arranging information, thereby allowing the researcher to focus on exploring trends as well as build and test theories related to the research questions.

#### Trustworthiness of Qualitative Research

Qualitative research has been criticised as “anecdotal, unscientific, and entangled with the opinions of the investigator” (Nastasi & Schensul, 2005, p.178). However, the validity of a qualitative study should be evaluated by the “trustworthiness” of the research findings. Nastasi and Schensul (2005) identified ten techniques for ensuring that the findings of a qualitative study were “trustworthy”: prolonged engagement; persistent observation; triangulation; member checking; peer debriefing; negative case analysis; reflective journal; thick description; audit trail; and referential adequacy. The techniques used in the present study to ensure that the research findings were trustworthy are discussed below.

Nastasi and Schensul (2005) argued that engagement in the research setting needs to be prolonged to ensure that the researcher understands

the complexity of the situation and the environment. In the present study, my role as an educational psychologist with the Ministry of Education, Special Education since 2000, meant that I already had in-depth knowledge of the research setting and the role of the psychologist in special education.

Persistent observations relate to the process of checking a participant's actions to see if they are typical or atypical events (Nastasi & Schensul, 2005). Although only interview based observations were undertaken as part of the present study, the process of repeated interviewing, and weekly reflective journal exercises allowed me to identify what was atypical and typical practice for each participant.

In the present study, triangulation of the data was achieved through using a range of different tools to collect data on the participants' practice including repeated interviewing, weekly reflective journal exercises, and collegial dialogue as a critical friend. In addition, data were also collected from semi-structured interviews with the identified learners, parents/caregivers and teachers on their perception of the psychologists' practice.

Member checking was achieved by returning all interview transcripts back to the interviewee to check for accuracy and returning reflective

journal exercises back to participating psychologists with feedback as a critical friend.

Peer debriefing occurred in the present study during the data collection stage as part of the semi-structured interview process, which allowed me to ask additional questions to clarify my understanding of statements and confirm my interpretations of information received through reflective journal exercises. In addition, my research supervisors provided guidance when support was required regarding the research process.

Finally, all self-completion questionnaires, interview transcripts, and reflective journal entries have been kept to ensure that there is an audit trail for the findings of the present study. In addition, I kept a research journal to document my journey and to note down observations or ideas when they occurred, for checking or for further development, over the research period.

#### Ethical Considerations

The present study conformed to all codes of ethical conduct as set down in Massey University's "Code of Ethical Conduct for Research and Teaching Involving Human Subjects" (1997). However, qualitative research with human participants can create some potential

risk to participants in the following areas: privacy, confidentiality, consent, access, trust, disclosure, and reciprocity (Danby & Farrell, 2004; Robinson & Lai, 2006). In the present study, the ethical principles of particular importance were handling and sharing information; storage, security, return, disposal, or destruction of data; access to participants; informed consent; confidentiality, and minimisation of potential harm to participants. The way these potential ethical risks were managed is discussed in the following paragraphs.

#### Procedures for handling and sharing information

Information collected during the present study was only used for identified research purposes. All information was treated as confidential and care was taken to minimise the risk that any individual could be identified in the present thesis. All participants involved in the present study had the right to access any information they provided to me at any time during the study. Participants also had the right to ask me to remove or delete any information that they had provided but in hindsight believed should not be included in the research. All participants were given the option of having the audiotape of their interview destroyed or returned to them once the interview had been transcribed, and all parties involved checked the

transcript for its accuracy. Finally, psychologists who participated in the self-completion questionnaire were able to request a summary of the results, once the data had been analysed.

#### Storage, security, return, disposal or destruction of data

Non-electronic data collected or produced during the course of the present study was stored in a locked filing cabinet at the MOE (SE) District Office. All electronic information produced in the course of the present study was stored on my office computer, which had restricted access and was password protected. All audiotapes used for interviews were returned to the participants concerned at their request, or destroyed after they had been transcribed and confirmed as accurate by the individuals involved. Finally, individuals employed to transcribe interview tapes signed a confidentiality agreement.

#### Access to participants

Access to all potential participants and their contact details were gained through those adults/managers responsible for the welfare of the individuals concerned. Prospective participants who were approached to participate in the study were given appropriately worded Information Sheets (Appendix A), Letters Requesting Participation (Appendix M, O, Q, S, U), and Consent Forms (Appendix N, P, R, T, V). Information Sheets included the

researcher's contact details and invited prospective participants to contact the researcher if they had any questions or concerns regarding the research. Consent Forms clearly stated that participation in the study was voluntary and participants had the right to withdraw from the study at any time. Prospective participants were encouraged to take some time to consider the implications of participating in the research before signing a Consent Form.

#### Informed Consent

Frankfort-Nachmias and Nachmias (1996) identify four elements to informed consent: competence, voluntarism, full information, and comprehension. Each element was addressed in the present study.

Competence refers to the individual's ability to make a decision on whether to take part in a study. Examples where an individual's competence may be questioned include studies involving individuals who have intellectual disabilities, or involving very young children. The present study did not involve students with intellectual difficulties or very young children. Both learners selected for the present study were over 8 years of age. Information Sheets and Consent Forms used appropriate language for the individuals concerned. The Board of Trustees/principal, classroom teacher, and parents/caregivers for each

learner were required to provide written informed consent. When this was achieved, the nominated learners were approached to gain their consent to take part in this study.

Voluntarism is concerned with the level of freedom participants have to take part or decline to take part in research. In the current study, all Information Sheets and Letters Requesting Participation clearly stated that participation in this study was voluntary and participants had the right to withdraw from the study at anytime. Consent Forms given to the Board of Trustees/principals, classroom teachers, learner's parents/caregivers, and the nominated students, all explained that participation in the present study or withdrawing from the study at any time, would not affect the level of service they received from the Ministry of Education, Special Education.

Full information refers to the participant's understanding of what the research involves. Information Sheets clearly explained the research aims, research process, what is involved for each participant, and issues such as confidentiality. In addition, participants were given an opportunity to ask questions prior to them giving informed consent to take part in this research.

Comprehension means that the research participants understand the information provided. In the present study, all participants were provided with appropriately worded Information Sheets and given the opportunity to ask the researcher questions before signing Consent Forms. As a secondary check, I verbally confirmed with the nominated learner's parents/caregivers and classroom teachers, as well as with the participating psychologists, that they understood the information provided in the Information Sheets, before conducting any interviews or collecting any data related to the individual concerned.

#### Anonymity and confidentiality

In the present study, the anonymity and confidentiality of participants were protected. Data collected in the course of this research were stored in a locked and secure environment. All participants were given pseudonyms so individuals were not identifiable in the doctoral thesis report. Before any interviews were conducted, I explained the participants' rights concerning declining to participate in the study. I also explained that although the interview was confidential, if at any stage I became aware that an individual was involved in a dangerous or unprofessional practice, I would notify the appropriate persons or agencies.

### Minimisation of potential harm to participants

To minimise any potential harm to any research participant, I ensured that all participants were kept informed of the research process and any issues that had the potential to affect them. In addition, each time I met with a research participant, I reminded them of their rights and confirmed that they were still prepared to participate in the study. Finally, if any research participant had shown any signs of discomfort or stress due to being involved in the research, I would have ended their involvement in the study and arranged for the necessary support; this process was not required during the present study.

### Summary

Chapter Three discussed the philosophical influences that informed my research methodology, the methods used, and the means of analysis in Phases 1 and Phase 2. There was a description of the action research approach used, with a detailed account of the challenges of action research involving collaborative partnerships between the outside and the inside researcher. This chapter has also provided details on the development and use of an electronic portfolio with a guided reflective journal, as a tool for enhancing, recording, and evaluation of reflective thinking. Finally, there was a description

of the way in which the issue of trustworthiness of research findings and potential ethical risks were addressed.



## **Chapter 4: Setting the Scene**

Every act of the practitioner is laden with theory, values, and beliefs. The greatest advantage in the development of professional practice is the reading of one's own actions (Butler, 1996, p.269)

This chapter presents the findings of a self-completion questionnaire sent to MOE (SE) psychologists in 2005, to identify individual and organisational factors that enhanced or restricted their reflective thinking.

### **Self - Completion Questionnaire**

In April 2005, MOE (SE) psychologists (n = 190) were mailed the 'Enhancing Reflective Thinking of MOE (SE) Psychologists Questionnaire' (Appendix K). Eighty-five completed questionnaires were returned between April and August 2005.

The self-completion questionnaire was divided into the five sections: (1) personal profile, (2) training and experience, (3) factors that enhance reflective thinking, (4) factors that restrict reflective thinking, and (5) affective factors that influence reflective thinking. Sections one and two of the questionnaire focused on collating demographic

data; Sections three, four and five asked psychologists to comment on the ways that factors identified in other professional domains influenced their reflective thinking. Statistical analysis of questionnaire results was undertaken using SPSS 16.0. Thematic analysis of psychologists' comments was undertaken with the assistance of NVivo 2 qualitative analysis software.

#### Participant Demographics

The participants consisted of 54 females and 30 males, with one participant not identifying their gender. Of the 85 psychologists who completed questionnaires, 7 were between 21 and 35 years of age, 37 were between 36 and 50 years of age, and 40 were 51 years of age or older, with one participant not identifying their age. There were no responses from male psychologists in the 21-25 age group and no responses from female psychologists in the 26-30 age range (Figure 4.1). Sixty-nine of the respondents identified themselves as New Zealand Europeans, 3 as Māori, 3 as American/North American, and 9 as European (Other), with one psychologist not identifying his/her ethnicity.

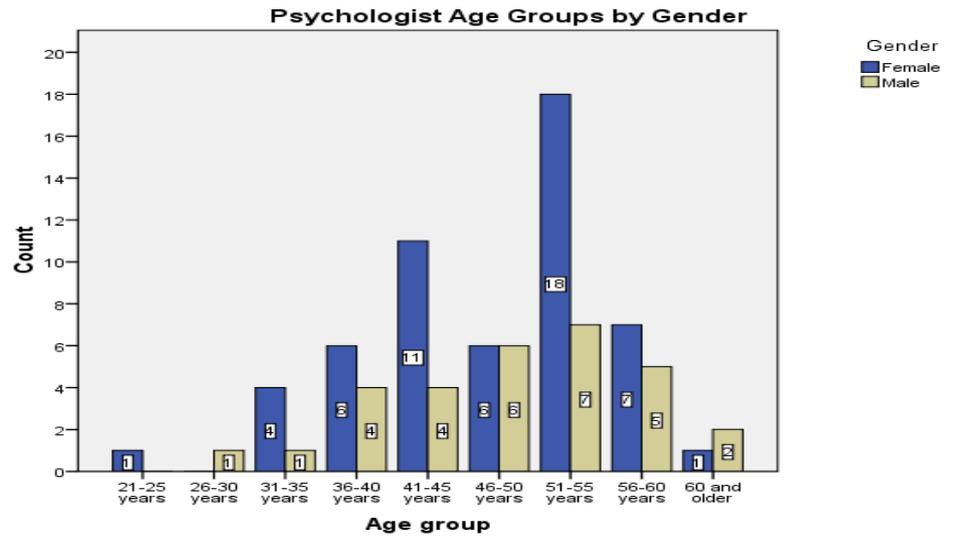


Figure 4.1 Psychologist Age Groups by Gender

Participants were asked to identify the country in which they had received their training. Of the 85 participants, 70 psychologists were trained in New Zealand, 6 in the UK, 5 in America, 2 in South Africa, 1 in Northern Ireland, and 1 in Australia.

Qualifications of the participants ranged from Doctorates to Bachelor degrees. Eight psychologists identified their highest qualification as a Doctorate, 56 identified a Postgraduate Diploma, 18 a Masters, with 2 psychologists identifying a Bachelor with Honours as their highest degree. Forty-eight psychologists reported that they had other relevant qualifications with 39 of this group reporting that they held a teaching qualification.

Participants were asked to identify what they felt was their specialist area. Sixty-four psychologists identified educational psychology as their area of specialisation, 4 identified developmental psychology, 3 identified clinical psychology, 3 cognitive-behavioural psychology, and 1 community psychology. Psychologists, who identified more than one specialist areas, identified educational psychology as well as two or more of the following specialisations: clinical, organisational, counselling, forensic, ecological, or community psychology (Figure 4.2).

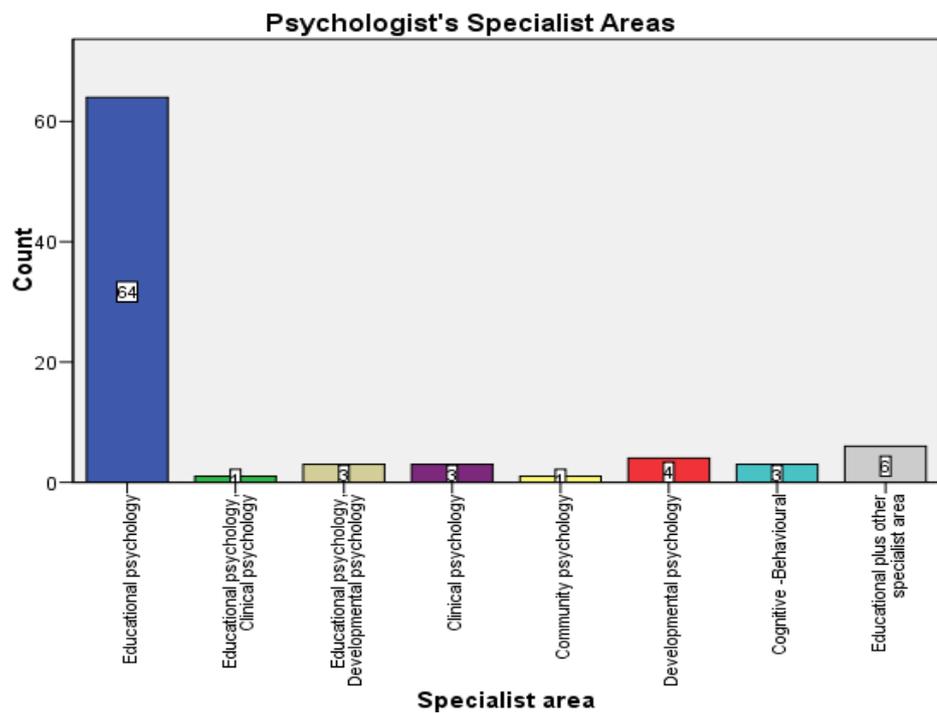


Figure 4.2: Identified Specialist Areas

The majority of participants identified their practice as behavioural or cognitive-behavioural; however, a range of theoretical perspectives were identified as influencing participants’ practice. Thirty two psychologists identified a cognitive-behavioural approach as one of the key theoretical perspectives of most influence on their practice, 12 identified applied behaviour analysis, 12 identified both cognitive-behavioural and applied behaviour analysis, and 29 identified either a cognitive - behavioural approach or an applied behaviour analysis approach as well as one or more of the following: humanistic, ecological, narrative, biological, developmental, or psychoanalytic perspectives, as influencing their practice (Figure 4.3).

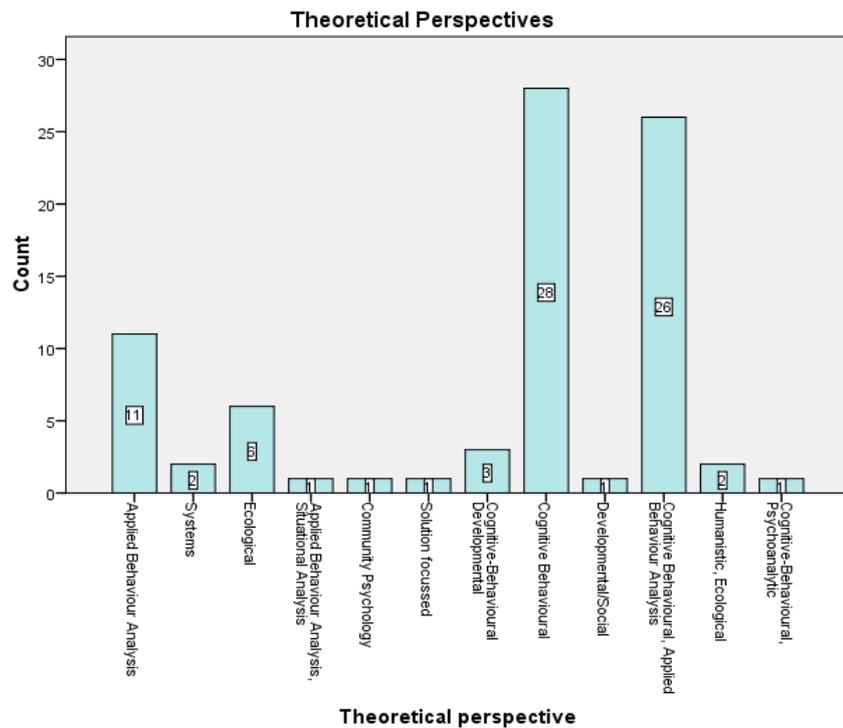


Figure 4.3 Theoretical Perspective of Most Influence to Practice

The participants' years of practice varied widely from less than 4 years to over 35 years of experience, with the majority having less than 14 years of experience. Thirty-four psychologists reported that they had been practising for less than ten years, 30 reported that they had been practising for between 10 and 20 years, with 21 psychologists reporting that they had been practising for more than twenty years (Figure 4.4).



Figure 4.4: Years of Practice as a Psychologist

## Data Analysis

### Qualitative analysis

In order to capture an overall picture of how MOE (SE) psychologists perceive reflective thinking as well as key themes from within the data, sections two, three and four of the self-completion questionnaire (Appendix K) were analysed using both quantitative and qualitative methods. The quantitative approach focused on generating a numerical expression of responses to specific questions. The qualitative analysis focused on identifying themes from psychologists' responses to specific questions regarding factors that enhanced or restricted their use of reflective thinking.

Thematic analysis of psychologists' comments followed the six phases recommended by Braun and Clarke (2006, p.87):

1. Familiarisation with your data
2. Generating initial codes
3. Searching for themes
4. Reviewing themes
5. Defining and naming themes
6. Producing the report

### Familiarisation with data

A Microsoft Word template was developed and all completed questionnaires were transcribed into the Word template (Appendix L).

The template had five sections, which matched the five sections of the questionnaire: personal profile, training and experience, factors that enhance reflective thinking, factors that restrict reflective thinking, and affective factors that influence reflective thinking.

All transcribed questionnaires were read and notes made regarding possible ideas or patterns. The development of initial ideas or patterns was influenced by the literature (a theoretical approach) as well as the data itself (an inductive approach). Richards (2005) recommended three questions to support the identification of possible themes within qualitative data:

1. What is interesting about this statement?
2. Why is it interesting?
3. What is its relevance to this study?

All transcribed documents were then electronically imported into NVivo 2.0. Using a Word template allowed section coding to be used later in the analysis process. NVivo section coding enables all answers to a specific question or section of the questionnaire to be grouped and then coded together. This process supports the researcher to identify themes that are specific to particular questions or sections of the document.

### Generating initial codes

A sub-set of the data was established and then coded as a group, in order to identify an initial coding structure and to check that the ideas or patterns that had been identified during the initial reading of the questionnaires accurately represented the main ideas or patterns.

When new ideas or patterns were identified within this sub-set, they were added to the initial list of codes. The process of coding a sub-set of data allows the researcher to build an initial coding structure, which is then used to code the full data set. The sub-set selected for initial coding consisted of 16 questionnaires (N1, N2, N7, N9, N12, N13, N20, N25, N31, N33, N35, N41, N53, N54, N62, and N76). The selected questionnaires represented one male and one female psychologist from each of the nine age groupings identified in the questionnaire. However, there were no participants who were male between 21-25 years or female between 26-30 years of age. An example of the initial codes identified from the sub-set of 16 questionnaires, are shown in Table 4.1.

Table 4.1 Example of Initial Codes Identified

Excerpt from data	Initial Codes Identified
<p>Caseloads are very high. Projects and other work make for fragmented work practice which impacts negatively on effective reflective practice- the time to do it/ prioritise it! (SCQ1)</p> <p>Self-awareness of these factors and how they help at any given time of my career. (SCQ9)</p> <p>Colleagues of similar values and ways of working. Regular supervision. (SCQ25)</p> <p>I reflect to see if I can do it better, not to demonstrate to others how effective I am – although I recognise the importance of telling people what you have done for them. (SCQ35)</p>	<p>Caseload/workload management</p> <p>Time management</p> <p>Prioritise reflective thinking</p> <p>Self awareness</p> <p>Support from colleagues</p> <p>Regular supervision</p> <p>Desire to improve</p> <p>Impressing others</p>

The self-completion questionnaire had three sections that were coded:

(1) factors that enhance reflective thinking, (2) factors that restrict reflective thinking, and (3) affective factors that influence reflective thinking. Initial identified codes were grouped under one of the three sections identified within the questionnaire (Table 4.2).

Table 4.2 Initial Codes for Each Section of the Questionnaire

<p><b>Section 3: Factors that enhance reflective thinking</b></p> <p>Time management  Supervision  Case reviews/ Collegial support  Performance reviews  Professional development  Client feedback  Safe/trusting environment  Caseload/Workload management  Organisational structure  Models/frameworks/strategies  Self awareness –values/beliefs/emotions/limitations</p>
<p><b>Section 4: Factors that restrict reflective thinking</b></p> <p>Poor work environment  High workload/caseload  Lack of time  Lack of supervision  Overly prescriptive work practices  Inexperience on the task  Limited contact with colleagues  Concerns about disclosing difficulties  Lack of organisational support  Stress/personal issues  Lack of Professional Development  Making excuses for not reflecting on practice</p>
<p><b>Section 5: Affective factors that influence reflective thinking</b></p> <p>Self-awareness  Stress/anxiety levels  Relationships  Ability to consider different perspectives  Ability to take criticism  Commitment to ongoing learning  Accepting personal responsibility  External requirements - Health Practitioner  Competency Assurance Act  Knowing your limitation  Motivation</p>

After the initial codes (also known as ‘free nodes’), had been identified and entered into NVivo as a coding structure, section coding was used on all questionnaires (n = 85), to group comments under the appropriate sections and sub-sections of the questionnaire. Section coding allowed responses to specific questions within sections to be grouped together. For example, in Section 3, question 2A asked psychologists to comment on how supervision enhances their ability to reflect on their practice.

After completing section coding, all data coded under a free node was printed off and re-read before they were recoded using the identified free nodes in Table 4.2. Care was taken to ensure that relevant surrounding information was kept with the coded segment to maintain the context of segments. Additional free nodes were added as new ideas or patterns were identified through the re-reading process. If initial free nodes were not supported by the data they were re-named, or deleted if they did not represent the data at all. NVivo allows coded sections to be linked to the original text as well as to other coded sections.

### Searching for themes

After coding the section using the free node structure (Table 4.2), each free node was printed off as a hard copy and re read to look for themes. Possible themes were identified as well as sub-themes and links between themes. Both deductive and inductive approaches were used. Deductive coding is based on the researcher's theoretical knowledge and inductive coding is derived from the data. During the reading process, any possible new themes were noted. The NVivo search tool was also used at this stage of the analysis to explore possible themes through key word or synonym searches across all data sets. These results were then analysed to check the relationship between themes and sub-themes. For example, the themes of collegial support, peer reviews, and supervision were all related themes, with trust and experience being a common sub theme for all three key themes.

### Reviewing themes

Themes and sub- themes were transferred from the hard copy notes back into NVivo programme using 'tree node' structures. Tree nodes have a key theme which is called the parent theme (representing the trunk of the tree), with sub-themes branching out of the main theme. Sub-themes can also have sub – themes of their own, which represent

'branches' coming from other 'branches'. Tree node structures were developed for sections 1, 2, and 3 of the questionnaire using NVivo. The tree node structures allowed me to clarify possible themes using 'sibling nodes' (related themes at the same level), and 'child nodes' (themes falling out of other themes). After the tree nodes had been developed all the original transcripts were re read and re-coded into the newly developed tree node structure for each section of the questionnaire. All data within each tree node were then printed off and re-read to check that the coded data under each parent, sibling, and child node formed a coherent pattern. If the coded data did not link together in a coherent manner, data were either removed from that tree node or moved to a more appropriate place within the tree node structure, or the original free node was renamed to represent the data within it. When I felt that each theme (parent node) accurately represented the data coded within it, all the coded data within each tree node for each relevant section of the questionnaire, was printed off, re-read to ensure that the identified themes accurately represented the data set as a whole and to identify and code any data that had been missed in the earlier coding process.

### Defining and naming themes

The focus of this phase of the analysis was to refine, name and provide a clear definition for major themes. Themes were examined to identify the essence of each theme and to identify what aspects of the data accurately represented by each theme. A detailed but brief analysis of each theme was written to identify the scope of the theme, its link to other themes, and the ways in which it linked to the wider data set and its relationship to the research questions. The names of each theme were reviewed, to check that they would convey the essence of the theme. For example, there were many comments related to what psychologists looked for in a supervisor such as confidentiality and honesty, but on review, the key theme was trust. Therefore 'trust' as a theme represents the essence of the key attributes that psychologists identified as critical in a supervisor. Finally, thematic maps were developed to represent the main themes identified for Sections 3, 4, and 5 of the questionnaire and to illustrate the links between themes. The key themes identified through this coding process, for each of the three sections, are explored in detail below.

**Factors Identified as Enhancing Reflective Thinking**

Section 3 of the self-completion questionnaire had two parts. Part 1 asked psychologists to list, in order of importance, the three factors that most enhanced their ability to reflect on their practice. Part 2 asked psychologists to look at a list of factors that had been identified in the literature as enhancing professional reflection (e.g. professional supervision, case reviews/discussions with colleagues, performance appraisals, ongoing professional development, client feedback, a safe/trusting environment), and then to comment as fully as possible, how each of these factors enhanced their ability to reflect on practice. Psychologists were asked to indicate on a five-point scale, ranging from 'very important' through to 'unimportant', the level of importance that each factor had on their reflective thinking.

#### The three most important factors

Psychologists identified extra time as the most important factor enhancing their reflective thinking (28%). Other factors identified at this level of importance were supervision (18%), and peer reviews/discussions (12%). Analysis of comments indicated that there was some overlap between the three themes. For example, the availability of time was a factor in accessing supervision and undertaking peer reviews. Furthermore, comments suggested that

many psychologists viewed formal supervision and informal supervision (case discussions/peer reviews etc) as serving a similar purpose with regard to enhancing reflective thinking. Examples of comments included:

*Time - acceptance that time devoted to this is important (SCQ67)*

*Having processes/systems in place that focus on/allow for supervision, peer supervision, case discussion (SCQ51)*

The second most important factor identified as enhancing reflective thinking was supervision (21%). Other factors ranked at this level included: time (11 %), dialogue/collaboration with colleagues (11%), and having a structure to assist reflective thinking (7%). Many psychologists who identified time as their most important factor identified supervision as their second most important factor and visa versa. Furthermore, as was the case with the ‘number one’ identified factors above, there was some overlap between supervision and dialogue/collaboration with colleagues. However, the new factor that emerged under the second place category was frameworks and support systems that assist or guide reflective thinking. Examples of comments included

*Supervision with peers – formal (SCQ61)*

*Dialogue/collaboration with colleagues (SCQ68)*

*Having a system/model to structure the reflection (SCQ27)*

The third most important factor identified as enhancing reflective thinking was dialogue with colleagues (24%). Other factors identified by psychologists at this level of importance were supervision (20%), and professional development (13%). The majority of participants had already identified time as their most important or second most important factor; therefore time was not a significant theme at this level of importance. Collegial support in the form of formal and informal supervision was the main theme in the third most important factor category, with professional development being a new theme to emerge. Examples of comments included

*Having colleagues who are skilled facilitators of reflection (SCQ27)*

*Professional development opportunity to be exposed to different models (SCQ67)*

In summary, when the three most important factors identified by psychologists as enhancing their ability to reflect on practice were analysed, three key themes were identified. These were time, supervision, and collegial support. The availability of time was seen as particularly important when reflecting on complex situations.

Supervision and collegial support were overlapping themes which highlighted the importance of social dialogue to reflective thinking. Overall, the data suggested that if psychologists had time, opportunities for collegial dialogue, and frameworks to guide reflective thinking, the next most important factor to enhancing reflective thinking was having new or challenging material to reflect on. Thematic analysis of the comments relating to supervision, peer reviews, and collegial support identified three sub-themes: trust, experience, and knowledge. These themes indicated that psychologists chose to engage in reflective dialogue with colleagues whom they trusted and perceived as experienced and knowledgeable in the area they were reflecting on.

#### Factors identified by other professional domains

A high proportion of psychologists rated professional casework supervision as important or very important in enhancing their ability to reflect on practice (89%). There were three key themes identified: time for supervision, a trusting relationship, and quality supervision. Analysis of these two themes supported the findings of part one, which had highlighted the importance of the relationship between the supervisee and the supervisor. Examples of comments included:

*Need to trust your supervisor, confidentiality (SCQ14)*

*Provide the opportunity to do reflection with a person who has the skills and knowledge (relating to my areas of practice) to facilitate the reflective process (SCQ59)*

Case discussions with colleagues were identified as very important or important to the reflective thinking of most psychologists (82%). As previously discussed, there was an overlap between the role of supervision and case discussions with colleagues. Thematic analysis of comments related to case discussions highlighted two key themes: timeliness and learning from others. The timeliness theme related to the ease of access to colleagues for informal case discussions rather than to scheduled supervision meetings. The theme of learning from others related to the benefit of being able to access support from a pool of colleagues who have different areas of knowledge. Examples of comments included:

*Great for getting information quickly when you need it (SCQ27)*  
*Helps me to overcome “stuckness,” staleness and provides a sense of perspective, source of ideas, challenge my thinking, sometimes provides new source of information and resources (SCQ17)*

Only a relatively small number of psychologists rated performance appraisal systems as important or very important to enhancing their

reflective thinking (17 %). In contrast, just over half the participants rated performance appraisal systems as of little importance or unimportant to their reflective thinking process (53%). Analysis of comments suggested that the ways managers used performance appraisals systems varied across districts. When the performance appraisal system was being used as a focus for discussion psychologists felt that it enhanced reflective thinking. However, when the performance appraisal system was being used to implement organisational objectives or as a checklist, psychologists felt that it restricted reflective thinking. In general, analysis identified two main opposing themes: an opportunity to examine practice, and irrelevant to reflective thinking. These two themes appeared to be heavily influenced by the way the management structure in the relevant District Office was using the performance appraisal system.

Examples of comments included:

*Focuses you to stop and evaluate from time to time possibly on those cases that are less demanding and therefore less likely to be reflected on in busy work schedule (SCQ1)*

*Performance appraisal systems seen to be driven by the organisation's agenda, I'm not clear about that agenda.*

*Anyway I find the process almost irrelevant in terms of reflective thinking (SCQ81)*

Ongoing professional development was identified as important or very important to reflective thinking by 93% of psychologists. Analysis of comments indicated that psychologists viewed professional development as a means of reviewing current practice as well as learning new skills; both of these perspectives were seen as enhancing reflective thinking. Examples of comments included:

*Professional development allows opportunity to review what I am currently doing (SCQ2)*

*Critical aspect of evolving current knowledge and practical insight into leading edge approaches and current analyses of existing theories and practice (SCQ10)*

Client feedback was rated by psychologists as important or very important to enhancing reflective thinking (83%). Psychologist commented that it was often difficult to get accurate feedback from parents, as they believed that many parents did not say anything even if they were dissatisfied with the service. In addition, positive feedback from a school did not necessarily mean that there was a good outcome for the learner, as sometimes the school had other objectives such as maintaining teacher aide time. Analysis of comments focused on two key themes: ongoing process and promoting personal reflection. The theme ‘ongoing process’ related to the need to seek client feedback at different stages of service delivery. The personal

reflection theme related to the need to use feedback as a catalyst for reflective thinking. Examples of comments included:

*The client feedback I find most informative is the ongoing direct feedback through checking/listening and indirect feedback- body language, responsiveness etc (RTS38)*

*Extremely valuable – our work is about making a difference for others. If they comment on how this has helped/not helped them, we learn. Much of my ‘learning’ took place this way. (RTS82)*

Almost all participants rated a safe working environment as important or very important to enhancing their reflective thinking (93%).

Analysis of comments highlighted the importance of positive collegial relationships to reflective thinking. There were three key themes identified: trust, communities of practice and professional growth.

Trust of colleagues, management, and the organisation provides the foundation for reflective thinking. In an environment with high levels of trust, psychologists feel safe to share their practice with others, were willing to acknowledge their own limitations and view communities of practice as opportunities to learn from each other.

Examples of comments included

*Trust is vital. You are baring your self and your practice, warts and all (SCQ36)*

*The whole community of practice approach is pivotal to me. Providing all of us the opportunity to collectively reflect and scaffold each other’s learning (SCQ40)*

*This is necessary for me to be totally honest about my practice and thoughts, which generates the best feedback on how I'm doing (SCQ15)*

#### Additional Factors Identified as Enhancing Reflective Thinking

Three additional key themes were identified from psychologists' responses to Section 3: time management, personal attributes (Open-mindedness, Whole-heartedness, and Responsibility), and structures or processes that assist and guide reflective thinking. These three themes are discussed in more detail below, along with supporting comments from psychologists.

Psychologists recognised the importance of making time for reflective thinking but also commented that prioritising time for reflection can be challenging due to heavy workloads and difficulties with coordinating meetings with supervisors. Preparation time to gather one's thoughts was also seen as important to maximise reflection during supervision, as was taking the time to build trusting relationships with colleagues. The key theme was that psychologists need to have good time management skills. Examples of comments included:

*The only factor that restricts my ability to reflect on practice is my own choice of how I structure my time (SCQ48)*

*TIME: This is the most important to me. I need to do this before I go to supervision etc. otherwise I haven't clarified the issues deeply enough and the supervision is less effective (SCQ27)*

*Very important and takes a great deal of time to build relationships with the key players in a case e.g. parents, teachers, support workers, other team members, as well as the child (SCQ1)*

Psychologists commented that the personal attributes of open-mindedness, whole-heartedness, and responsibility as identified by Dewey (1933), lay the foundation for self-reflection. Psychologists' comments suggested that they believed that reflective thinking starts with a personal commitment to looking at one's own practice.

Examples of comments included

*Professionals are self-directed based on values, philosophy, ethics, & motivators (SCQ72)*

*Willingness to accept personal responsibility for professional practice (SCQ28)*

Finally, frameworks or processes that guide reflective thinking were seen as enhancing a psychologist's ability to reflect on their practice. Processes such as supervision, peer reviews, and frameworks of analysis, which have reflection as a component within them (for example, problem analysis and situational analysis frameworks), were

seen as supporting reflective thinking. Examples of comments included:

*Having strategies/framework for reflection would also help (SCQ38)*

*I found the problem/situational analysis model more accommodating for reflective practice during analysis (SCQ8)*

#### Thematic Map of Factors that Enhance Reflective Thinking

The thematic map (Figure 4.5) is based on an analysis of the factors that have been identified by participants as enhancing reflective thinking. Figure 4.5 identifies three key themes: Intra-personal (cognitions and emotions), Social (relationships) and the Work Environment.

Each of these three themes or areas interacts with the other; a change in one can effect a change in the other two areas. For example, a change in the work environment that supports reflective thinking may increase an individual's willingness to engage in reflective thinking and enhance opportunities for collegial dialogue.

I have named the fourth theme scaffolding. Scaffolding refers to systems and processes that guide or facilitate reflective thinking. Scaffolding can operate within any of the preceding three areas.

For example, scaffolding such as an individual learning better time management skills may reduce levels of stress and lead to improved collegial relationships, and increase opportunities for group reflection. Scaffolding at an organisational level in the form of better work allocations systems, may create time at an individual level for case reviews, leading to opportunities for individual and collegial reflection.

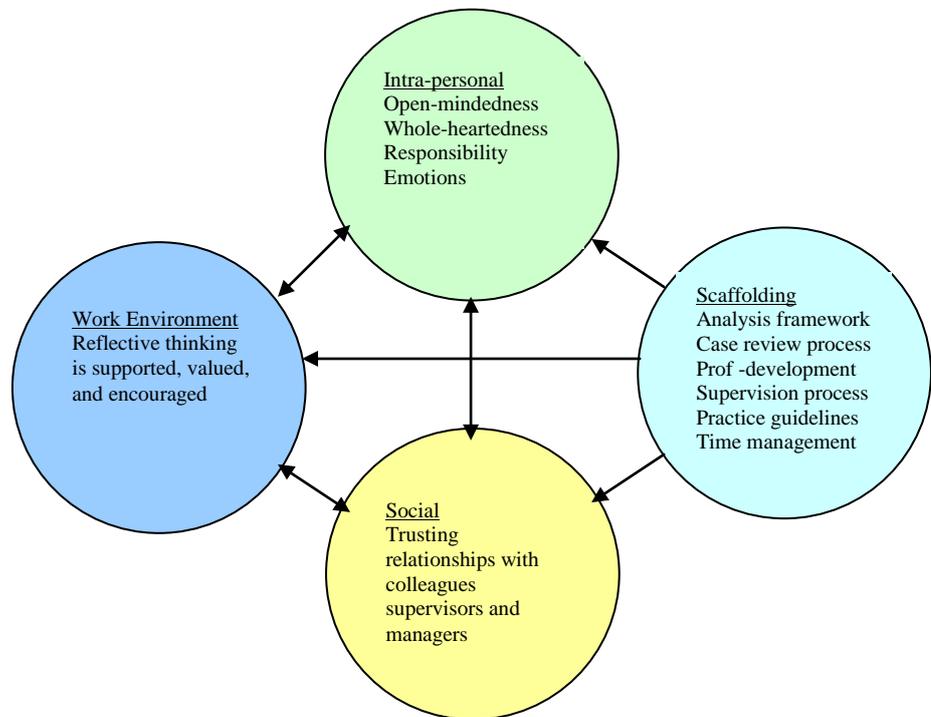


Figure 4.5 Key Factors Identified as Enhancing Reflective Thinking

#### Factors Identified as Restricting Reflective Thinking

Section 4 of the questionnaire had two parts. Part 1 asked psychologists to list the three factors that most restricted their ability to reflect on practice, in order of importance. Part 2 asked psychologists to look at a list of factors that had been identified by other professions as restricting professional reflection. These were overly prescriptive casework practices, inexperience with the task at hand, lack of contact with other team members/colleagues, concern about disclosing difficulties to colleagues, the organisation's attitude towards professional reflection, and high workloads or competing demands. Respondents were asked to describe as fully as possible the way each of the factors restricted their ability to reflect on practice. Psychologists were also asked to indicate on a five-point scale, ranging from 'unimportant' through to 'very important', the impact of each factor on their reflective thinking.

Psychologists identified high caseloads/workloads as the major factor restricting reflective thinking (39%). Other factors also ranked at this level were a lack of time (28%), and unsafe work environments (6%). Comments related to high caseloads/workloads often mentioned a lack of time for reflective thinking, which suggested that these two themes were strongly related. Comments related to an unsafe work environment also mentioned high stress levels and low levels of trust

between colleagues, with management, and at an organisational level, indicating a relationship between these themes. Examples of comments included:

*Large caseloads and poorly managed caseloads that don't allow time/energy for reflection (SCQ51)*

*Lack of regular/frequent enough supervision to allow for as much time for reflection as would be most helpful (SCQ38)*

Many psychologists identified a lack of collegial support, including a lack of appropriate supervision as the second most important factor restricting reflective thinking (20%). Other factors identified at this level of importance were high caseload/workload issues (19%), and a lack of time (15%). The relationship between high workloads and a lack of time for reflective thinking has been highlighted above although comments also indicated a relationship between time and the complexity of the work. The lack of appropriate supervision was also related to training for supervisors and difficulties accessing other psychologists for support, particularly in smaller offices. Examples of comments included:

*High caseloads, which have high complexity (SCQ10)*

*Lack of experienced supervisors in your office (SCQ8)*

Psychologists identified a lack of collegial support, including comments related to a lack of appropriate supervision, as the third

most important factor that restricted reflective thinking (13%). Other factors identified were high levels of stress and anxiety (11%), workload/caseload (11%), and a lack of time (8%). The themes of a lack of collegial support, high workloads/caseloads, and a lack of time have already been discussed above. However, the theme of stress and anxiety was a relatively new theme. Analysis of comments indicated that there was an association between this theme and a lack of trust and high workloads/caseloads. However, some comments also indicated that an individual's overall emotional state played an important role. Examples of comments included:

*Personal blocks mean I can't face issues (SCQ29)*

*Too many clients – i.e. high workload causing stress (SCQ81)*

*Too little time and limited access to supervision; regular or incidental as crises arise leads to increased levels of stress and anxiety (SCQ1)*

In summary, analysis of the three factors identified by psychologists as most restrictive of reflection identified three key themes: high workloads, a lack of time, and a lack of collegial support. Further analysis revealed an interrelationship existed between these three themes. For example: psychologists believed that high workloads lead to a lack of time for reflective thinking. Comments regarding high workloads were often related to increased levels of anxiety and stress and a lack of collegial support. However, stressors from outside of the

work environment were also acknowledged as influencing one's emotional state and therefore one's ability to reflect on individuals practice.

#### Factors Identified by Other Professional Domains

A little over half of the psychologists rated overly prescriptive casework practices as an important or very important factor in restricting their ability to reflect on practice (53%). However, the other half of the psychologists felt that overly prescriptive casework practices were only moderately important, of little importance, or unimportant (46%). An analysis of comments identified three key themes: devalues professional skills, professional obligation, and provides a supportive framework. Analysis of comments found that the psychologists' view of prescriptive casework practices was largely dependant on their perception of how these prescriptive casework practices were being implemented in their District. If prescriptive casework practices were viewed as being applied too inflexibly or used as a compliance tool, than psychologists felt that professional skills and reflective thinking were being devalued. If, however, prescriptive casework practices were being used as a 'guideline' for practice, than they were seen as supporting reflective thinking. Examples of comments included:

*The standards are too idealistic (not realistic/ often intrusive to clients). Preoccupation with meeting these standards gets in the way of reflective thinking as one becomes preoccupied with what the organisation expects rather than the effectiveness of what one is doing (SCQ81)*

*This could significantly restrict reflective practice if people used the system as a box ticking instead of thinking about what they are doing and the kind of information they are collecting (SCQ22)*

Inexperience with the task was seen as important or very important by a quarter of participants (25%). However, most participants rated inexperience with the task as only moderately important (21%) or of little importance/unimportant (41%). Analysis of psychologists' comments highlighted two key themes: encourages reflective thinking, and recognising limitations. Whether inexperience restricted or enhanced reflective thinking depended on how the individual psychologist responded to the new experience. For example, if the new situation caused anxiety and stress, then reflective thinking was restricted; if however the new situation was seen as an opportunity to learn then reflective thinking was enhanced. Whatever the individual's response, psychologists identified that it was important when dealing with new situations to recognise one's limitations and to seek support from more experienced colleagues to ensure safe practice. Examples of comments included:

*Creates high levels of anxiety which hinders ability to reflect but practitioner should take responsibility in searching literature etc to gain more understanding (SCQ41)*

*Inexperience can be a barrier in limiting one's ability to reflect, but it can also be a strength if one acknowledges one's limitations and approaches the task with an open mind, a willingness to learn, and seeks opportunities to read/discuss with colleagues (SCQ64)*

A high proportion of psychologists identified a lack of contact with colleagues as an important or very important factor in restricting reflective thinking (61%). However, comments suggested that for most participants this was not currently an issue in their work environment. The key themes identified from an analysis of comments were isolation and professional obligation. Where participants indicated they felt isolated due to a lack of contact with colleagues it was due to their geographic location and/or poor collegial relationships. In either situation psychologists recognised that seeking collegial support when required was a professional obligation. Examples of comments included:

*The geographical region in which I work means that I lose contact with others (SCQ56)*

*I haven't experienced this but would consider it my job to create contact i.e. by e-mail, time protected phone contact (SCQ69)*

*This job cannot be done effectively and safely without contact with colleagues (SCQ35)*

Views were divided on concern about disclosing difficulties to colleagues; half the participants rated it as moderately important, important, or very important (50%) the other half felt that it was of little importance or unimportant (47%). Comments suggested that while psychologists believed that concern about disclosing difficulties would restrict reflective thinking, in most cases, it was not an issue in the current work environment. An analysis of participants' comments identified two main themes: trust and responsibility. In general, the participants who rated concern about disclosing difficulties as important also emphasised the importance of trust in collegial relationships and the environment. Participants who rated concern about disclosing difficulties as unimportant stressed their professional responsibility to build trusting relationships with colleagues and to seek collegial support when it is needed. Examples of comments included:

*Creating a non-judgemental culture that proactively seeks to improve what we are doing is vital (SCQ70).*

*It is important to have trust, but also my responsibility to build trust with someone, may need me to search for a person who can fulfil that role (SCQ69)*

A little over half of the respondents rated the organisation's attitude towards reflective thinking as an important or very important factor in

restricting reflective thinking (60%). Analysis of comments identified two key themes: professional responsibility and organisational support. Psychologists recognised that reflective thinking is an ethical and professional responsibility. However, working in an environment that values, supports and promotes reflective thinking was seen as creating opportunities for reflective thinking. The majority of participants commented positively on the Ministry of Education, Special Education's level of support for reflective thinking, however some felt that there was a discrepancy between what the organisation promoted and what actually happened at a line managed level. Overall, it appears that psychologists' view of the organisation's attitude towards reflective thinking was heavily influenced by their district management team. Examples of comments included:

*I have a professional duty towards safe practice, which involves reflection, and so need to work with the organisation to make it happen (SCQ69)*

*Management may say they want us to improve our practice through reflective practice but the reality is that only "numbers" seem important i.e. x number of students discharged x number of training sessions run etc (SCQ14)*

A high proportion of psychologists rated high workloads or competing demands as an important or very important factor in restricting reflective thinking (86%). Thematic analysis of comments identified

the following key themes: time, stress, and joint responsibility. There was a frequent link made between high workloads, a shortage of time, and increased stress levels. Psychologists believed that managing workloads was a joint responsibility between themselves and their managers although comments suggested that some had minimal input in their workload allocations. Examples of comments included:

*Ultimately, it's my responsibility regarding the external factors. I'm responsible for practicing safely, as a registered psychologist (SCQ69)*

*This definitely gets in the way. As a professional this is probably one of my biggest challenges- balancing the demands of the organisation with the demands of my practice (SCQ81)*

The thematic map (Figure 4.6) has been developed from an analysis of the factors that psychologists identified as restricting reflective thinking. Figure 4.6 identifies three key themes: (1) Intra-personal challenges (emotions and attributes), (2) Social difficulties (relationships), and (3) Unsupportive work environment. Each of these three themes interacts with each other; a change in one area can lead to a change in the other two areas. For example: a line manager who does not value reflective thinking (unsupportive work environment) may not allow time for reflective thinking when allocating workloads. This may cause the individual psychologist to feel overloaded and stressed (Intra-personal challenges), and lead to

tension in their relationships with colleagues and low levels of trust between colleagues (Social difficulties). The fourth theme is ‘Lack of scaffolding’. Scaffolding refers to the systems, tools and processes that guide or facilitate reflective thinking. A lack of scaffolding within any of the three identified areas will affect the other two areas. An absence or restriction of scaffolding creates challenges to reflective thinking.

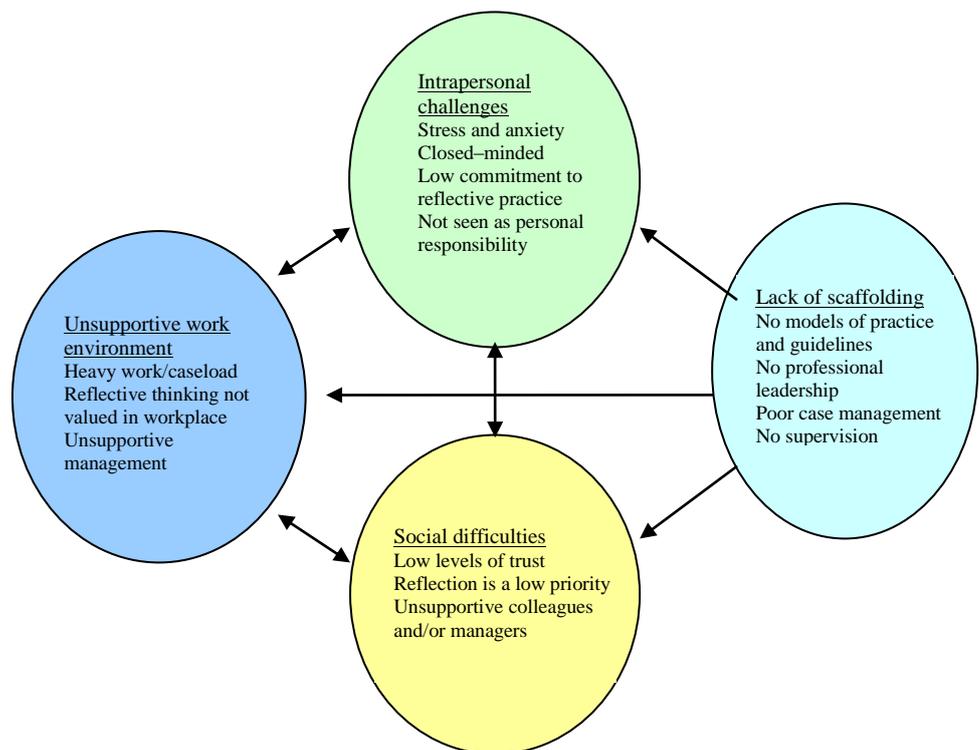


Figure 4.6 Factors Identified as Restricting Reflective Thinking

**Affective Factors that Influence Reflective Thinking**  
 There were two parts to Section 5 of the questionnaire. Part 1 asked psychologists to list in order of importance the three most important

affective factors that influenced their ability to reflect on practice.

Part 2, provided a list of affective factors identified in the literature as influencing professional reflection and asked psychologists to comment as fully as possible on the influence that each factor had on their ability to reflect on practice. Psychologists were asked to indicate the level of importance of each factor to their reflective thinking on a five-point scale, from very important to unimportant. Psychologists identified a large range of affective factors that positively and negatively influenced their reflective thinking. Factors that were closely related or were variations on a similar theme were grouped together. For example: ethical responsibility and professional responsibility were seen as representing a similar theme.

A high proportion of participants identified a personal belief in the importance of continuous learning/reflection as the most important affective factor influencing reflective thinking (65%). Other themes identified at the most important level were: stress/anxiety (11%), and self-belief in one's ability (11%). A belief in the importance of continuous learning/reflection is similar to the attribute of 'Whole-heartedness' identified by Dewey (1933). However, the last two factors related to the individual's emotion, which emphasises the importance that psychologists place on their emotional state with

regard to enhancing or restricting reflective thinking. Examples of comments are given below.

*Personal commitment to one's own continuous learning and improvement (SCQ28)*

*Stress and levels of anxiety, no creative reflection when these are high (SCQ13)*

*Confidence or self-belief that I am doing effective work, but recognition that improvements in my practice can be made (SCQ51)*

Open-mindedness to new ideas was the second most important affective factor identified by psychologists (22%) Other factors rated as the second most important factor were: a commitment to learning through reflective thinking (22%), and self-belief in ones ability (8%). The first two identified affective factors are similar to Dewey's (1933) attributes of "Open-mindedness and 'Whole-heartedness', however once again the last factor 'self-belief' highlights the importance of emotions in reflective thinking. Examples of comments are given below.

*Wanting to provide "the best" professional practice and using reflective thinking to identify positive and negative elements of my practice; things that could be done differently (SCQ59)*

*Openness to new ideas, concepts, points of view (SCQ23)*

*A belief that I can make a difference for the client (SCQ35)*

Open-mindedness to learn from others was the affective factor most commonly cited as the third most important affective factor (25%). Other factors ranked at this level were: stress and anxiety issues (13%), and work satisfaction (7%). Dewey's (1933) attribute of 'Open-mindedness' was once again identified as the most common number three affective factor and (as was the case with the number one and two most important affective factors), the psychologists' emotions were highlighted as one of the affective factors most likely to influence reflective thinking. Examples of comments are given below.

*Keeping an open mind to where people are coming from, being sensitive and trying to understand their worldview (SCQ15)*

*Taking care of myself to ensure my levels of stress and anxiety is not negatively influencing my practice (SCQ54)*

*I have a "big heart" (passion) for this work. I love it (SCQ72)*

Affective factors identified in the literature as influencing reflective thinking

Almost all psychologists rated the ability to consider a problem from a different perspective (Open-mindedness), as an important or very important affective factor, influencing reflective thinking (93%).

There were two key themes identified from their comments; flexibility and relationships. Psychologists believed that flexible thinking, challenging their own thinking and being open to challenges from

others were key attributes of reflective thinking. In addition, openness to different perspectives was also seen as vital to developing relationships with the key people involved in a case. Examples of comments are given below.

*Very relevant, there is no “one way” some of the best ideas come when one’s mind is open to new possibilities, close it and you’ll miss them (SCQ78)*

*Very important and takes a great deal of time to build relationships with the key players in a case e.g. parents, teachers, support workers, others team members, as well as the child (SCQ1)*

A very high proportion of psychologists rated personal commitment to continuous learning (Whole-heartedness), as an important or very important affective factor (95%). Analysis of comments identified two key themes: enhancing services and reflective learning.

Psychologists saw improving services to clients as a key motivator for their commitment to ongoing learning. They also believed that there is a circular relationship between reflective thinking and professional learning in that reflective thinking identifies the need for professional development, and professional learning identifies the need for reflective thinking on one’s current practice. Examples of comments are given below.

*Reflection means, and hopefully leads to, learning and doing things “better” (SCQ56)*

*The more one knows, the more one knows what there is yet to learn (SCQ6)*

*In the professional field of psychology, you never know it all.*

*Theories and research changes, you need to commit to ongoing professional development (SCQ55)*

All respondents rated a willingness to accept responsibility for their professional practice as an important or very important factor in reflective thinking (100%). There were two key themes identified from their comments: professionalism and managerial support. Psychologists believed that taking responsibility for their own professional practice was critical as a professional. However, many psychologists also commented this is easier when management understand the responsibilities of being a registered psychologist and provide support to exercise this responsibility. Examples of comments are given below

*A psychologist cannot blame anyone else for unprofessional practice (SCQ37)*

*It's up to me to manage my work life with my managers and clients no matter what problems and constraints exist (SCQ28)*

*This is undermined by management attitudes, which do not have the same commitment to the standards (SCQ47)*

Along with the three key themes identified above, the theme of emotional readiness was also identified from thematic analysis of psychologists' comments, as a key affective factor. Comments

suggested that high levels of stress and anxiety restricted reflective thinking, whereas more settled and calm emotions facilitated reflective thinking. Emotional readiness relates to the affective element of what Taylor (2006) called 'readiness to reflect'. Taylor argues that readiness to reflect "comes from silence from within oneself, some knowledge of concepts and a willingness to practice skills, and the qualities of taking and making time, making the effort, being determined, having courage and knowing how to use humour (Taylor, 2006, p.84). Examples of comments are given below:

*Stress levels, no creative reflection when these are high (SCQ13)*

*Stress because of time and caseloads ends you up in a strange headspace. The anti-reflective headspace I'd say (SCQ49)*

*It is sometimes easier to reflect when you are not stressed because at these times you are more open to critically examining your practice - better headspace (SCQ78)*

Thematic analysis of the affective influences identified by psychologists as influencing their reflective thinking, identified four themes: (1) Open-mindedness (objectivity and a willingness to learn from others), (2) Whole-heartedness (commitment to learning and reflective thinking), (3) Responsibility (professional and ethical practice), and (4) Emotional readiness (low levels of stress and anxiety, confidence, inner calmness and self-belief). The first three

themes are the three attributes identified by Dewey (1933). The fourth theme, emotional readiness, influences the other three by setting the stage for reflective thinking. For example, if psychologists feel calm and confident in their ability they are more likely to discuss their practice with colleagues, whereas if psychologists feel stressed and do not trust their colleagues they are less likely to discuss their practice with others. Figure 4.7 shows the thematic map developed to illustrate key affective factors that influence reflective thinking.

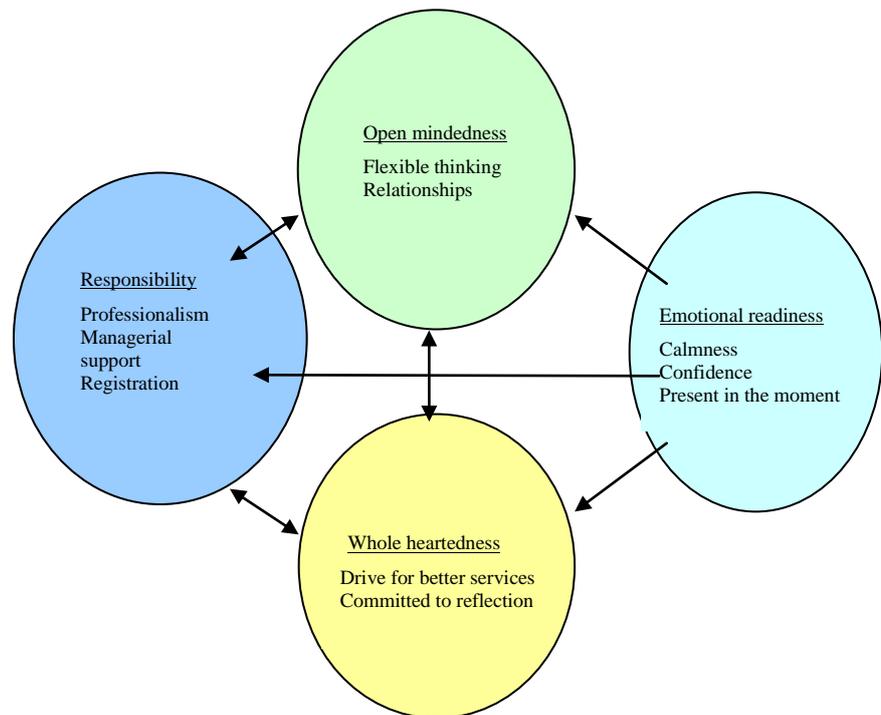


Figure 4.7: Affective Factors that Influence Reflective Thinking

### Summary

The present study identified four themes or areas, which enhance psychologists' reflective thinking: (1) Intra-personal (cognitions and emotions), (2) Social (relationships), and (3) Work Environment, and (4) Scaffolding (systems or processes that support reflective thinking). A lack of support for reflective thinking in any of the four identified areas restricted reflective thinking of psychologists. Psychologists were also asked to comment on the affective factors that enhanced their reflective thinking. Thematic analysis of participants' responses identified four key themes: (1) Open-mindedness (objectivity and a willingness to learn from others), (2) Whole-heartedness (commitment to learning and reflective thinking), (3) Responsibility (professional and ethical practice), and (4) Emotional readiness (low levels of stress and anxiety, confidence, inner calmness and self-belief). Thematic maps were developed for each section leading to a final thematic map of the key factors identified as enhancing psychologists' reflective thinking (Figure 4.8).

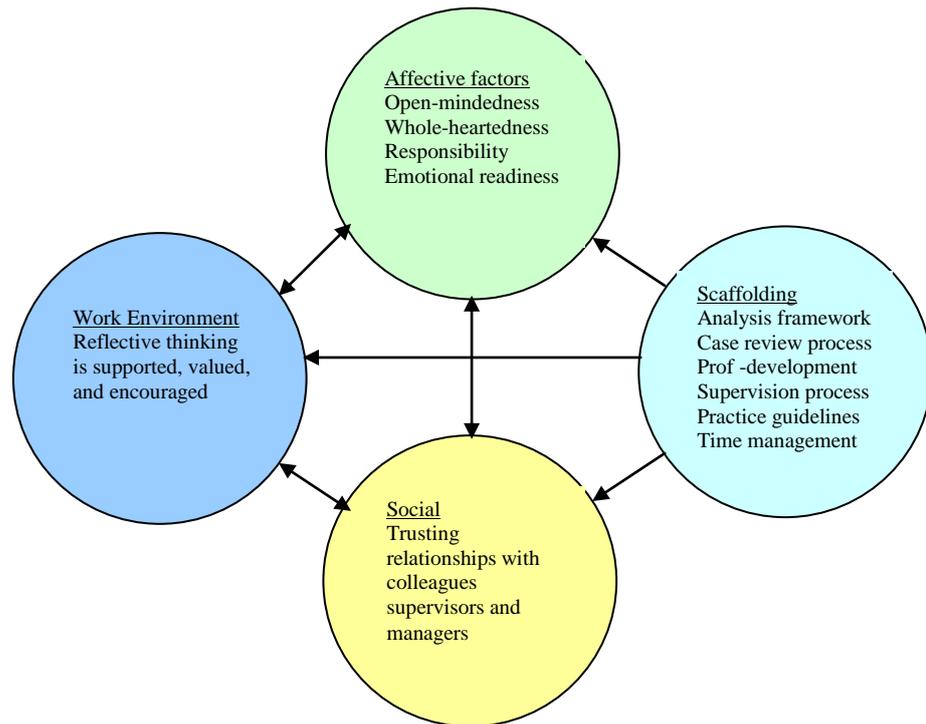


Figure 4.8: Key Factors Enhancing Psychologists’ Reflective Thinking

### Planning for Phase 2

In Phase 2, a small group of psychologists are asked to nominate a learner they are currently working with. The service provided to this student, their parents/caregivers, and the classroom teachers became a focus of the participating psychologists’ action research project and weekly reflective journal exercises over a twelve-week period. The

key scaffolds identified in Phase 1 as supporting reflective thinking will be put in place in Phase 2 of the study to support the participating psychologists to reflect on their practice.

Over the course of the participants' action research projects, the impact of the identified scaffolding on reflective thinking will be evaluated to identify the outcomes for the psychologists and for their clients, the learners.



## **Chapter Five: Theory into Practice**

We actually find out who we are when we watch ourselves act  
and what we think when we hear ourselves say something  
(Huberman, 1992, p.9)

Chapter five provides a detailed description of Phase 2 of the current study. This phase involved two MOE (SE) psychologists undertaking three cycles of action research. Participating psychologists were asked to identify an area of their current practice which was relevant to an identified current client. The chosen area of practice became the focus for the psychologist's action research project and weekly reflective journal exercises. For the purposes of this research, the identified 'client' or 'case' is defined as a student with special needs who was receiving support from the psychologist. The weekly reflective journal entries are referred to as reflective cycles.

This chapter provides demographic information on the participating psychologists, their identified cases, and an overview of each psychologist's action research project, as well as analysis of their levels of reflective thinking during each cycle of action research.

### Participants

Of the six MOE (SE) psychologists, employed within the same District office who were approached to take part in Phase 2, three psychologists agreed to participate. Due to an unplanned overseas commitment, one psychologist withdrew prior to the data collection phase. Demographic information on the two participating psychologists, Mark and Jack (pseudonyms) is presented below in Table 5.1.

T

<sup>a</sup>	<b>Mark</b>	<b>Jack</b>
<b>Gender</b>	Male	Male
<b>Cultural/Ethnic Group</b>	New Zealand European	New Zealand European
<b>Age Group</b>	56–60 years	36–40 years
<b>Country of training</b>	New Zealand	New Zealand
<b>Highest academic qualification</b>	Masters Degree	Bachelor of Arts Hon
<b>Identified specialist areas</b> 5	Clinical psychology Educational psychology	Educational psychology Counselling psychology
<b>Theoretical perspective</b>	Applied Behaviour Analysis	Cognitive Behavioural
<b>Years of practice as a psychologist</b>	35–40 years	0–4 years

Table 5.1: Demographic Information for Participating Psychologists

### Informed Consent Process

Given the complexity of the study, and the need for the two participants to access MOE (SE) client information as part of this process, a rigorous informed consent process was conducted. To commence this process, Mark and Jack were provided with information on action research to give them an overview of the chosen methodology. They were also given an opportunity to ask any questions about action research or the proposed study. Once both psychologists had an understanding of the requirements of the research and were comfortable with the action research approach, they were given a copy of the 'Enhancing Reflective Thinking Self-Completion Questionnaire' and all the necessary informed consent forms. Mark and Jack were asked to undertake a series of actions that would ensure all participants were fully informed. These included:

- complete the Enhancing Reflective Thinking Self-Completion Questionnaire
- identify a current case to be the focus of their action research and their weekly reflective journal exercise
- complete the informed consent process for the identified case

Mark and Jack were asked to place a copy of each signed consent form in the nominated student's MOE (SE) file. The original signed consent forms were returned to the researcher. When all the informed consent forms had been returned, a time was made to interview each

psychologist individually. Prior to these interviews Mark and Jack were asked to identify an area of their practice, relevant to the identified case, that they wanted to focus on for their action research project. Mark and Jack were also given a copy of the semi structured interview questions (Appendix X) prior to the interview to help prepare them for their initial interview.

There were only twelve weeks in which to conduct the three cycles of action research, so Mark and Jack were reminded of this timeframe when selecting their area of focus. Any planned interventions needed to be appropriately paced, relevant, and meaningful for the participating psychologist and the client. To support Mark and Jack to record their action research projects, I suggested that they use their interviews with me and their weekly reflective journal exercises as two methods of documenting and evaluating their action research project.

#### Overview of the Three Cycles of Action Research

The first cycle of participatory action research began at the end of Term 3, 2008, after completing the informed consent process. Cycle 1 was initiated by me as the outside researcher, with the goal of evaluating the use of reflective thinking by the psychologists and the effect that reflective thinking had on their practice as well as their

clients. To achieve these goals I negotiated the initial research questions for their action research projects. The reason for taking an active role in identifying the research questions was to ensure that the focus was on the psychologist's own practice, rather than being a case review or an evaluation of the practice of other individuals who were involved in the case. Subsequent cycles were progressively more participant-driven as the participants became more aware of the benefits of focusing their reflective thinking on their practice, and took greater ownership of their action research projects.

Planning for the initial cycle of action research was guided by the results of Phase 1 of the current study and the following research questions:

- Are psychologists able to enhance their reflective thinking when scaffolding (identified in Phase 1) is put in place?
- Are clients able to identify any change in the services they receive as a result of the psychologists' reflective thinking?
- What aspects of scaffolding do participants identify as being most likely to enhance their reflective thinking?

The initial cycle of action research required each psychologist to:

- identify an area of practice as the focus of their action research project.
- participate in a semi-structured interview with the researcher to plan and document the first cycle of action research.
- complete a reflective portfolio/journal exercise each week using an electronic portfolio.

To evaluate the service provided by the participating psychologists, the teacher and a parent of each nominated student were interviewed at the beginning and end of each of the 12-week action research projects. Consideration was given to interviewing the nominated students. However, the area of practice chosen by the participating psychologists focused primarily on their interactions with the parents and the teachers, rather than their interactions with the student. I consulted and agreed with the psychologist, the parent, and the teacher in each case, that the student would not be interviewed, as they would not have been in a position to comment on the identified area of the psychologist's practice. The focus areas chosen by the participating psychologists were consistent with an emerging MOE (SE) policy encouraging psychologists working with the key mediators in a student's life, rather than directly with the student.

### Identified Cases

Mark and Jack were asked to identify a current case as the focus of their action research and weekly reflective exercises. Table 5.2 provides demographic information on the cases selected. Pseudonyms have been used to protect confidentiality.

T

<b>Psychologist</b>	Mark	Jack
<b>Student</b>	Allen	Doug
<b>Student's mother</b>	Cathy	Kate
<b>Teacher</b>	Joe	Rose
<b>Student's gender</b>	Male	Male
<b>Student's ethnicity</b>	New Zealand European	Māori,
<b>Student's age</b>	7 years	7 years
<b>Service requested</b>	Behaviour support	Behaviour

Table 5.2 Demographic Information for Identified Cases

### Scaffolding Reflective Thinking

Based on the results of Phase 1, I put in place a series of scaffolds to provide a supportive and enriched context for the participating psychologists to engage in reflective thinking. Each psychologist was provided with an electronic portfolio and trained in its use. The electronic portfolio included weekly reflective journal exercises based on the Gibbs model of reflective thinking (1988). These reflective exercises were designed to assist the psychologists to structure their reflective thinking through providing prompt questions (Appendix Y).

The participating psychologists were interviewed every three weeks, using a semi-structured interview that followed the four steps of the Deakin action research model: planning, action, observation, and reflection. The semi-structured interviews provided a structure to assist the reflective thinking process, and was used by the psychologists as a data collection tool to document their action research projects.

To enhance the understanding of reflective thinking in the psychologists' work environment a half-day professional development workshop on reflective thinking was organised for MOE (SE) staff. I presented a one-hour talk and workshop attendees were provided with a three-page review of the literature on reflective thinking, based on a summary of Chapter 2 of this thesis. My role in the work place as an educational psychologist and as an experienced supervisor assisted me to act as a critical friend to the participating psychologists. The critical friend role was based on trust and mutual respect for each other as colleagues. This role allowed me to engage the psychologists in dialogue on the practice of psychology, with the aim of encouraging reflective thinking and assisting them to make the links between theory and practice. Individual scaffolding provided by the critical friend role, through face-to-face discussions, e-mail feedback on reflective exercises, and three weekly semi-structured interviews also

provided opportunities to scaffold reflective thinking through reflective questioning. Participants were encouraged to discuss their action research projects with their supervisors, and to seek client feedback on their services.

Work place scaffolding was provided by the psychologists' line managers mainly through agreeing that the time they spent on their action research projects, completing their reflective thinking journal exercises, and taking part in interviews, could be coded directly to the nominated student on the psychologists' time/diary sheet. Essentially, this meant that their time was 'charged' against the client file.

Psychologists were also given access to computers, which had their personalised electronic portfolios loaded onto them, and the technical support to train them in the use and maintenance of their electronic portfolio.

The psychologists' emotional readiness, open mindedness, whole heartedness and level of responsibility to reflect on their practice, were not evaluated prior to Phase 2. However since both participants (1) volunteered to participate in this study, (2) provided informed consent when they had received full information, and (3) actively contributed to the project, this was taken as evidence of their cognitive and emotional readiness to engage in reflective thinking.

Overview of Phase 2

To identify change in the psychologists’ level of reflective thinking and the effect on the service provided to the identified clients, Phase 2 of this study was organised into three sections aligned to the three cycles of action research. Table 5.3 outlines the focus and the data collection activities involved during each cycle of action research.

Table 5.3 Activities Involved in Each Cycle of Action Research

<p>Cycle One :</p>	<p>A) Evaluating psychologist’s levels of reflective thinking</p> <ul style="list-style-type: none"> <li>• Semi structured interview with the psychologist to identify the area of focus and to plan and document the first cycle of action research.</li> <li>• Weekly reflective journal exercise focused on the psychologist’s chosen area in relation to the identified case (3 cycles).</li> </ul> <p>B) Documenting client’s views on services</p> <ul style="list-style-type: none"> <li>• Semi-structured interview with nominated student’s teacher focusing on the service provided in relation to the psychologist’s chosen area of focus.</li> </ul> <p>Semi structured interview with nominated student’s parents focusing on the service provided by the psychologist in the chosen area of focus.</p>
<p>Cycle Two:</p>	<p>A) Evaluating psychologist’s level of reflective thinking</p> <ul style="list-style-type: none"> <li>• Semi structured interview with the psychologist to capture his reflective thinking on the first cycle of action research and to plan for the second cycle of action research.</li> <li>• Weekly reflective journal exercise focused on the psychologist’s chosen area, in relation to the identified case (4 cycles).</li> </ul>



### Levels of Reflective Thinking

A thematic analysis approach was taken to evaluate each psychologist's level of reflective thinking during all cycles of their action research projects, and to evaluate the client's views on the services they were receiving. This was applied at the beginning of cycle one and repeated at the end of cycle three. This approach was both inductive (drawing from the data) and theoretical in nature, as the key themes that were identified were aligned to Teekman's three tiered model of reflective thinking (Teekman, 2000).

The three levels identified by Teekman are reflective thinking-for-action, reflective thinking-for-evaluation, and reflective thinking-for-critical inquiry. A brief overview of each level of reflective thinking is provided, with key themes italicised and examples of how each level relates to the present study.

#### Reflective thinking-for-action

Reflective thinking-for-action focuses on '*problem solving*' within the setting '*without paying significant attention to the wider context*'. The goal is to make sense of the '*here and now situation*', and select the most appropriate intervention for the setting, at that time (Teekman, 2000, p. 169). In the present study, reflective thinking-for-action focused on intervening on the behaviour of concern without

considering the function of that behaviour, the context in which that behaviour occurs, or any developmental influences. Psychologists operating at this level use a one-size-fits-all approach to intervention, focusing on managing the behaviour rather than understanding the meaning of the behaviour for the individuals involved.

#### Reflective thinking-for-evaluation

Reflective thinking-for-evaluation focuses on trying to *understand the situation by clarifying the experiences, meanings, and assumptions that others give to the situation*. Practitioners operating at this level demonstrate ‘*empathy*’ and examine their own role in the situation with relation to others. Knowledge gained through reflective thinking-for-evaluation is transferable across settings (Teekman, 2000). In the context of the present study, psychologists operating at this level would focus on understanding the behaviour of concern for the individuals involved, within the context. The psychologist attempts to understand the experiences and beliefs of others, and the influence this has on the situation. Psychologists operating at the reflective thinking-for-evaluation level demonstrate *sensitivity towards others* and are open to examining their own behaviour and beliefs in relation to the situation.

### Reflective thinking-for-critical-inquiry

Reflective thinking-for-critical inquiry is concerned with the “*underlying structures and systems that control and influence every aspect of social and professional life*” (Teekman, 2000, p. 176).

Practitioners examine the ‘*historical and developmental influences that shape the way society operates and attempt to address perceived inequalities or injustice*’ (Teekman, 2000, p. 176). In the context of the present study, psychologists would attempt to understand the ways in which individual, family, organisational, and societal belief systems have developed and are being reinforced/maintained. In the current study, psychologists were not required to take direct action to address any perceived inequalities or injustice (an action), but were required to demonstrate an awareness of these perceived inequalities or injustices in their reflective thinking exercises and interviews and to reflect on how they might be influencing the situation.

### Key Themes from Initial Interviews and Reflective Journal Entries

The key themes from each psychologist’s initial semi-structured interview (Table 5.5) and their initial reflective exercises is presented below (Table 5.6). Although Mark’s and Jack’s key themes are

presented side by side, this does not imply a comparison should be made between the two participants.

Table 5.4: Key Themes from Participants' Initial Interview Questions

<b>Questions</b>	<b>Mark</b>	<b>Jack</b>
What area of your practice have you chosen for your reflective thinking?	Focus on parent and teacher understanding, prior to implementing strategies.	Co-working with multiple agencies. Identified focus is enhancing communication within the team.
How would you describe your current practice in the area you have chosen?	Efficient. Could develop greater understanding for parent and teachers regarding rationale for strategies to increase the likelihood of strategies being used across setting and time.	Some initial progress. Regular meetings established. Tend to be focused on professional demarcation of roles and specific goals for the child, rather than a team approach.
How are you going to implement this plan/strategy?	Help child to attend to what is happening and behave in a way that will receive positive attention. Teach mother and teacher to recognise appropriate behaviour and reinforce it. Increase strategy use through understanding	Name concern Team reflection Identify gaps and possible solutions.
How will you evaluate the impact of your plan on your practice?	Collect data on interactions between mum and child and look for generalising into home setting. Collect data on teacher and child interactions and look for generalisation across kids.	Use 10 point scale to collect team members' views on how we can make a difference for the young person and his family

Table 5.5: Key Themes from Participants' Initial Reflective Journal Entries

<b>Prompt questions (Gibbs, 1988)</b>	<b>Mark</b>	<b>Jack</b>
<b>Description:</b> Describe the situation, activity, or new experience you are reflecting on	Student tendency to write in capitals or variable script	Feedback from home and school on how the team is working
<b>Feelings:</b> What are your thoughts and feelings about the situation, activity or information?	I should not have allowed behaviour to develop. Stupidity: focussing on application to task, not generalisation of behaviour	How did we let things slip this far? How did I miss their concerns? Anger and disappointment
<b>Evaluation:</b> What previous knowledge has influenced your thoughts and feelings?	Sloppy Need to be more thorough Aware of taking short cuts, and making assumptions	Ethical practice risk re: ongoing informed consent Young person and family are experiencing confusion Mixed messages
<b>Analysis:</b> What alternative perspectives could there be? What could change your perspective?	Nothing, stupidity is stupidity	Do clients need to experience team support as one service? Is it ok to work in different areas on an agreed overall plan?
<b>Conclusion:</b> What have you learnt from reflecting on the situation, activity, or new information?	Emphasising accuracy in copying	Need to name and clarify roles and potential issues with each other
<b>Action:</b> How will you know that what you have learnt has changed your practice?	Teacher needs to prompt Allen to complete task as requested	Name concerns at the next team meeting and allow the team reflection Gain an agreement and identifying the next steps
<b>Follow-up:</b> How can you use what you have learnt in your practice?	Be more thorough and beware of short cuts and assumptions	Prompt on 'to do' list to seek regular client/family feedback

### Evaluating Reflective Thinking

Thematic analysis was used to evaluate levels of reflective thinking in Phase 2. This process involved reading and re-reading interviews and reflective portfolio exercises to identify themes. Themes were compared to the critical elements identified by Teekman (2000), to give an indication of the participants' level of reflective thinking.

#### Action Research Cycle One: Mark

Mark and I spent quite a lot of time discussing our understanding of reflective thinking and negotiating the focus of his action research project. This was necessary because Mark viewed reflective thinking primarily as a process of responding to the client's behaviour, at the time it occurred. However, the present study required Mark to focus on a specific area of his practice for reflection usually after the event. This initial discussion with Mark highlighted the importance of dialogue to reflective thinking and made me aware of my need, as a critical friend, to check my understanding of what Mark wrote or said to ensure we understood each other.

Mark's focus area was his '*explanations for the suggestions or strategies that he gave to the parent and teacher*' (Mark, Interview 1).

The identified topic suggested that Mark was operating at a ‘reflective thinking-for-evaluation’ level (Level 2), as he was interested in looking at his role in relation to others. However, there were also elements of reflective thinking-for-action (Level 1) because of the focus on changing the immediate behaviour of concern, without considering the wider contextual factors. Analysis of Mark’s initial interview identified the following key themes: Here and Now Thinking, Generalisation of Strategies, and Building Relationships. Each theme is explained with links made to Teekman’s levels of reflective thinking, in the following paragraphs.

#### Here and Now Thinking

Mark believed that his primary role was to help the teacher manage the immediate observable behaviour of concern. He was not overly interested in understanding the behaviour from the student’s perspective or examining the wider contextual or historical factors that may have influenced the development of the behaviour. This focus on the ‘here and now’ is evidence of reflective thinking-for-action (Level 1). The following quote illustrates this point.

*Mark: I get the referred problem and I do my observations to identify the frequency of the behaviour. I then implement specific strategies and monitor the degree of change these bring about (Interview: 1).*

### Generalisation of Strategies

Although Mark's focus was on addressing the immediate behaviour of concern, he recognised the importance of generalising strategies across time and settings. One way he believed he could achieve this was to increase the teacher's understanding of the rationale for his strategies. The focus on exploring his own role in a situation in relation to others (Teekman, 2000) is evidence of reflective-thinking-for-evaluation (Level 2). The following quote illustrates this point.

*Mark: I would say in terms of my strategies being efficient it is quite high. In terms of me being able to do it more completely and to get the teacher or parent more onboard through increasing their understanding and use of what I'm suggesting and therefore increasing the generalisation of these strategies across settings and time, that could probably be improved (Interview:1).*

### Building Relationships

Mark identified his relationship with the teacher as a critical factor in allowing him to work effectively in the classroom. Mark's emphasis on building relationships to enhance his effectiveness in the classroom environment is evidence of reflective thinking-for-evaluation (Level 2). The following quote illustrates this point.

*Mark: I've got a good relationship with her [the teacher], which allows me to just walk into the class at any point and time and move around the children quite freely, that makes my job a lot easier (Interview: 1).*

#### Mark's Reflective Journal Entries: One, Two and Three

Portfolio reflective journal exercises were based on Gibbs (1988) reflective cycle. Mark and Jack were provided with prompt questions under the following seven headings: Description, Feeling, Evaluation, Analysis, Conclusion, Action and Follow-up. Prompt questions were designed to assist the psychologists to maintain the focus of their reflective thinking on their own practice. Thematic analysis of Mark's first three cycles of reflective journal entries identified the following two key themes: Self-reflection and Client's Belief System. Each theme is explained in more detail in the following paragraphs with links made to Teekman's (2000) levels of reflective thinking.

#### Self-reflection

Although Mark's first reflective journal entry was student specific and in some ways a contrast to his stated goal of examining his suggestions and strategies for the teacher, a development towards more self reflection was evident in his writing. For example, although Mark identified his focus as the student's tendency to write in capitals

or variable script, his reflective thinking was primarily about his own practice and his role in allowing the behaviour to develop. This type of self-reflection is evidence of reflective thinking-for-evaluation (Level 2) as it requires Mark to examine his role in relation to others.

For example,

*Mark: I was surprised at my own stupidity; focussing on his application to task and not paying attention to the generalised nature of him writing in capitals. Basically, I need to be more thorough and be aware of taking short cuts and making assumptions (Reflective cycle: 1).*

Mark continued exploring his role in allowing Allen's undesirable behaviour to develop in his second reflective exercise; however, his focus shifted to his role in relation to the classroom teacher. In his second journal entry, Mark demonstrated empathy for the teacher; which is also evidence of reflective thinking-for-evaluation level (Level 2):

*Mark: I'm no longer prompting the teacher directly but rather prompting Allen and other students in the class to perform more accurately in the presence of the teacher, making her aware of the positive changes, and attributing these changes to her input. This approach maintains the focus on Allen's behaviour without making the teacher feel pressured or that she is in some way failing him (Reflective cycle:2).*

### Client's Belief System

Mark's third reflective journal entry provided evidence of Teekman's (2000) reflective thinking-for-critical-inquiry level (Level 3). This type of reflective thinking focuses on the underlying systems that shape individual and societal beliefs.

In the following quote Mark is exploring the way Allen's behaviour was being viewed as an 'illness' by the teacher and his mother and how this belief may have developed as well as the possible impact of this belief on Allen's future behaviour.

*Mark: The teacher's over protectiveness has not generalised her classroom management, but it has become very much the case in new situations. At home, mum tends to be overprotective of Allen; however, she has had heavy involvement from hospital personnel for a long time, so it is not surprising that she views Allen as 'ill'. If this perspective becomes too dominant across settings it is likely to impact negatively on Allen and make him more dependant on seeking support from others rather than doing things himself (Reflective cycle: 3).*

### Action Research Cycle One: Jack

During my initial discussions with Jack, it was evident that he had given a lot of thought to the focus of his action research project and that he was familiar with the concept of reflective thinking. Jack had

recently completed two years of training as a trainee psychologist and as part of that training he had been required to demonstrate the ability to reflect on his practice in his written work and to his supervisors. Jack's familiarity with reflective thinking meant that my critical friend role was able to focus on prompting him to explore his feelings about situations and the beliefs that shaped his practice.

Jack's chosen area of focus was "*co-working when there are multiple agencies involved in a case and my role in how we can communicate and work together better*" (Interview 1). This topic is evidence of Jack's ability to reflect at Teekman's second level: reflective thinking-for-evaluation as the focus is on his role in relation to other team members. Thematic analysis of Jack's initial interview identified the following key themes: Teamwork and Client's Perspective. Each theme is explained in more detail in the following paragraphs with links made to Teekman's levels of reflective thinking. Quotes are provided to illustrate the key themes.

#### Teamwork

Jack's desire to work as a collaborative team member and clarify the experiences, meanings, and assumptions of the other team members is evident in the following quote from his first interview. The desire to

understand the perspective of others is evidence of reflective thinking-for-evaluation level (Level 2).

*Jack: I think we have made some initial progress in that we have set up regular meetings with the Paediatrician and the Child Adolescents and Families Service (CAFS) team. But what we've tended to do in those meetings is we'll reflect on where we are at individually and go 'OK' so you will do this and I do that, and then go off in our own directions. It sounds a bit harsh to say it like that but I'm wondering if there is a better way we can do this.*

*What I've been thinking about doing is essentially naming this concern with the team and getting their thoughts on it (Interview: 1).*

#### Client's Perspective

The second theme identified in Jack's interview related to his desire to understand the situation from the perspective of the parents. This type of reflective thinking is evidence of reflective thinking-for-evaluation (Level 2), as it demonstrates empathy and a willingness to try to understand the situation from another person's perspective. The following quote from Jack's interview illustrates this.

*Jack: I've checked with the parents and asked them after a meeting how was that for you? They go 'um we've kind of been wondering what he's been doing and what their [CAFS] role is'. And that was some of my early clues that they were telling me it's not OK for them. I want them to have confidence in what each of us is doing. I want them to feel that they are an active part of the*

*team. I want them to know how our roles all fit together, and what their part is in it (Interview: 1).*

#### Jack's Reflective Journal Entries: One, Two, and Three

Thematic analysis of Jack's first three reflective journal exercises identified the following key themes: Self-reflection, Enhancing Communication, and Barriers to Collaboration. Each theme is explained in more detail in the following paragraphs with links made to Teekman's levels of reflective thinking.

#### Self-reflection

In a similar way to Mark, Jack started his reflective journal by reflecting on his own role in relation to the team supporting Allen, his family, and the school. Jack was quite critical of the service provided by the team although he was also aware of the need to monitor his level of criticism, as this could be unproductive and potentially damaging to his own confidence. This type of reflective thinking is evidence of reflective thinking-for-evaluation (Level 2), as it demonstrates a willingness to examine one's own role in a situation. The following quote illustrates this theme.

*Jack: How did we let things slip this far? How when the parents felt more on track in the past did I miss their concerns? I have a sense of anger and disappointment with myself for not raising*

*these concerns directly with the parents. However, I need to be careful that I am not being over critical or over thinking issues and making it more complicated than necessary (Reflective cycle: 1)*

### Enhancing Communication

Jack's second reflective journal entry focused on the data that he had collected from home and school regarding their perception of the services they were receiving. In this journal entry, Jack reflects on the need to balance his desire to improve communication between team members with the need to respect the parents' wishes for confidentiality.

Reflecting on the perspectives of different team members and how this influences the way the team works together is evidence of reflective thinking-for-evaluation (Level 2). Reflecting on ethical issues such as weighing up the parents' wishes for confidentiality and the need for team members to share information in order to provide an effective service for the child has elements of reflective thinking-for-critical-inquiry (Level 3). Both of these traits are illustrated in the following quote from Jack's reflective exercise.

*Jack: When I asked the home and the school 'how well do you feel MOE (SE) and CAFS are working together?' His teacher said 'I don't know, we don't hear much' 'I don't know what you guys*

*are doing with him'. Mum said: 'difficult to tell' 'we are feeling isolated and out of the loop'. We need to work on improving our communication but I need to manage this process carefully as in the past the parents have not wanted the school to be aware of the details of the service that CAFS were providing due to the last school's inability to manage confidentiality (Reflective cycle:2).*

### Barriers to Collaboration

Jack's third reflective journal entry explored the challenges he was experiencing trying to work collaboratively with the CAFS play therapist. During this journal entry, Jack explored the possible underlying structures and systems that could have been influencing how the two agencies worked and the potential barriers to working more collaboratively. This type of reflective thinking is evidence of Jack reflecting at Teekman's critical inquiry level (Level 3), as it focuses on how services operate and the pressures that organisations place on practitioners. The following quote illustrates Jack's attempt to understand the possible barriers to the play therapist working together with him.

*Jack: I am yet to get traction with CAFS. They cancelled the last team meeting. The play therapist has still not called the parents. CAFS have also said they will not be attending the IEP meeting. I'm feeling frustrated as it seemed that our difficulty in working together may be due in part to the way that our organisations*

*still work relatively independently of each other. I get the feeling that the therapist's work place does not support the idea of her going into the school or working outside of one-to-one therapy (Reflective cycle:3).*

#### Teacher's and Parent's Perceptions of the Psychologist's Practice

To evaluate the service the psychologist provided to the identified clients, the student's teacher and parents were interviewed at the start of the first cycle of action research and the end of the third cycle of action research. These interviews were used to identify any shift in the psychologists' practice during their participation in the study. Thematic analysis of these interviews was undertaken to identify key themes with regard to the psychologists' practice.

#### Mark's Practice

Thematic analysis of interviews with Allen's mother and the teacher identified the following key themes in relation to their perception of Mark's practice: Knowledgeable, Practical and Timely, and Relationships. These themes are discussed in more detail below; with quotes to illustrate key points.

#### Knowledgeable

Jo and Cathy both spoke very highly of Mark's expertise and knowledge. It was evident from Jo's interview that she respected

Mark's professional knowledge as well as his understanding of Allen's behaviour. Jo described Mark as "*an encyclopaedia of knowledge*" and used words such as '*expert*' and an '*authority*'.

*Cathy: Mark is really good at seeing exactly why Allen is behaving the way he is, and giving me strategies that I can use with him (Interview: 1).*

*Jo: I respect Mark's knowledge and I value his support in the classroom so much (Interview: 1).*

#### Practical and Timely

Jo felt that the strategies that Mark gave her were practical and appropriate for the classroom setting. She said, "*I have tried his strategies in the past and they make sense straight away*" (Interview 1). Jo also commented on the relevance of Mark's suggestions to the situation.

*Jo: What happens is he comes in and he observes within the classroom, he knows Allen very well and he gives me strategies that I can try that are timely to that situation (Interview: 1).*

#### Relationships

Mark's initial interview and his first three reflective journal entries all highlighted the importance that he placed on building and maintaining his relationships with Allen's parents and the classroom teacher. Jo

and Cathy also highlighted the positive nature of his relationships in their initial interviews, which is evident in the following quotes:

*Jo: When he gives me a strategy, we'll have a little bit of discussion. Usually he'll explain where that strategy has come from and what kind of outcome he'd expect as a result. If I'm thinking 'oh golly, that doesn't fit with me', he gives me more information, or an alternative, or we compromise on that strategy. So it's pretty much a two-way thing (Interview: 1).*

*Cathy: One of the things I like about Mark is that he always takes the time to drop around home or catch up with me after school, just to let me know how Allen is going and to have a chat (Interview: 1).*

Cathy and Jo also commented that they felt comfortable asking Mark for further clarification when this was required:

*Jo: If I do have questions I keep on asking them until I feel I have sufficient information to implement the suggested strategy and sometimes it doesn't require a huge explanation but other times it may, especially if the proposed strategy doesn't initially sit quite right with me (Interview: 1).*

*Cathy: Mark's advice is generally pretty clear and easy to understand but if I do have any questions, I just ask them and he explains it again (Interview: 1).*

### Jack's Practice

Thematic analysis of Kate's and Rose's interviews identified the following key themes in relation to their perception of his practice: Team Functioning, Supportive, Effective, and Easy Going. These themes are discussed in more detail below with quotes to illustrate key points

#### Team Functioning

Kate and Rose spoke very positively about Jack as a psychologist although they were both critical of the level of communication between the agencies supporting Doug.

*Kate: They have fallen into a big black hole; nobody is coordinating anything as far as I know. No one is looking into the future and asking, 'what's the next step, how can we help Doug grow and become a better person?' We feel left out about what they are talking about regarding our son and what they are planning for our son (Interview: 1).*

*Rose: I'm not sure what's going on. I do know that they are talking about setting up play therapy for Doug, and Jack is working on getting that sorted for next year, but apart from that I don't know much else (Interview: 1).*

#### Supportive

Kate and Rose both described Jack as being supportive, although this theme was particularly strong in Kate's interview. The following

quotes demonstrate the positive relationship Jack had developed with Kate and Rose

*Kate: He [Jack] is accessible, you can talk to him about anything, he understands confidentiality, and he is discreet. There would seldom be a week where I don't have contact with him and that is excellent. He is prepared to listen when I am saying that we are feeling more isolated and nobody is taking a long futuristic look at our son. If it weren't for him we would know nothing (Interview: 1).*

*Rose: Jack was a great help when Doug first started when we didn't know anything about him or how we should manage his behaviour (Interview: 1).*

Effective

Kate and Rose spoke positively about Jack's practice and individual work, which he had been doing with Doug. They both commented that they felt that Jack's support had helped Doug settle into his new school.

*Kate: Jack is brilliant, and he always has been since the moment he started working with Doug, he has made a difference. He has been really efficient at bringing in tools that were needed to help the school work with Doug (Interview: 1).*

*Rose: Jack's support made a big difference to the transition. He let me work along side of him, when I was still feeling my way with Doug (Interview: 1).*

### Easy Going

Jack was viewed as very professional in his approach, however Rose believed that Jack's easygoing manner was a potential barrier to him achieving his goal of improving the way the team supported the family.

*Kate: Jack is such a very careful practitioner, he is very thoughtful, he doesn't leap in and say things until he has thought it through and he is very calm and professional, but sometimes I think he just needs to leap up and clip them around the ears a bit, and say, 'come on this is not ok', you know 'this is not ok' (Interview: 1).*

### Researcher Reflection

The positive feedback on Mark's practice from Cathy and Jo highlighted why it is important for me as a critical friend, and as a researcher to check my understanding of Mark's thinking when discussing his practice with him, as he appeared to have selected an area where he was already very effective. Jack on the other hand had selected an area that both Kate and Rose identified as unsatisfactory, which was the way the team was functioning. Kate's comments highlighted a possible tension in Jack's practice between his easygoing manner and his ability to influence the wider team. The balance between working collaboratively as part of a team and taking a lead role in a multi-discipline team is an important issue for a

psychologist to negotiate. Therefore, one of my roles as a critical friend was to support and encourage Jack to continue to promote his point of view, particularly when he met with resistance from his more experienced colleagues within the team.

#### Action Research Cycle Two: Mark

Thematic analysis of Mark's second interview identified two key themes: Perspective of Others and Client Beliefs. Each theme is explained in more detail in the following paragraphs with links made to Teekman's levels of reflective thinking.

#### Perspective of Others

This theme relates to Teekman's second level of reflective practice called reflective thinking for evaluation. In the following quote, Mark is trying to understand the perspective of the teacher in order to develop his interventions.

*Mark: I'm learning to consider the position of the teacher more than I would have done previously, in the sense that I am looking more closely at my suggestions and how they fit with the teacher's perception of the situation (Interview: 2).*

### Client Beliefs

During his second interview, Mark reflected on the tension between what he referred to as the behavioural approach and the ‘*illness or medical model*’, which he felt Allen’s family used to explain Allen’s inappropriate behaviour. This type of reflective thinking is evidence of reflective thinking-for-critical-inquiry (Level 3). It looks at other people’s beliefs and attempts to understand how these may have developed and how they influence different roles in the situation.

Mark: *When I picked up this case, I agreed that the family was the CAFS psychologist’s prerogative, so the degree to which I can or should promote a more behavioural approach at home is an area I need to look at in more depth in my reflective exercises. I am cautious about pushing a more behavioural approach in the home, but I need to talk to mum about how she is managing Allen, particularly now that she has her daughter’s son living at home and I think it is important for Allen that she treats both boys consistently (Interview: 2).*

### Mark’s Reflective Journal Entries: Four, Five, Six, and Seven

An analysis of Mark’s four reflective journal entries during his second cycle of action research identified the following two key themes:

Client Beliefs and Supporting key Mediators. Each theme is explained in more detail in the following paragraphs with links made to Teekman’s levels of reflective thinking.

### Client Belief

Mark's fourth reflective journal entry focused on the family's beliefs around Allen's inappropriate behaviour, how these beliefs had developed and to what degree Mark could or should try to influence them. This type of reflection is evidence of reflective thinking-for-critical-inquiry (Level 3), as Mark is reflecting on how the family's beliefs have been shaped by the services they are receiving and the underlying structures and systems that control these services. Mark is also reflecting at the evaluation level (Level 2) as he is examining his role in relation to the other professionals involved in the case and the potential outcomes for the family if there is significant disparity between the recommendations from the professional groups.

*Mark: Home has an entrenched 'medical' perspective on Allen's behaviour. I decided quite early on that the best approach was to simply retain oversight of what was happening at home rather than become too actively involved, as this allowed me to maintain positive relationships with the family and the health professionals involved, and to keep the communication avenues open for future input. Taking a more proactive role, which could be in conflict with the health practitioners involved, would be unlikely to be helpful to the family (Reflective cycle: 4).*

### Supporting Key Mediators

Reflective exercises five, six and seven all focused on Mark's evaluation of the teacher's confidence in managing certain situations and the influence this had on the strategies he suggested. Trying to consider situations from the perspective of another and looking at your own behaviour in relation to another's is evidence of reflective thinking-for-evaluation (Level 2). The following quote illustrates reflective thinking-for-evaluation:

*Mark: Jo is trying to placate/cajole/reason Allen out of incidents of task refusal particularly if he presents in an upset manner. I have emphasised the need to implement the agreed strategies. This however, took considerable prompting and reassurance on my part, due to the difficulty she had implementing these strategies if mum was present (Reflective cycle: 6).*

### Action Research Cycle Two: Jack

An analysis of Jack's second interview identified two key themes:

Self-reflection and Barriers. Each of these themes is explored in more detail in the following paragraphs with links made to Teekman's levels of reflective thinking.

#### Self-reflection

Jack's ability to reflect on the client's perception of his service and his ability to show empathy for the client's feelings is evidence of

reflective thinking-for-evaluation (Level 2). In the following quote, Jack is expressing his discomfort with the parent's feelings about the way MOE (SE) and CAFS are working together:

*Jack: Kate's response caused quite a jolt for me when she said, "we don't really know what you're doing together, we don't know what your plan is, and we don't feel part of the planning process." I suspected that's how she was likely to feel and that's why I chose this area for reflection but it still made me feel uncomfortable hearing it (Interview: 2).*

Jack's reflective thinking about Kate's feelings leads him to reflect on his own influence on her view. Once again, this type of reflective thinking is evidence of reflective thinking-for-evaluation (Level 2), as it is reflecting on his role with regard to others.

*Jack: The family and the school both think there is a problem, but to what degree has my pushing this issue fed into their perception? Is there a risk that by doing this reflective action research project that I am making this issue bigger than it really is? (Interview: 2).*

### Barriers

In Jack's second interview he showed evidence of reflective thinking-for-critical-inquiry (Level 3); when he explored the possible underlying structures and systems that may be influencing the way the two agencies work together.

*Jack: I've been thinking about the dynamics of what might be getting in the way of us working together. Is it because of our different views on how we see the problem or the different philosophies of the two organisations? (Interview: 2).*

Jack's Reflective Journal Entries: Four, Five, Six, and Seven

Thematic analysis of Jack's four reflective exercises during his second cycle of action research identified two key themes: Relationships, and Barriers.

#### Relationships

Reflective journal entries four and six examined Jack's relationship with Kate and the play therapist, and reflected on how his behaviour may be influencing their behaviour. This type of reflective thinking is an example of reflective thinking-for-evaluation (level 2) as it examines what the possible influence his behaviour may have had on the situation.

*Jack: I was wondering about the possibility of a dual process occurring, with mum expressing frustration with CAFS and my own feelings being very similar. I need to be aware of the possible dangers of over identifying with the client. (Reflective cycle: 4).*

*Jack: I am concerned about my processes during a meeting with CAFS, when the play therapist commented that she did not support some of the work I had done. My initial reaction was*

*defensive, although I recognised this and was able to stop it part way through my response (Reflective cycle: 6).*

Jack's frustration over co-working with the play therapist was evident in reflective journal entries five through to seven. During these reflective cycles Jack reflected on possible barriers to co-working and his responsibilities as a psychologist. This type of reflective thinking is evidence of reflective thinking-for-evaluation (Level 2). There are also some elements of reflective thinking-for-critical-inquiry (Level 3), when Jack reflects on whether underlying systems and structures may be acting as barriers to co-working.

*Jack: Agreements are not translating into actions. Do I need to be even more direct with the CAFS therapist? What is going on here? CAFS say they want to work together but do not follow through. What are the organisational barriers that are preventing this from happening? (Reflective cycle: 5).*

*Jack: I am concerned that the lack of traction is negatively impacting on the client. The Code of Ethics says that any work where children are involved, psychologists should recognise that the interests and welfare of the children are paramount. Therefore, I have an ethical duty to push this issue (Reflective cycle: 6).*

### Researcher Reflection

Although Mark and Jack both demonstrated the ability to move across all three of Teekman's (2000) levels of reflective thinking, their actual practice was indicative of Levels one and two because their interventions generally focused on the 'here and now' (Level 1), or on building relationships (Level 2). This finding supports the argument that practitioners generally practice at Levels one and two and that Level three is more akin to '*arm chair*' reflection, which requires time outside of the practice situation (Teekman, 2000). One explanation for why Mark and Jack were able to reflect at Teekman's third level in the present study, is that their service managers allowed them to take time for reflection, away from the practice situation to reflect on their practice. This finding also supports the view that no one single type of reflective thinking is necessarily better than another, as each serves a different purpose (Taylor, 2006).

Jack's second interview and his reflective journal entries highlight a growing frustration with the play therapist. However, they also support Kate's comment regarding the need for Jack to be more 'forthright' in promoting on his views, as he took no direct action to progress this issue. This point highlights the importance of a practitioner being able to translate reflective thinking into practice, if

there are to be tangible benefits for clients from practitioner reflective thinking.

Jack's sixth reflective journal entry demonstrates 'reflect in practice'; when he says "*I recognised this [his defensiveness] and stopped it part way through my response*". It is likely that Jack's previous reflective thinking on his relationship with the play therapist provided the foundation for Jack's reflective thinking in practice in this example.

#### Action Research Cycle Three: Mark

Thematic analysis of Mark's third interview identified two themes:

Self-evaluation, and Empathy. Both are examples of reflective thinking-for-evaluation (Level 2). Examples of these themes are presented in the following paragraphs with links made to Teekman's levels of reflective thinking.

#### Self-evaluation

In his third interview Mark reflected on the services he had provided over the last ten weeks and how he might have done things differently.

In the following example, Mark is reassessing his earlier decision to try to approach Jo's over-protectiveness in a subtle manner.

*Mark: Jo has gradually become more protective of Allen in new situations and she is increasingly seeing his behaviour in terms of his diagnosis. I made a decision earlier in the term to only tentatively address the concern I had regarding Jo being over-protective of Allen. On reflection, I should have addressed this more forcibly as the behaviour has increased (Interview: 2).*

### Empathy

Mark recognised that client and situational factors influenced his strategies. In the following example, Mark demonstrates that empathy for Jo's and Cathy's situation was one of the factors that influenced his decision to approach Jo's over protectiveness of Allen in a subtle manner.

*Mark: My decision not to address Jo's over protectiveness more forcibly, was partly because it was quite late in the year and I was aware that Jo had applied for another job and been unsuccessful. This appeared to rock her confidence and so I decided to focus on reinforcing what she was doing well rather than target her over protectiveness of Allen directly (Interview: 2).*

### Mark's Reflective Journal Entries: Eight, Nine and Ten

Mark's last three reflective exercises all focused on his attempts to understand the experiences, meanings and assumptions of others in the

situation. This focus is evidence of reflective thinking-for-evaluation (Level 2). The key themes identified were Empathy and Contextual Factors. These themes are discussed below with quotes to illustrate the key themes.

### Empathy

In the following example Mark demonstrates an awareness of the classroom context and shows empathy towards Jo when considering how best to address Allen's increasing noncompliance.

*Mark: Jo presented as very self-conscious, and in need of frequent reassurance. She is increasingly trying to reason Allen into compliance. Her behaviour is due to her anxiety about Allen's behaviour escalating. I have decided to focus on drawing her attention to the occurrence of desirable student behaviour and help her make the link to her behaviour at the time rather than address her anxiety issue directly, so late in the year (Reflective cycle 8).*

### Contextual Factors

Mark's awareness of the impact of contextual factors on Jo's behaviour was evident in his last two reflective journal entries. In the following examples Mark demonstrates his ability to step back and look at the bigger picture with regard to what had already been achieved this term.

*Mark: Problems with Allen's compliance are re-emerging due to a greater presence of his family in the school setting. Jo finds it difficult to address Allen's behaviour in the presence of his family but this needs to be addressed or the problems of the past will return. However, I have decided to let it go as addressing this so late in the year would put too much pressure on Jo and it would be difficult to maintain any gains over the holiday period anyway. I will address this issue with the new teacher next year (Reflective cycle: 9).*

#### Mark's Final Interview

In his final interview, Mark reflected on Jo's role in Allen's success over the last year and on the relationships he himself had developed with the school and the family in Term 4, 2008, which he felt provided a good platform for working with Allen next year. The key theme was Relationships, which is evidence of reflective thinking-for-evaluation (Level 2).

#### Relationships

During the last ten weeks, Mark spent a significant amount of time reflecting on how he could develop his relationships with Allen's teacher and the family. In his final interview Mark focused on the importance of these relationships, as is illustrated in the following example:

*Mark: Allen has had a positive year and made some good progress this term. Jo has done a good job and will be a great support person for Allen's new teacher next year. My relationships with the school and home continue to be positive, which gives me a good platform on which to address the areas that need further work next year (Interview: 4).*

#### Action Research Cycle Three: Jack

Analysis of Jack's third interview identified two key themes:

Empowerment and Barriers. Empowerment is a reflective thinking-for-critical-inquiry theme (Level 3) as it is concerned with trying to address the power imbalance between parents and professionals.

Barriers is also a reflective thinking-for-critical-inquiry theme, and relates to an awareness of the underlying structures and systems that are preventing team members from working together in a cooperative manner.

#### Empowerment

In his third interview Jack reflected on Doug's parents rejoining the team meetings, which had become a 'Professionals Only' forum excluding the parents from the decision making process. The quote below illustrates Jack's sense of achievement about Kate now participating in the team process.

*Jack: I've had a meeting with the CAFS psychologist, the play therapists, and mum. Mum was actively involved and said that she really appreciated that the team had started inviting them to the meetings again (Interview: 3).*

### Barriers

Although Jack was pleased that Doug's mother was once again feeling involved in the team process he was still frustrated by the lack of progress that he had made with regard to co-working with the play therapist. In his third interview Jack reflected on the possible barriers to co-working with the play therapist and some options for addressing these barriers.

*Jack: We agreed in the last team meeting to try and involve the school more in the future. At this meeting, the play therapist and I also set some times to go into the school, but she has cancelled those appointments. I'm pretty frustrated about this, so what I've decide to do is to meet face-to-face with the therapist and identifying exactly what are the barriers to us working together (Interview: 3).*

### Jack's Reflective Journal Entries: Eight, Nine and Ten

Thematic analysis of Jack's last three reflective journal entries identified the key themes: Shared Ownership, and Empowerment. These themes represent elements of Teekman's second and third levels of reflective thinking. Reflecting on how team members are

coming on board with the concept of a seamless service and a developing sense of shared ownership for the team's actions is an example of reflective thinking-for-evaluation (Level 2). Reflecting on how the service to the family has shifted from an 'expert' model to a more collaborative model where the parents are empowered to be active partners in the team process has elements of reflection-for-critical-inquiry (Level 3). The following example illustrates both of these themes.

*Jack: There is a shift in the ownership of the challenges and solutions happening; with CAFS, home, and the school making plans that include all other team members. For the first time it feels like the concept of a seamless service is being taken up by the whole team in a way that they are starting to plan and drive it. There are also indications that client independence is increasing and the family are better able to promote their own well being in an ongoing way without needing external support (Reflective cycle: 9).*

#### Jack's Final Interview

In his final interview, Jack reviewed his last three reflective journal entries and the progress that had been made towards a seamless service. The key theme was teamwork, which is evidence of reflective thinking-for-evaluation (Level. 2). The following quote from Jack's final interview illustrates this theme:

*Jack: The school and the play therapists are now planning how we can work together. I've also checked with Kate and she is very positive about how things are going. She said "thank you for the work you've done, I gather you've been talking to people because I've noticed a big shift in the way they are talking to me and starting to make things happen". The school also said that they now have a better understanding of what their role is, and they are looking forward to working together as a team next term (Interview: 4).*

Teacher's and Parent's Perceptions of the Psychologist's Practice  
To evaluate the teachers' and parents' perceptions of the psychologists' practice at the end of their action research projects, a second interview was undertaken with the nominated student's teachers and parents in the week after Mark's and Jack's final interviews. The key themes identified from the teachers' and parents' final interviews are discussed in the following paragraphs.

#### Jo's and Cathy's perceptions of Mark's practice

Mark chose to focus his action research project on the explanations and strategies he gave to Jo and Cathy, in order to increase their understanding of these strategies and their use of these strategies

across settings and time. In Cathy's and Jo's second interviews there was evidence that Mark had achieved this goal, as both Jo and Cathy indicated that they were using these strategies in other settings and with other children. Thematic analysis of Jo's and Cathy's final interviews identified the following two key themes: Clear Communication and Generalisation. These two themes are discussed below; with quotes provide to illustrate each theme.

#### Clear Communication

Jo and Cathy both commented that they felt that Mark was very clear on communicating what he wanted them to do and why he thought that strategy would work with Doug. The following quotes illustrate this point.

*Jo: Mark has continued to provide the same high level of service and support that he has done throughout the year. He continues to give me the information that I need at the time I need it, to implement the strategies I need to implement (Interview 2).*

*Cathy: Mark explains what he wants me to do, his advice has always been helpful, and I have always felt that I could ask him questions if I didn't understand what he wanted me to do (Interview 2).*

### Generalisation

One of Mark's goals was that through improving Jo's and Cathy's understanding of the strategies, they would be able to use these strategies across settings and time. The following quotes from the final interviews with Jo and Cathy demonstrate that they felt they were able to use Mark's strategies in other settings with other children.

*Jo: If you look at the support that Mark has given me, it's been huge. It's made a big difference not only for Doug but also in how I manage the other children in the class (Interview 2).*

*Cathy: The main difference I have noticed between Mark's advice and the advice I get from the other professionals involved is that Mark's advice is very practical and down to earth so I can use it with both of the boys (Interview:2).*

### Rose's and Kate's perceptions of Jack's practice

Jack's action research project focused on co-working with other agencies and his role in how the team could communicate and work together better. Rose and Kate both commented that they felt that the team supporting Doug had become more collaborative this term and that this change was largely due to Jack's efforts. Thematic analysis of Rose's and Kate's final interviews identified the following three

key themes: Supportive, Collaborative and Proactive. Examples of these themes are given below.

### Supportive

Rose and Kate both commented very positively on the level of support Jack had given them over the last twelve weeks. The following quotes highlight the positive relationship Jack had with Rose and Kate:

*Rose: Jack has been a big factor in helping us successfully transition Doug (Interview: 2).*

*Kate: I think Jack has been instrumental in recent developments. We have re-instituted meetings between the agencies and the family to try to get better co-ordination of what we are doing (Interview: 2).*

### Collaborative

Jack's collaborative approach was evident in the following comments made by Kate and Rose, on their perception of his practice.

*Rose: He takes the time to listen to what has been happening and works with us to problem-solve solutions. I really like the fact that he checks in with us all individually before we sit down and discuss what we are going to do next (Interview: 2).*

*Kate: Jack and the play therapist are going into the school to observe Doug in the playground situation and see how they can work*

*together. Jack has the teachers on board and they are very keen to be involved (Interview: 2).*

#### Proactive

Kate and Rose both felt that Jack had worked more proactively this term to get the team supporting Doug to work together:

*Rose: Jack is a clear communicator, so we have always known what he was trying to do but now we can also see how CAFS fits into the picture and this is largely due to him pushing for us all to work together (Interview: 2).*

*Kate: Jack identified the need; he saw that we were all working independently and that better results for Doug, long-term, would be gained if we worked together. I think Jack has been more direct this term with CAFS, than in the past and as a result they have taken on board what he has said and we are now seeing the benefits of that (Interview: 2).*

#### Evaluation of Scaffolding put in Place to Support Reflective Thinking

Mark and Jack were asked if their action research projects or their use of their reflective journal had lead to any changes in their practice or the service they provided to their clients. They were asked to identify which scaffolds enhanced their ability to reflect on their practice and how they might sustain any changes to their practice. The following section discusses Mark's and Jack's responses.

### Changes in practice

Mark and Jack both identified changes in their practice, arising as a result of their action research projects and journal activities. Mark's project caused him to re-examine his understanding and use of reflective thinking and helped him critique his practice. Jack felt that his project had highlighted the importance of reflective thinking to his practice and given him confidence to share his thoughts with others.

Quotes from Mark's and Jack's interviews highlight these points:

*Mark: My involvement has helped me to differentiate more clearly between reflective thinking in practice and reflective thinking on practice, and it has caused me to critically re-examine my practice (Interview 4).*

*Jack: My action research project has increased my awareness of the importance of reflective thinking and highlighted the value of approaching reflection in a more structured way. The reflective journal maintained my focus and helped me to reflect in greater depth (Interview 4).*

### Improved services to clients

Mark and Jack both believed that their action research projects had lead to improved services to their clients. The quotes below highlight the key benefits seen by Mark and Jack in each case.

*Mark: In terms of the teacher, reflective thinking made a huge difference. Focussing my reflective thinking on Jo, the classroom, and my suggested strategies helped me develop a*

*positive working relationship with Jo and allowed me to support her overall classroom management. In terms of mum, reflecting on her situation as well as Allen's behaviour helped me tailor my strategies for the home (Interview 4).*

*Jack: I was able to promote a group reflective process, which led to the whole team being more on board with what we are doing. There was also some shift in the team's thinking, which is evident by the change in the language that team members were using from 'I' and 'you', to 'we'. I also think it led to the family feeling empowered as a member of the team (Interview 4).*

#### Scaffolding that enhances reflective thinking

Mark identified the process of documenting his thoughts in his reflective journal as the main scaffold that enhanced his reflective thinking. Jack identified a range of different types of scaffolding including: his action research project, the reflective journal, collegial dialogue and management support in the form of time to reflect on his practice. Mark's and Jack's comments below illustrate how these supports enhanced their reflective thinking.

*Mark: The act of recording my reflective thinking using the portfolio reflective journal definitely helped things gel for me and helped me to be more aware of my practice. Discussions with my supervisor and our interviews also helped although to a lesser extent as I try to unpick a situation and get things moving on the*

*spot as much as possible rather than delay and discuss these situations with other colleagues (Interview 4).*

*Jack: Identifying a specific area to reflect on and using the action research process helped me maintain my focus. The reflective journal highlighted the importance of hanging in there and seeing reflection as an ongoing journey. The discipline involved in doing a reflective journal also helped me reflect at a deeper level. Sharing my reflections in these interviews and with my supervisor was a key element for me because it gave me opportunities to revisit my thoughts and to reflect at a deeper level. Finally, being able to code the time I spent reflecting as direct service made a big difference; it told me that this is part of our service and that I don't have to feel like I am sneaking around reflecting behind people's backs (Interview 4).*

#### Sustaining changes to practice

Mark and Jack identified two key scaffolds, which they believed would help them sustain the changes they had made to their practice: writing down their reflections and supervision. The following quotes highlight how Mark and Jack planned to sustain the positive changes they had made to their practice.

*Mark: Reflective thinking is absolutely essential to dealing with people and to realising any effective gains from intervention. If you are not doing it as a psychologist, you are buggered.*

*This study has caused me to critically review my practice, I think writing down my thoughts in the case file and taking these to supervision is probably the best way to maintain my focus on reflective thinking (Interview 4).*

*Jack: Sometimes there is a sense that reflective thinking is a luxury when caseloads are increasing. However, as a psychologist, reflective thinking is a very valuable part of my practice and if I'm making the time to reflect I'm probably doing the best I can for my clients. My goal will be to make the time and get into the habit of writing my thoughts down whenever they come to me and then taking these to supervision (Interview 4)*

#### Researcher Reflection

Mark and Jack both commented that their action research projects had helped them to reflect more critically on their practice and had lead to changes in their practice and subsequently to a more client focused service. They also identified the same two forms of scaffolding as being the most likely to help them sustain these changes: reflective writing and supervision. It is of importance to note that one of these involves an individual process of capturing one's interpretation of an event and the other involves a social process of dialogue with a colleague to make sense of one's interpretation of the event. This finding supports the view that

reflective thinking occurs first at an intra-personal level and then at an inter-personal level.

### Summary

At the beginning of this chapter, the following three research questions were identified:

- Are psychologists able to enhance their reflective thinking when scaffolding (identified in Phase 1) is put in place?
- Are clients able to identify any change in the services they receive as a result of the psychologist's reflective thinking?
- What aspects of scaffolding do participants identify as being most likely to enhance their reflective thinking?

These questions are addressed below, based on the findings from Phase 2 of this study.

Did psychologists enhance their reflective thinking?

Mark and Jack demonstrated their ability to reflect at all of Teekman's three levels of reflective thinking. The level was determined by the situation they were reflecting on. However, as they moved into their second and particularly their third cycles of action research they both tended to reflect more at Teekman's second and third levels with a focus on: relationships, empowerment and belief systems. Their use of Teekman's higher levels of reflective thinking was also supported by their final interviews in which both Mark and Jack reported that their action research projects and reflective journals had helped them

to reflect critically on their practice. The findings of Phase 2 demonstrate that the participating psychologists were able to enhance and use reflective thinking, when scaffolding (identified in Phase 1) was put in place.

#### Changes in services to clients

Jack's chosen focus area was to improve the way the team communicated and worked together with the family and the school. In their initial interview both Allen's mother and his teacher identified the way the team was working as an area of concern, making comments such as "*I'm not sure what's going on*" (Rose) and "*We feel left out*" (Kate). Throughout Jack's reflective journal and his three cycles of action research he maintained the same overall focus reflecting on themes such as client perspective, co-working, barriers and empowerment. At the end of Jack's third cycle of action research Rose and Kate were interviewed again and both were able to identify positive changes in the way the team was now working, commenting that they felt this improvement was due to Jack's efforts as illustrated in the following quotes.

*Rose: We can also see how CAFS fits into the picture and this is largely due to him [Jack] pushing for us all to work together (Interview: 2).*

*Kate: I think Jack has been instrumental in recent developments.*

*We have re-instituted meetings between the agencies and the family to try to get better co-ordination of what we are doing (Interview: 2).*

Mark's focus was on gaining Jo's and Cathy's understanding of his recommended strategies prior to implementing them, with the goal of increasing the use of these strategies across settings and time. In their initial interviews, Cathy and Jo both commented that Mark provided an appropriate level of explanation in order for them to use the strategies he suggested, however they did not comment on their use of these strategies with children other than Allen. Mark's focus shifted slightly over his three cycles of action research, with a greater emphasis on supporting the classroom teacher to manage the whole class and an increase in the level of support he gave to Cathy at home. At the end of Mark's third cycle of action research, Cathy and Jo were interviewed again and they both commented that they still felt that Mark's explanations for his strategies were appropriate for their needs. However, Cathy and Jo also indicated that they were using Mark's strategies with other children, for example:

*Jo: It's made a big difference not only for Doug but also in how I manage the other children in the class (Interview 2).*

*Cathy: Mark's advice is very practical and down to earth so I can use it with both of the boys (Interview: 2).*

Although Jo and Cathy did not notice any change in the nature of Mark's explanations for his strategies, they continued to be satisfied with the explanations he gave. However, Mark's goal of improving Jo's and Cathy's understanding of his strategies leading to generalisation of these strategies over time and settings was achieved and this was noticeable to Jo and Cathy. Therefore these findings are evidence that Mark's reflective thinking led to changes in his practice, which increased Jo's and Cathy's ability to use Mark's strategies with other children.

#### Scaffolding that enhanced reflective thinking

Mark and Jack both identified the process of documenting their thoughts in the reflective journal and collegial dialogue as processes that enhanced their reflective thinking. Jack also identified the action research process and being able to record the time used on reflective thinking to the client as enhancing his reflective thinking. The findings of Phase 2 therefore support the findings of Phase 1, which found that time, supervision, case reviews/discussions with colleagues, ongoing professional development opportunities such as

action research, client feedback, and a safe/trusting environment all enhance the ability of psychologists to reflect on their practice.

In the final chapter of this thesis the results of Phase 1 and Phase 2 and the implications of these findings are discussed.

## Chapter Six Discussion and Conclusions

As a reflective agent, I cannot view myself as merely a system—however well functioning—of sub-systems, that passively register and respond to environmental stimuli much as a thermostat registers and responds to changes in temperature.... To think of myself in this way is not to think of myself as an agent at all. It is to give up thinking of myself as rationally guiding my actions via reasons. (Jones, 2003, pp. 188–189).

This study examined the individual and organisational contexts that enhanced and restricted reflective thinking for psychologists working in education, through two phases. In Phase 1 MOE (SE) psychologists completed a reflective thinking self-completion questionnaire to identify individual and organisational factors that enhanced or restricted their use of reflective thinking. Phase 2 examined the application of reflective thinking by two psychologists through using an action research methodology and a reflective journal. Psychologists involved in Phase 2 identified a student as a focus for weekly reflective journal entries. The service provided to the nominated student, their parents/caregivers, and the classroom teacher became the focus of a twelve week action research project.

This chapter discusses the significance of the findings of Phase 1 of the study for educational psychologists and the organisations that

employ them. The first section discusses key factors that educational psychologists identified as enhancing or restricting reflective thinking. Based on the identified key factors, an ecological model of reflective thinking has been developed and the concept of reflective thinking used in the reflective thinking self-completion questionnaire has been redefined.

In Section 2, the relationship between action research and reflective thinking is discussed and an argument is made for action research and reflective journals as scaffolding that enables psychologists to enhance reflective thinking. The role of the outside researcher and critical friend in supporting participatory action research projects is reviewed in this section, as well as key elements of the participants' reflective thinking process.

Section 3 foregrounds the types of scaffolding used by the participating psychologists in Phase 2 to enhance reflective thinking and the changes which occurred in their practice because of their reflective thinking. The effect of the psychologists' reflective thinking on the services to their identified clients is also discussed in Section 3. The fourth section of the chapter discusses possible implications of the study's findings for educational psychologists, organisations that employ them, and researchers who study

practitioner reflective thinking. In the final section, the strengths and limitations of the present study are discussed, as well as possible implications for future research.

#### Factors that Enhance Reflective Thinking

The self-completion questionnaire used in the present study provided extensive data on a range of factors that MOE (SE) psychologists identified as enhancing and restricting their ability to engage in reflective thinking. The three main factors were time, supervision, and collegial support. The three main factors the psychologists identified as restricting reflective thinking were high workloads, lack of time and a lack of collegial support.

#### Time

Ministry of Education, Special Education psychologists identified the availability of time as the most significant factor that enhanced their reflective thinking. A lack of time was identified as one of the top three factors restricting reflective thinking. Thematic analysis of psychologists' comments identified two opposing key themes with regard to the relationship between time and reflective thinking. The first theme was that reflective thinking is part of normal casework and

occurs within the context of normal practice, therefore additional time is not required in order to reflect on one's practice. The second theme was that the availability of additional time does enhance reflective thinking, when 'critical' or higher-level reflective thinking is required. Teekman (2000) identified this distinction between reflective thinking within the context of practice and reflective thinking at a 'critical' level. Teekman argued that "reflective thinking-for-critical-inquiry" occurred outside of the practical situation and was similar to "armchair reflection" (p.179). Teekman (2000) found that nurses tended to reflect at a practical or technical level within the context of practice, but that reflective thinking-for critical-inquiry was extremely difficult within practice, due to time constraints.

The self-completion questionnaire did not ask psychologists to make any distinction between levels of reflective thinking. However, thematic analysis of their comments supported Teekman's view that extra time was necessary to reflect at a critical inquiry level, and that this type of reflective thinking generally occurred outside of the practice situation, due to time constraints. A key finding of the present study is that although reflective thinking-for-critical-inquiry requires a professional commitment to incorporate it into normal practice, it also requires a commitment on the part of the employer to allow time outside of the practice situation for critical reflective

thinking to occur. In addition, the findings of the present study suggest that “reflective thinking-for-critical-inquiry” is particularly important for complex cases when the psychologist needs to consider a wide range of influential factors. Possible scaffolding that organisations could put in place to assist psychologists with reflective thinking at the critical inquiry level is discussed later in this chapter under ‘Implications of this Study’.

#### Supervision and Collegial Support

Psychologists identified supervision and collegial dialogue as two types of scaffolding that significantly enhance reflective thinking. Psychologists also identified a lack of collegial support as one of the main factors restricting their reflective thinking. Thematic analysis of psychologists’ comments found that the themes of Supervision and Collegial dialogue overlapped, and that a lack of collegial support was associated with increased stress and feelings of professional isolation. This finding supports the work of Johns (2009), who emphasised the role of collegial dialogue in facilitating reflective thinking, referring to clinical supervision as guided reflection. Knott and Scragg (2007) also stressed the importance of collegial dialogue in reflective thinking, arguing that:

It is through the process of reflection in supervisory sessions that professional learning can take place, both by analysing the explanations and the evidence on which assessments and interventions were based and identifying where there are developmental needs in relation to practice (p.123)

One of the key findings of the present study is that whether collegial dialogue occurs within the context of formal or informal supervision (collegial dialogue), psychologists identified the following attributes as necessary in a supervisor: Trustworthiness, Experience, and Knowledgeable. These three attributes can be seen as supporting the development of the three attitudes Dewey (1933) identified as necessary for reflective thinking: Wholeheartedness, Open-mindedness, and Responsibility. For example, Trustworthiness encourages a '*wholehearted*' exploration of practice without fear of being judged. Actively seeking support from an experienced colleague displays 'open-mindedness' to exploring other perspectives. Moreover, a commitment to ongoing learning from knowledgeable colleagues demonstrates recognition of one's professional '*responsibility*' to strive to improve practice and deliver the best possible service to clients.

The relationship between quality supervision and lower levels of stress was highlighted in the work of Johns (2004), which emphasises

the importance of collegial dialogue in supporting practitioners to discuss experiences that have caused them anxiety and distress. Thematic analysis of psychologists' comments found that higher levels of stress were associated with perceptions of inadequate supervision and/or limited access to other psychologists as supervisors. A key finding of the present study is that reflective thinking was seen as being enhanced through engaging in collegial dialogue with other psychologists as opposed to non-psychologists and a lack of access to psychologists was identified as a barrier to reflective thinking in smaller offices. This finding is likely to be linked to the identified need for supervisors to be seen as knowledgeable in the work the practitioner is doing.

#### High workloads

High workloads were identified as the factor that most restricted psychologists' reflective thinking. Thematic analysis of psychologists' comments found that high workloads were often related to a perceived lack of time for reflective thinking. As discussed earlier in this section, psychologists identified that a lack of time restricted reflective thinking at the critical inquiry level. Perceived high workloads were also associated with increased levels of stress particularly in the case of less experienced psychologists.

This finding suggests that workloads need to be well managed in order to enable opportunities for critical reflection.

Rosen (2000) argued that one of the roles of a line manager was to establish workload allocation systems to ensure practitioners were able to manage their workloads effectively without creating stress, anxiety, or burnout. In the present study, perceived high workloads and/or poor workload management systems were identified as restricting reflective thinking. Scagg (2007) argued that practitioners and their line managers needed to understand the demands of each other's roles in order to "*establish a relationship where they both adopt an approach that recognises the value of reflective learning*" (p.121). Thematic analysis of psychologists' comments suggested that some psychologists felt that line managers who had previously been psychologists had a greater understanding of the role of the psychologist and were therefore better able to manage workload allocations to psychologists.

The self-completion questionnaire also listed factors that had been identified in other professional domains as enhancing or restricting reflective thinking and asked psychologists to indicate on a five-point scale the level of importance they placed on each identified factor. The factors identified as enhancing reflective thinking were time,

supervision, case reviews/discussions, professional development, client feedback, performance appraisal systems and safe/trusting environments. In the present study, all of the above-mentioned factors were viewed by psychologists as enhancing reflective thinking with the exception of performance appraisal systems.

Hannay, Telford, and Seller (2003) argued that frameworks such as performance appraisal systems could enhance reflective thinking, however at the time this questionnaire was undertaken, MOE (SE) psychologists viewed their performance appraisal system as occurring too infrequently to enhance reflective thinking, and being used primarily as a means of implementing organisational objectives. It is important to acknowledge that shortly after this questionnaire was undertaken the MOE (SE) changed its performance appraisal system and psychologists' views on the current performance management system may be different.

Overly prescriptive casework practices, which have been shown to restrict reflective thinking (Bulman & Schutz, 2004), were seen by psychologists as having the potential to support reflective thinking. Analysis of comments found that how psychologists' viewed prescriptive casework practices were largely influenced by the manner of implementation, which varied between districts. If prescriptive

casework practices were applied too inflexibly or used as a compliance tool, then psychologists felt that their reflective thinking was restricted. If, however, prescriptive casework practices were being used as a 'guideline' for practice, then they were seen as being supportive of reflective thinking. This finding highlighted the role of frameworks with regard to supporting reflective thinking (Gibbs 1988; Johns, 1996, 2004, 2009) and the way in which line managers can support practitioners to reflect on their practice.

Inexperience with the task at hand was also identified as having the potential to facilitate reflective thinking, as long as the degree of inexperience did not create high levels of stress. This finding supports previous research which found that novice practitioners can be more reflective than expert practitioners, where the novice practitioner finds the new experience to be thought provoking, whereas the expert practitioner's response to the new situation may be based on established routines, implicit understandings and intuition rather than reflective thinking (Eraut, 2000; McGee & Penlington, 2001).

Factors Identified as Restricting Reflective Thinking

Psychologists' views on factors that restricted reflective thinking agreed with those identified in the current literature and included: lack of time, lack of contact with colleagues, concern about disclosing

difficulties to colleagues, organisational attitudes towards professional reflection, and high workloads. In general, the key factors identified as restricting reflective thinking were an absence of the scaffolding identified as enabling reflective thinking.

Thematic analysis of the data collected in Phase 1 identified three key themes that significantly enhanced psychologists' reflective thinking: Intra-personal, Social and Work Environment. These three themes are discussed in the following paragraphs along with the types of scaffolding, identified as supporting the practitioner to reflect on their practice for each of the three areas.

#### Intra-personal

Individual cognitions and emotions that were identified as enhancing reflective thinking were Open-mindedness, Whole-heartedness, Responsibility and Emotional readiness. Dewey (1933) identified the first three attributes as core attributes of reflective thinking. Although emotional readiness was not one of the core attributes of reflective thinking, Dewey acknowledged the role that emotions played in reflective thinking in arguing that reflective thinking arises from a state of doubt or perplexity, which he named the "pre-reflective period" (p.107). A key finding of the present study is that a

psychologists' emotional state is not only a precursor to reflective thinking but also influences the other three core attributes. Thematic analysis of psychologists' comments identified a number of types of scaffolding that individuals could use to enhance their emotional readiness for reflection including relaxation, humour, self and time management skills. This finding supports Taylor's (2006) model of reflective thinking which identified 'Readiness to reflect', as an element of the reflective thinking process. Taylor describes readiness as:

Readiness to reflect comes from silence from within oneself, some knowledge of concepts and a willingness to practise skills, and the qualities of taking and making time, making the effort, being determined, having courage and knowing how to use humour (Taylor, 2006, p.84).

Psychologists identified that reflective thinking was more challenging when they felt stressed or overloaded by work pressures and that the degree to which their work environment supported reflective thinking had a major influence on their emotional readiness for reflective thinking.

Work environments support, value & promote reflective thinking

The importance of working in an environment where reflection was supported, valued and promoted was highlighted in the present study. Reflective thinking can be promoted through the presence of organisational scaffolds, which enhance the psychologists' ability to reflect on practice. In Phase 1, a number of organisational scaffolds were identified as enhancing reflective thinking, including frameworks for analysis, managerial support, effective workload management systems, practice guidelines, and access to professional development. Similar supports have been identified as facilitating reflective thinking by other professional domains, including: models and structured frameworks to support reflection (Gibbs 1988; Johns, 1996), effective line management (Knott & Scragg, 2007), and action learning approaches (McGill & Beaty, 2001).

Bulman and Schutz (2004) argued that models and structured frameworks do not promote 'deeper' levels of reflection, however the present study found that the Gibbs (1988) model of reflective thinking did prompt participants' reflective thinking at an evaluation level because it guided and encouraged participants to reflect on their own values, beliefs and feelings. In addition, my findings suggest that the Gibbs (1988) model may have laid the foundation for reflective thinking-for-critical-inquiry and that the key barrier to deeper levels of

reflective thinking is a lack of time to reflect outside the practice situation.

The role of management in developing an environment that values, encourages, and supports reflective thinking, was also identified by Knott and Scragg (2007) who argued:

In order to create and sustain an atmosphere in which continuous learning and professional development can take place, it is important that the manager promotes their own learning and development of reflective practice and in turn is more receptive to the development of reflection in colleagues (p.122).

The physical elements of the work environment were also identified as influencing psychologists' ability to reflect on their practice. Physical factors identified as enhancing reflective thinking included access to computers and office space. Some psychologists commented that open plan offices restricted reflective thinking, due to a lack of privacy for collegial dialogue and increased noise levels. The social factors of the work environment that were identified as enhancing reflective thinking are discussed in the following paragraphs.

### Inter-personal dialogue

Psychologists emphasised the role of dialogue with trusted colleagues as a means of enhancing reflective thinking. Environments where a lack of trust was believed to be an issue were seen as restricting reflective thinking. Carrington and Robinson (2006) argued that engaging in dialogue with a trusted colleague encourages a level of reflection that “*uncovers the deeper aspects of thinking*” (p.326).

Dialogue also brings different perspectives to a situation, which allows the practitioner to explore and refine their own thinking (Knott & Scragg, 2007). In the present study, the organisational scaffolding that was identified as supporting collegial dialogue included: communities of practice, case reviews, professional development opportunities and supervision.

### Redefining the Concept of Reflective Thinking

The thematic analysis process used in Phase 1 of the present study facilitated the development of thematic maps to illustrate factors that enhanced and restricted reflective thinking, as well as the affective factors that influence reflective thinking. From these, a comprehensive overview of reflective thinking was developed in a global thematic map of reflective thinking (Figure 4.8). Figure 4.8 led to the development of Figure 6.1, which places reflective thinking

within an ecological framework, and to re-define the concept of reflective thinking referred to in the self-completion questionnaire:

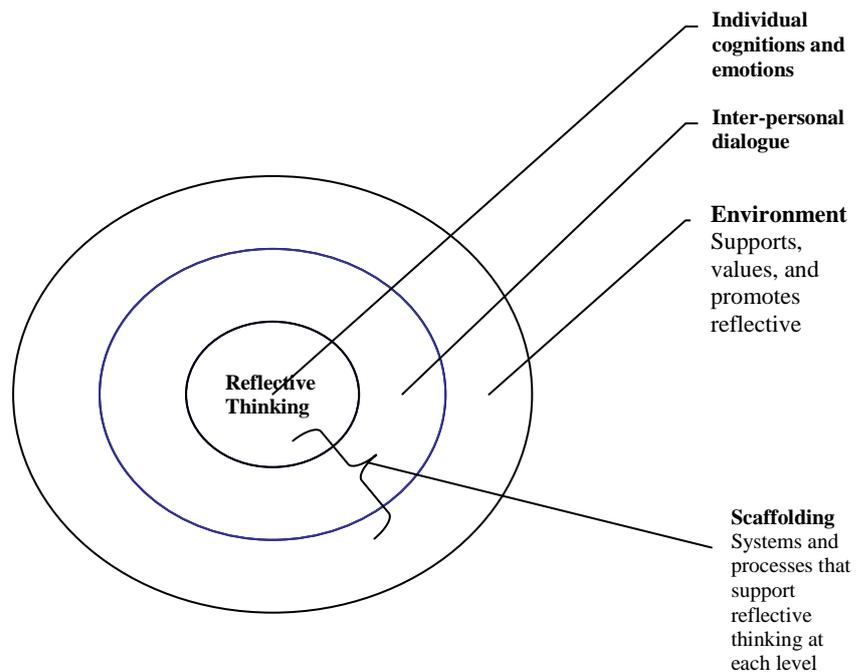


Figure 6.1: Ecological Model of Reflective Thinking

**Re-definition of the concept of reflective thinking**  
 Reflective thinking is an adaptive metacognitive and emotional process, which is facilitated through inter-personal dialogue within the context of multiple environments that actively support, value and promote reflective thinking. Reflective thinking is enhanced through the presence of scaffolds, which support the individual to purposefully

engage in self or peer discourse in an attempt to critically analyse his or her own understanding of past, current, and future experiences and events, leading to a change in perspective that influences future thoughts, actions or beliefs.

#### Action Research and Reflective Thinking

Phase 2 of the study used a participatory action research methodology to examine how two MOE (SE) psychologists used reflective thinking to enhance their practice and improve the service to their clients.

Participatory action research and reflective thinking combine well as a collaborative qualitative research approach for “*identifying and transforming clinical issues*” because reflective thinking is part of the action research cycle (Taylor, 2006, p178). The Deakin model of action research was chosen for the present study because of the parallels between its cyclical phases of: planning, action, observation, and reflection and the cyclical process of assessment, intervention, monitoring, and reflection commonly used by educational psychologists. Using a research approach that was similar to the psychologists’ current model of practice, assisted the participants to learn the action research approach and use it as a framework for enhancing their reflective thinking.

Action Research as Scaffolding for Enhancing Reflective Thinking  
It can take between two to five years for professional development to bring about lasting change in practice (Guskey, 1990; Timperley, Wilson, Barrar, & Fung, 2006). However, a key finding of the present study was that the two participating psychologists were able to use action research to enhance their reflective thinking skills, leading to a change in practice. In addition, both psychologists demonstrated their ability to reflect at all three levels of reflective thinking identified by Teekman (2000) within a very short timeframe of only twelve weeks. There were a number of factors that supported the participants to make changes to their practice including: (1) the participants were committed to improving practice, (2) participants' prior knowledge of reflective thinking, (3) action research projects were relevant to the participants' current practice, (4) the action research process provided a framework for reflective thinking, (5) concurrent action research cycles maintained the focus on a specific area of practice, (6) the time required to undertake their action research projects was manageable for participants, (7) progress towards the identified goals was motivating, (8) participants received frequent verbal and written feedback from the researcher as a critical friend, and (9) the work environment actively supported, valued, and promoted reflective thinking. Thus, a key finding of the present study is that when appropriate scaffolding was put in place to support the participating

psychologists to reflect on their practice, they were able to enhance their use of reflective thinking leading to a change in their practice, within a relatively short timeframe. It is acknowledged, however, that the present study did not investigate if the identified change in practice was sustained beyond the participants' involvement in the study.

Changing professional practice is a complex process, which is seldom linear in nature (Day, 1999; Eraut, 1994; Fullan, 2005a; Hewitt, 2007). Two key intrinsic factors found to influence the process of changing professional practice are a practitioners' openness to reflect on their practice and make their implicit theories-in-use explicit (Argyris & Schon, 1974); and a practitioner's willingness to change their implicit theories-in-use once a need for change is identified (Day, 1999). The participants' openness to reflect on their practice was not an issue in the present study, as both participants had volunteered to take part in the study. However, the participants' willingness to change was a factor, which will be discussed in the following paragraphs.

Willingness to changing practice based on reflective thinking Day (1999) found that a practitioner's willingness to change their practice was one of the major influences on the effectiveness of any

professional development. In the present study although Mark and Jack were both open to examining and changing their practice, they started from slightly different positions with regard to their understanding of reflective thinking-on-practice, which influenced their openness to change their practice based on reflective thinking.

Mark was a very experienced and respected psychologist, but initially he found it challenging to conceptualise reflective thinking in terms of a process of looking back on a specific aspect of practice, whereas Jack was more comfortable with the concept of reflective thinking. This meant that Mark's initial reflective exercises were perhaps a little superficial, until he started to see the value of reflective thinking for his practice. As a critical friend, in the early stages of his project I had to prompt Mark to focus his reflective thinking on his own practice rather than the situation or the practice of others. In addition, the fact that Mark was a very experienced psychologist may have made it more challenging for him to make his implicit theories-in-use explicit, as he was viewed as an 'expert' in the office and the school community.

Eraut (1994, 2000) argued that changing a long-standing practice, could be difficult.

Although Jack was a relative novice to educational psychology, he had strong professional beliefs that guided his practice, in particular using a collaborative consultative model of practice. As a critical friend, I encouraged Jack to re-examine his concept of collaborative consultation and of the 'expert' model in order to explore ways he might work collaboratively and still be seen as a specialist with expert knowledge within a team environment.

Eraut (2000) proposed that as professionals progress from novices to expert practitioners they develop patterns of practice based on unthinking routines, implicit understandings, and intuition. Somekh (2006) argued that action research "*enables the transformation of the unthinking routines into reflective practice*" (p 29). In the present study, Mark and Jack both had elements of their practice that were based on routines and their implicit understandings of special education that had developed based on their experience as practitioners. Eraut (1994, 2000) argued that when practice relies too heavily on these routines and the practitioners' implicit understandings about the situations or individuals they work with, it becomes difficult to monitor and can lead to unproductive practices. Mark's routines and implicit understandings related to him fulfilling the role of the 'expert'. This pattern of behaviour appeared to have developed over many years, and been reinforced by clients and

colleagues. Jack's routines and his implicit understandings about the role of the educational psychologist appeared to have developed during his training and related to the need to be working in a collaborative and consultative manner. In both cases, the goal of the critical friend was to encourage the participants to reflect on their practice and to make their implicit theories-in-use, explicit.

Argyris and Schon (1974) argued that making implicit theories-in-use more explicit through collegial dialogue allows practice to be examined critically. More recent research has found that by providing opportunities to engage in collegial dialogue through supervision or through engaging with a critical friend, practitioners are supported to reflect on their current practice (Borko, 2004; Zorfass & Keefe Rivero, 2005). In the present study, both participants identified collegial dialogue as a key form of scaffolding that had supported them to reflect on their practice. The critical friend role was also identified as a key form of scaffolding that supported Mark and Jack to make their implicit theories-in-use more explicit.

#### Ability to change routines

Although Mark and Jack focussed much of their reflective thinking on improving their interactions with key individuals, they both found it

challenging to their current patterns of behaviour. This difficulty in changing one's current way of interacting was particularly evident in Jack's case as is evident in the amount of time that he spent reflecting on his frustration at his inability to engage the play therapist before he changed his approach and asked for a meeting. Perkin (2003) argued that in complex or stressful situations, practitioners tend to revert to their established behaviours rather than experiment with new behaviours. Eraut (1994) suggests that it is difficult to change established behaviours as the old patterns of behaviour need to be "unlearned" and replaced by new approaches (p.112) and this involves "*risk taking*" (p.36).

#### Espoused theories versus theories in use

The espoused theories, which professionals use to explain their actions, can be quite different from the implicit theories-in-use on which their actions are based (Argyris & Schon, 1974). The discrepancy between Mark's espoused theories and his theories in use became apparent in his first cycle of action research. Although Mark commented that he felt that his own values and beliefs didn't play a significant part in his strategies, interviews and reflective journal entries revealed that his values and beliefs played a key role in his practice and his theories-in-use were far more complex than his espoused theories suggested.

Eraut (2000, p.123) argued, "*The mismatch between espoused theories and theories-in-use is a natural consequence of the dualistic approach to professional education.*" Espoused theories are learned during training and formal education however, theories-in-use are developed in practice to meet the demands of the environment. Mark's initial comments gave the impression that his practice was very 'scientific' and that he saw himself as being removed from the situation he was working in. However, his reflective journal entries and his interviews suggested that his theories-in-use, which had developed to meet the realities of working with a range of individuals across a number of settings, were far more complex, and took into consideration a wider range of factors than his espoused theories suggested.

In Jack's case, there appeared at first to be relatively little discrepancy between his espoused theories and his theories-in-use. Jack's espoused theories were based on the key principles such as empowerment, equity, and collaborative consultation. His theories-in-use seemed to reflect these principles quite well. By the end of cycle three of his action research project, however, Jack had further developed his theories-in-use, to allow him to work in a collaborative consultative way, and still feel comfortable providing leadership to the

team as a specialist when he believed this was necessary. A key finding of the present study was that action research provided both participants with opportunities to reflect on their practice and helped them to identify discrepancies between their espoused theories and their theories-in-use.

The Researcher as an Outside Researcher and Critical Friend  
I acted as an outside researcher and a critical friend. This approach to supporting participatory action research projects has been used by a number of researchers (Cardno, 2006; Harnett, 2007; Salisbury, Wilson, Swartz, Palombaro, & Wassel, 1997; Zuber-Skerritt & Perry, 2002). As an outside facilitator, I actively supported participants to undertake their own action research projects through helping to plan the research process, assisting in goal setting, developing data collection tools, and supporting participants to analyse their own data. In the present study, a high level of guidance and support was necessary at the start of the research process to address the concerns raised by both psychologists regarding the anticipated time commitment required, even though both were keen to participate in the study. My outside ‘researcher’ role was the dominant focus at this stage of the research process, as my support was very practical in nature and involved helping participants to plan, develop, and implement their research projects, in such a way that it was

manageable for them and at the same time meet my own research goals. As the participants became more familiar with the action research methodology, the potential benefits of reflective thinking, and comfortable reflecting on their own practice they began to take greater ownership of their action research projects. This shift in ownership was mirrored by a shift in the researcher/participant relationship towards a relationship as co-researchers. My role as a critical friend also increased as the projects developed. As my focus moved to acting as a critical friend I was more able to actively challenge participants to reflect on their own practice, values and beliefs. However, there was one final shift in roles towards the end of the participants' research projects. This was a shift in the critical friend/participant relationship; which occurred as a result of both participants starting to internalise some of my critical friend questioning to the extent that they were challenging their own practices, values, and beliefs to a greater extent both verbally in their interviews and in their reflective journals. It would be interesting for future researchers using the outside researcher and a critical friend approach to practitioner research to document these changing relationships in detail and analyse how the changing relationship enhanced the reflective thinking of both the researcher and the participants.

### A Supportive Community of Practice

Professional practice is enhanced when practitioners are given time to experiment with and modify their new skills within a supportive culture (Guskey, 2003c). A supportive community was developed through providing participants with scaffolding to facilitate reflective thinking, which included opportunities for collegial dialogue, professional supervision, professional development on reflective thinking, weekly reflective journal exercises, three-weekly semi-structured interviews (based on the four steps of the action research approach), access to computers (along with the necessary technical support for learning how to use the electronic portfolio), work time to spend on their action research projects and ongoing support from the researcher as a critical friend. Roettger (2006) highlighted the key role that a supportive community of practice played in ensuring that research results are applicable to the work of the practitioner.

### The Critical Friend Role

Eraut (2000) emphasised the role that a critical friend could play in scaffolding reflective thinking on practice. A critical friend brings an objective perspective to the process and assists participants to reflect critically on their practice rather than using reflective thinking as a means of justifying their current practice (Poskitt, 2005; Timperley &

Robinson, 2001). Carrington and Robinson (2006) argued that, “*a critical friend can provide focus, guidance and encourage processes that uncover the deeper aspects of thinking needed for reform*” (p.326). The present study found that the critical friend role helped participants to make the links between their theory and their practice and assisted them to identify discrepancies between their espoused theories and their theories-in-use. Techniques such as reflective questioning, offering alternative perspectives, and constructive criticism were used in the present study. In their final interviews, both Mark and Jack identified collegial dialogue as one of the key forms of scaffolding, which had enhanced their reflective thinking. This finding is consistent with Eurat (2000), who argued that collegial dialogue helps to make routinised behaviours explicit to the practitioner.

#### Reflective Journal Exercises

The value of written reflective journals in promoting reflective thinking has been argued by a number of researchers (Bulman & Schutz, 2004; Scanlan, Care, & Udod, 2002). In the present study participants completed weekly reflective exercises based on the Reflective Thinking Cycle of Gibbs (1988). The researcher read the

participants' weekly reflective journal entries and provided both verbal and written feedback to participants, as a critical friend.

Bulman (2004) suggested that Gibbs' Reflective Thinking Cycle is an appropriate model to use in order to enhance professional reflection, although he argues that frameworks need to be seen as providing a guide not a prescription. In the present study, Jack initially used the Gibbs model in a more prescriptive manner but by cycle two of his action research project he was using the Gibbs model more flexibly. The present study found that the reflective journal exercises were a key form of scaffolding in enhancing practitioners' reflective thinking and that the Gibbs model prompted practitioners to reflect on their own feelings, values and beliefs.

**The Effect of Reflective Thinking on Client Outcomes**

Van Manen (1991) argued that for practitioners, identifying outcomes for clients was a key element of reflective thinking. However, studies examining the outcomes of reflective thinking for the client are rare (Harnett, 2007; Mamede, Schmidt, & Penaforte, 2008; Moon, 2007). The present study attempted to identify whether clients were able to see any changes in the services they received as a result of the psychologists' reflective thinking. The parents and classroom teachers of the nominated students were interviewed at the beginning

and end of the participants' twelve-week action research projects. The results of the present study found that the parents and classroom teachers of the nominated students were indeed able to recognise positive changes to the service the psychologist provided to them. In Jack's case, Doug's parents and classroom teacher believed that the service they were receiving from the team supporting Doug had significantly improved and that this improvement in service was due to Jack's actions over the period of his involvement in this study. In Mark's case, Allen's parents and classroom teacher were not able to identify a change in service as such but commented that his support had remained constantly high over the course of his action research project. However, their comments in their second interviews indicated that they were now using the strategies that Mark had taught them, across settings and individuals, which was a key focus of Mark's action research project. Therefore, Mark's reflective thinking did lead to a positive change in the behaviour of the identified clients, which is consistent with one of his stated goals. The present study found that in both cases the psychologists' reflective thinking led to a change in practice, which had an identifiable positive outcome for the clients.

#### Possible Implications of the Findings of the Study

Phase 1 of the present study identified a number of key factors that enhance or restrict the reflective thinking of psychologists. In Phase 2, these identified factors were incorporated into a model that assisted the two psychologists to reflect on their practice, thereby enhancing the services they provided to the identified clients. The implications of the present study's findings for psychologists, the organisation that employ them and future research in this area are discussed below.

#### Implications for psychologists

The present study found that an individual's cognitions and emotions affected their reflective thinking. Dewey (1933) identified open-mindedness, whole-heartedness, and responsibility as core attributes of reflective thinking. A key finding of the present study was to identify emotional readiness for reflection as an additional core attribute, which may either enhance or restrict reflective thinking. Psychologists who feel calm and confident in their own ability, have manageable workloads, and feel supported within a trusting community of practice, are more emotionally ready to reflect on their practice. In contrast, psychologists who feel overloaded stressed, lacking in confidence and unsupported within their work environment, find engaging in reflective thinking is more challenging. This finding

has important implications for psychologists and the organisations that employ them. Psychologists need to develop strategies to manage their own emotional states in order to maximise their readiness for reflective thinking, these strategies may include relaxation techniques, self reflective questioning, as well as time and workload management systems.

#### The role of organisations in promoting reflective thinking

The present study found that psychologists were able to enhance their use of reflective thinking within a short timeframe of only twelve weeks, when appropriate scaffolding was put in place. Enhanced reflective thinking led to improved outcomes for clients. This finding supports research in the area of professional learning (Eraut, 1994, 2000; Hammerness, Darling-Hammond, & Bransford, 2005; Harnett, 2007) which has found that unless practitioners are supported to develop their reflective thinking skills to a level where they are able to critique and monitor their practice, their current routines and unreflective practice will continue. A number of organisational factors were identified as enhancing reflective thinking including: supervision, time and workload management systems and environments that value, support and encourage reflective thinking. These factors are discussed in more detail below.

### Supervision

Access to appropriate supervision was identified as a key factor in enhancing reflective thinking. Psychologists viewed supervisors who were trained and experienced in the work of the psychologist as enhancing their reflective thinking skills, whereas a lack of appropriate supervision restricted reflective thinking. This finding suggests that it would be beneficial for organisations employing psychologists to ensure that regular training in supervision is provided and when an appropriate supervisor is not available, alternative arrangements such as using video conferencing facilities to access appropriate supervision are supported.

### Time

Having enough focussed or dedicated time was a key element in enhancing reflective thinking-for-critical-inquiry (Teekman, 2000). Factors that organisations may consider are training in time and workload management, acknowledging reflection as part of normal casework, recognising that time spent on reflective thinking activities has a direct relationship to services, by allowing this time to be logged against the individual client on dairy/timesheets, and providing line managers with guidelines and training in the management of staff workloads.

### Workload management

Organisations have a critical role in ensuring that the work environment supports reflective thinking. Psychologists need to have a good working relationship with their line managers and take shared responsibility for developing this relationship so that any time or workload management concerns can be openly discussed and solutions identified.

### Environments that value support and encourage reflective thinking

Environments that value, support and encourage reflective thinking provide opportunities for psychologists to reflect on their practice with colleagues, within trusting communities of practice. Psychologists need to be supported to reflect on their practice in environments where they feel safe to discuss their practice in the knowledge that good work is recognised and identified areas for improvement are supported through opportunities for professional learning. The culture of the organisation and frameworks such as the clinical supervision process play a key role in enabling self-reflection to occur.

### Implications for future research

The role of action research as an effective professional learning tool to enhance reflective thinking was highlighted in the present study.

Shulman and Shulman (2004) argue that professional learning is more effective when accompanied by reflection and metacognitive awareness, within the context of a supportive community of practice. Although the current research touched on some of the key elements of a supportive community of practice, future research is needed on how these communities of practice can be best developed and maintained in the psychologists' work environment. The findings of the current study suggest that the cyclical action research process is an effective professional learning tool for enhancing psychologists' reflective thinking skills leading to improvements in professional practice. One implication of this finding is that psychologists could be encouraged to identify specific areas of their practice for further development as part of their individual professional development plan, and then supported to undertake targeted action research projects in order to enhance this aspect of their practice. However, it is important to acknowledge that conducting research on one's own practice can be a challenging process due to the multiple roles you have as a researcher and practitioner. In the current study the emphasis on my different roles as a researcher, a critical friend, and a colleague changed and this required me to model a high degree of reflective thinking in order to understand and adapt to the changing relationships I had with my participants, clients and colleagues. Researchers wanting to undertake this type of participant research in the future should be mindful of the

relationship between researcher and participant changes in this type of research and should consider documenting how these changes enhanced or restricted the reflective thinking of both parties.

**Limitations of the Study and Implications for Future Research**  
All studies have limitations and it is acknowledged that the findings of Phase 1 of the present study were based on self-reported data collected through a self-completion questionnaire. While this is an appropriate measure for collecting data on a population's perception of a phenomenon, the accuracy of participants reported use of reflective thinking is unclear. In addition, although a definition of reflective thinking was provided with the survey questionnaire, it was not possible to check that all participants had a shared understanding of the concept of reflective thinking when interpreting participant responses to the questionnaire. It is likely that participant's responses to the questionnaire were influenced by their previous understanding of the reflective thinking as a concept as well as the definition given. For this reason, future research on practitioner perceptions could attempt to check the degree of shared understanding between participants. This could be achieved through asking participants to provide their own definition of reflective thinking or to state how their understanding of reflective thinking differs from the definition used in the survey.

The current study focused heavily on the cognitive elements of reflective thinking. Therefore a limitation of the current study is that relatively little attention was given to the behavioural elements of reflective thinking. This meant that measuring the outcomes of reflective thinking for the participants in phase 2 relied on self report measures. Future research could pay greater attention to the observable changes in behaviour of the practitioner and their clients, as a result of reflective thinking. One possible data collection tool to measure behaviour change would be the use of behavioural observations across settings to identify if reported changes in practice were observable.

A limitation of Phase 2 is that the participating psychologists were provided with information on the aims of the research and a proposed methodology prior to their consenting to take part in this study.

Although this is consistent with informed consent processes, it meant that the participants were likely to be supportive of the research topic and its underlying philosophy when they volunteered to take part in the study. As the participating psychologists were colleagues of the researcher they were likely to be sympathetic to the researcher's own goal of undertaking his doctoral research.

Another limitation of the current study was the dual roles of the researcher. In the current study I was the researcher, the critical friend, and a colleague. Although as a researcher I was mindful of which role I had in different situations and at different stages of the research process, it is unclear what influence having these multiple roles had on participants' level of engagement in this study or on their level of reflective thinking. As a researcher the multiple roles provided many opportunities for me to reflect on my behaviour as there were subtle differences in my relationship with participants depending on the role I was performing. For example as a researcher one of my primary goals was to successfully complete the study, as a critical friend encouraging participant critical reflection was my focus, and as a colleague, being a supportive peer with whom they were able to discuss the practice was a key goal. It would be helpful for future participant based research, which involves these types of multiple roles to document how the researcher role changed in relation to the participants at different stages in the research process and what impact this changing role had on the practice of the participants. This could be achieved through the researcher and the participants documenting not only their reflections on their practice but also on their relationship with each other at different stages of the research process.

A final possible limitation of Phase 2 is that the findings of the action research approach used are limited to the setting in which the research was undertaken (Arhar, Holly, & Kasten, 2001); although replication and generalisation are not critical elements of valid research.

Participatory and interpretive research designs are particularly helpful when investigating professional practice issues such as the use of reflective thinking, when research needs to be sensitive to the environment and the individuals within that environment. The knowledge gained through action-orientated research is validated through practitioners in similar situations recognising the practical value of the findings of the study for their own context (Somekh, 2006). As Eisner (2005a) argued:

What we have learned is that we can treat the lessons learnt from case studies as anticipatory schemata that facilitate our search processes, for a case is not only about itself but an example of things like it. (p.199)

The present study involved three cycles of action research over a relatively short period of twelve weeks. A key finding was that action research was an effective tool for enhancing reflective thinking on practice over this timeframe.

Although both psychologists were able to enhance their use of reflective thinking over the three cycles of action research (twelve

weeks), the study did not investigate whether the identified changes in practice were sustained beyond the completion of the projects.

Another possible limitation of the study is that the findings are based on psychologists' and clients' self-report measures. Future research in this area may benefit from collecting observational data as well as self-reports as evidence of a change in practice.

#### Concluding Comment

Reflective thinking is an adaptive metacognitive and emotional process, which is facilitated through inter-personal dialogue within the context of multiple environments that actively support, value and promote reflective thinking.

Individual practitioners are able to enhance their practice through self-reflection but this will only lead to sustainable positive organisational change when the culture of the organisation is receptive to reflective thinking. For this to happen, organisations need to value reflective thinking and recognise practitioner knowledge as a valid form of evidence.

Organisations can use a range of scaffolded approaches to support psychologists to enhance their reflective thinking skills. The findings of the current study showed that action research, reflective journal

exercises, and collegial dialogue in the form of supervision or a critical friend, were three effective tools which can enable psychologists to enhance their reflective thinking over a relatively short period of time.

Reflective practice will become a reality if psychologists are committed to enhancing their practice through self-reflection and the organisation supports the implementation of appropriate scaffolding to enable psychologists to reflect on their practice.



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## **APPENDICES**

## Appendix A: Information Sheet

**Title of the research:** Psychologists' Intentional use of Reflection as a Tool for Inquiry

**Researcher:** Andrew Rae, BA, MEdPsych, PGDipEdPsych,  
Registered Psychologist

**Contact details:** Ministry of Education, Special Education  
Cnr Warren St and Lyndon Road, Hastings  
Telephone (06) 8709769

**Research supervisors:** Professor Ian M. Evans: Head of The School of Psychology Massey University Palmerston North  
Dr Roseanna Bourke: Director Centre for Educational Development Massey University, Palmerston North

The purpose of this research is to explore the use of reflective thinking by Ministry of Education, Special Education psychologists and the outcomes of reflective thinking for the psychologists practice as well as their clients. There are two phases to the study.

Phase 1 of the study involves identifying individual and organisational factors that enhance or restrict reflective thinking. This phase will involve a literature review and Ministry of Education, Special Education psychologists' completing a self completion questionnaire on the factors that enhance or restrict their use of reflective thinking.

Phase 2 of the study involves working with a group of psychologists to trial an electronic portfolio which has a guided reflective thinking exercise. Psychologists will be asked to nominate one student, on their current caseload. The service provided to this student, their parents/caregivers and the classroom teacher will become the focus of a weekly reflective exercise. The researcher will interview the student, their parents/caregivers, and their teacher on two occasions during the course of this study, to identify the outcomes of the psychologist's reflective thinking on the service provided.

Any person employed to transcribe interview tapes will sign a confidentiality agreement.

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/97. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North. Telephone 06 350 5249, email [S.V.Rumball@massey.ac.nz](mailto:S.V.Rumball@massey.ac.nz).

**All participants who take part in this study have the right to:**

- 1) Refuse to answer any particular question and to withdraw from the study at any time.
- 2) Ask for the audiotape to be turned off at any stage during a taped interview.
- 3) Ask any questions about the study that occurs to them during their participation.
- 4) Provide information on the understanding that it is confidential and no names will be used.
- 5) Ask for interview tapes to be destroyed or returned to them at the conclusion of the study.

Appendix B: Letter to Massey University Course Controller

Course Controller  
Post-Graduate Diploma of Educational Psychology  
Department of Learning and Teaching  
Massey University

Date

Dear

My name is Andrew Rae and I am a registered educational psychologist working for the Ministry of Education, Special Education in the Central North Region. I am currently undertaking a study on the use of reflective thinking by registered psychologists working in the New Zealand education system. This research is part of my doctoral study and may result in publications.

Please find enclosed an Information Sheet outlining the aims of the study and the processes involved in meeting the aims of the study.

As part of this research, I am interested in the role reflective thinking plays in the training of educational psychologists. Therefore, I would like to request an interview with you to examine the role of reflective thinking in the Massey University Post-Graduate Diploma of Educational Psychology programme. The interview will take approximately 40 - 60 minutes and with your permission will be audiotaped.

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/97. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North, telephone 06 350 5249, email [S.V.Rumball@massey.ac.nz](mailto:S.V.Rumball@massey.ac.nz).

If you require any further information please do not hesitate to contact me on (06) 8709769, or at [andrew.rae@minedu.govt.nz](mailto:andrew.rae@minedu.govt.nz). Alternatively, you may wish to contact my supervisors: Professor Ian M. Evans or Dr Roseanna Bourke at Massey University on (06) 356 9099

If you are prepared to take part in this study, please complete the attached Consent Form and return it to the researcher in the postage paid envelope supplied.

Many thanks for considering this request,

Sincerely,

*Andrew Rae*  
Registered Psychologist  
Ministry of Education, Special Education

Appendix C: Consent Form for Massey University Course Controller

**Title of the research:** Psychologists' Intentional use of Reflection as a Tool for Inquiry

**Researcher:** Andrew Rae, BA, MEdPsych, PGDipEdPsych,  
Registered Psychologist

**Contact details:** Ministry of Education, Special Education  
Cnr Warren St and Lyndon Road, Hastings  
Telephone (06) 8709769

**Research supervisors:** Professor Ian M. Evans: Head of The School of Psychology Massey University Palmerston North  
Dr Roseanna Bourke: Director Centre for Educational Development Massey University, Palmerston North

I have read the Information Sheet and have had the details of the study explained to me.

My questions have been answered to my satisfaction and I understand that I may ask further questions at any time about this study.

I understand that I have the right to withdraw from the study at any time or to decline to answer any particular questions.

I agree to provide information to the researcher on the understanding that my name will not be used in any report that results from this study. The information will be used only for this research and publications arising from this research project.

I give my consent for Andrew Rae to interview me on the role of reflective thinking in the Massey University Post-Graduate Diploma of Educational Psychology programme. I understand that the interview will be audiotaped and that the information will be used only for the purpose of this research. I also understand that I have the right to ask for the tape-recorder to be turned off at any time during the interview.

I agree to participate in this study under the conditions set out in the Information Sheet.

**Signed:**

**Name:**

**Position:**

**Date:**

Appendix D: Letter to the National Manager of Group Special Education  
National Manager  
Ministry of Education, Special Education  
Wellington

Date

Dear

My name is Andrew Rae and I am a registered educational psychologist working for the Ministry of Education, Special Education in the Central North Region. I am currently undertaking a study on the use of reflective thinking by registered psychologists working in the New Zealand education system. This research is part of my doctoral study and may result in publications.

I would like your consent to contact Group Special Education Regional and District Managers to gain consent to approach registered psychologists (all regions), and the nominated clients of a selected group of psychologists in the Central North Region for the purposes of this study.

Please find enclosed an Information Sheet outlining the aims of the study and the processes involved in meeting the study's aims.

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/97. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North. Telephone 06 350 5249, email [S.V.Rumball@massey.ac.nz](mailto:S.V.Rumball@massey.ac.nz).

If you require any further information please do not hesitate to contact me on (06) 8709769, or at [andrew.rae@minedu.govt.nz](mailto:andrew.rae@minedu.govt.nz). Alternatively, you may wish to contact my supervisors: Professor Ian M. Evans or Dr Roseanna Bourke at Massey University on (06) 356 9099

If you consent for me to contact Regional Managers, District Managers, registered psychologists, and nominated clients of a

selected group of psychologists in the Central North Region for the purposes of this study, please complete the attached Consent Form and return it in the postage paid envelope supplied.  
Many thanks for considering this request,

Sincerely,

Andrew Rae  
Registered Psychologist  
Ministry of Education Special Education

Appendix E: Consent Form for the National Manager Group Special Education

**Title of the research:** Psychologists' Intentional use of Reflection as a Tool for Inquiry

**Researcher:** Andrew Rae, BA, MEdPsych, PGDipEdPsych,  
Registered Psychologist

**Contact details:** Ministry of Education, Special Education  
Cnr Warren St and Lyndon Road, Hastings  
Telephone (06) 8709769

**Research supervisors:** Professor Ian M. Evans: Head of The  
School of Psychology  
Massey University Palmerston North  
Dr Roseanna Bourke: Director Centre for Educational Development  
Massey University, Palmerston North

I have read the information provided about this study and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time about this study.

I understand that I have the right to withdraw my support for the study at any time.

I also understand that any participant of this study has the right to withdraw from the study at any time or to decline to answer any particular question asked of them.

I give my consent for Andrew Rae to contact Regional and District Managers, Registered Psychologists, and nominated clients of a selected group of registered psychologists (Central North Region) for the purposes of this study under the conditions set out in the Information Sheet.

**Signed:**

**Name:**

**Position:**

**Date:**

Appendix F: Letter to Regional Managers

Regional Manager  
Ministry of Education, Special Education

Date

Dear

My name is Andrew Rae and I am a registered educational psychologist working for the Ministry of Education, Special Education in the Central North Region. I am currently undertaking a study on the use of reflective thinking by registered psychologists working in the New Zealand education system. This research is part of my doctoral study and may result in publications.

I would like your consent to contact District Managers to gain their approval to approach registered psychologists (all regions), and the nominated clients of a selected group of registered psychologists (Central North Region) for the purposes of this study.

Please find attached an Information Sheet outlining the aims of the study and the processes involved in meeting the study's aims.

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/97. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North. Telephone 06 350 5249, email [S.V.Rumball@massey.ac.nz](mailto:S.V.Rumball@massey.ac.nz).

This research has the approval of the National Manager Group Special Education

If you require any further information please do not hesitate to contact me on (06) 8709769, or at [andrew.rae@minedu.govt.nz](mailto:andrew.rae@minedu.govt.nz). Alternatively, you may wish to contact my supervisors: Professor Ian M. Evans or Dr Roseanna Bourke at Massey University on (06) 356 9099

If you consent to me contacting District Managers to gain their approval to approach registered psychologists (all regions), and the nominated clients of registered psychologists (Central North Region) for the purposes of this study, please complete the attached Consent Form and return it in the postage paid envelope supplied. Many thanks for considering this request,

Sincerely,

Andrew Rae  
Registered Psychologist  
Ministry of Education, Special Education

Appendix G: Consent Form Regional Managers

**Title of the research:** Psychologists' Intentional use of Reflection as a Tool for Inquiry

**Researcher:** Andrew Rae, BA, MEdPsych, PGDipEdPsych,  
Registered Psychologist

**Contact details:** Ministry of Education, Special Education  
Cnr Warren St and Lyndon Road, Hastings  
Telephone (06) 8709769

**Research supervisors:** Professor Ian M. Evans: Head of The School of  
Psychology Massey University Palmerston North  
Dr Roseanna Bourke: Director Centre for  
Educational Development  
Massey University, Palmerston North

I have read the information provided about this study and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time about this study.

I understand that I have the right to withdraw my support for the study at any time.

I also understand that all participants of this study have the right to withdraw from the study at any time or to decline to answer any particular question in the study.

I give consent for Andrew Rae to contact District Managers, Registered Psychologists, and the nominated clients of a selected group of first year registered educational psychologists (Central North Region) for the purposes of this study, under the conditions set out in the Information Sheet.

**Signed:**

**Name:**

**Position:**

**Date:**

Appendix H: Letter to Ministry of Education, Special Education District..  
Managers

District Manager  
Ministry of Education, Special Education

Date

Dear

My name is Andrew Rae and I am a registered educational psychologist working for the Ministry of Education, Special Education in the Central North Region. I am currently undertaking a study on the use of reflective thinking by registered psychologists working in the New Zealand education system. This research is part of my doctoral study and may result in publications.

I would like your consent to approach registered psychologists and the nominated clients of a selected group of registered psychologists (Central North Region) to gain participants for the study.

Please find attached an Information Sheet outlining the aims of the study and the processes involved in meeting the studies aims.

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/97. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North. Telephone 06 350 5249, email [S.V.Rumball@massey.ac.nz](mailto:S.V.Rumball@massey.ac.nz).

This research has the approval of Group Special Education's National Manager, and Regional Managers.

If you require any further information please do not hesitate to contact me on (06) 8709769, or at [andrew.rae@minedu.govt.nz](mailto:andrew.rae@minedu.govt.nz). Alternatively, you may wish to contact my supervisors: Professor Ian M. Evans or Dr Roseanna Bourke at Massey University on (06) 356 9099.

If you give consent for me to contact registered psychologists (all regions), and the nominated clients of registered psychologists (Central North Region) for the purposes of this study, please complete the attached Consent Form and return it in the postage paid envelope supplied.

Many thanks for considering this request,

Sincerely,

Andrew Rae  
Registered Psychologist  
Ministry of Education, Special Education

Appendix I: Consent: Ministry of Education, Special Education District .  
Managers

**Title of the research:** Psychologists' Intentional use of Reflection as a Tool for Inquiry

**Researcher:** Andrew Rae, BA, MEdPsych, PGDipEdPsych,  
Registered Psychologist

**Contact details:** Ministry of Education, Special Education  
Cnr Warren St and Lyndon Road, Hastings  
Telephone (06) 8709769

**Research supervisors:** Professor Ian M. Evans: Head of The School of  
Psychology Massey University Palmerston North  
Dr Roseanna Bourke: Director Centre for  
Educational Development Massey University  
Palmerston North

I have read the information provided about this study and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time about this study.

I understand that I have the right to withdraw my support for the study at any time.

I also understand that all participants of this study have the right to withdraw from the study at any time or to decline to answer any particular question in the study.

I give consent for Andrew Rae to contact registered psychologists (all regions) and the nominated clients of a selected group of registered psychologists (Central North Region) for the purposes of this study, under the conditions set out in the Information Sheet.

**Signed:**

**Name:**

**Position:**

**Date:**

Appendix J: Letter Ministry of Education, Special Education Registered  
Psychologists

Registered Psychologist  
Ministry of Education, Special Education

Date

Dear

My name is Andrew Rae and I am a registered educational psychologist working for the Ministry of Education Special Education in the Central North Region. I am currently undertaking a study on the use of reflective thinking by registered psychologists working in the New Zealand education system. The research is part of my doctoral study and may result in publications.

As part of this research, I am interested in factors that enhance or restrict reflective thinking by registered psychologists in practice. Therefore, I would like to request your participation in a survey to identify the factors which enhance or restrict your ability to operate as a reflective practitioner. The survey will take 40 minutes to one hour to complete.

Please find enclosed an Information Sheet outlining the aims of the study and the processes involved in meeting the study's aims.

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/97. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North. Telephone 06 350 5249, email [S.V.Rumball@massey.ac.nz](mailto:S.V.Rumball@massey.ac.nz).

The research has the approval of Group Special Education's National Manager, Regional Managers, and District Managers.

If you require any further information please do not hesitate to contact me on (06) 8709769, or at [andrew.rae@minedu.govt.nz](mailto:andrew.rae@minedu.govt.nz). Alternatively, you may wish to contact my supervisors: Professor Ian M. Evans or Dr Roseanna Bourke at Massey University on (06) 356 9099.

Many thanks for considering this request

Sincerely,

Andrew Rae  
Registered Psychologist  
Ministry of Education, Special Education

Appendix K: Registered Psychologists' Self-completion Questionnaire  
**Reflective Thinking of**

**Ministry of Education, Special Education Psychologists**

This survey aims to identify both individual and organisational factors that enhance or restrict the ability of Ministry of Education, Special Education psychologists to reflect on their practice. The operational definition of reflective thinking used for the purposes of this survey is:

Reflective thinking is an adaptive metacognitive and social activity by which the individual purposefully engages in self or peer discourse in an attempt to critically analyse his or her own understanding of past, current, and future experiences and events, leading to a change in perspective that influences future thoughts, actions or beliefs (Adapted from Teekman, 1997).

I greatly appreciate you taking the time to complete this survey and returning it in the envelope supplied. The survey will take approximately 30 - 40 minutes to complete.

Section 1: Personal Profile

**Please circle the appropriate response:**

**A) Your gender is:**                      Male

Female

**B) The cultural/ethnic group with whom you primarily identify is:**

New Zealand European      New Zealand Māori      Pacific Nations

Other If other please specify .....

**C) Your age group is:**

21-25 years    26 -30 years    31-35 years    36-40 years    41 -45 years  
46 -50years    51 -55 years    56 – 60 years    61 years and over

**Section 2: Training and Experience**

**A) In which country did you train to be a psychologist?**

**B) What qualifications do you hold as a psychologist? (Please circle all that apply)**

Bachelors Degree    Masters Degree    Postgraduate Diploma  
Doctoral Degree    Other

If other please specify .....

**C) Please identify any other professional qualifications you hold**

.....  
.....

**D) Which field of psychology best describes your speciality?**

Educational psychology    Clinical psychology  
Developmental psychology    Counselling psychology  
Industrial psychology    Other

If other please specify .....

**E) Which theoretical perspective most influences your practice?**

Cognitive-Behavioural    Biological    Applied Behaviour Analysis  
Psychoanalytic    Humanistic    Other

If other please specify .....

**E) How many years have you been practising as a psychologist?**

0-4 years	5-9 years	10-14 years	15-19 years
20-24 years	25-29 years	30-34 years	35 years plus

Section 3: Factors that Enhance Reflective Thinking

1) Please list the three most important factors that *enhance* your ability to reflect on your practice, in order of importance.

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_

2) Below are a list of factors that other professional groups have identified as enhancing their ability to reflect on practice. Please describe in detail, how each of the following factors enhances your ability to reflect on practice and circle the most appropriate response to indicate its level of importance to you.

A) Professional casework supervision

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important                      Important                      Moderately Important                      Of Little Importance*  
*Unimportant*

B) Case reviews/discussions with professional colleagues (e.g. presentations to team)

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important                      Important                      Moderately Important                      Of Little Importance*  
*Unimportant*

C) Performance appraisal systems

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important*                      *Important*                      *Moderately Important*                      *Of Little Importance*  
*Unimportant*

D) Ongoing professional development

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important*                      *Important*                      *Moderately Important*                      *Of Little Importance*  
*Unimportant*

E) Client feedback on your practice

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important*                      *Important*                      *Moderately Important*                      *Of Little Importance*  
*Unimportant*

F) A safe environment for discussing problems with colleagues

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important*                      *Important*                      *Moderately Important*                      *Of Little Importance*  
*Unimportant*

G) Any other comments you would like to share regarding factors that enhance your ability to reflect on practice?

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Section 4: Factors that Restrict Reflective Thinking

1) List the three most important factors that restrict your ability to reflect on your practice, in order of importance.

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_

2) Below is a list of factors that other professional groups have identified as restricting their ability to reflect on practice. Please comment in full, on how each of the following factors restricts your ability to reflect on practice and circle the most appropriate response to indicate its level of importance to you.

A) Overly prescriptive casework practices

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important                      Important                      Moderately Important                      Of Little Importance*  
*Unimportant*

B) Inexperience with the task at hand

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important                      Important                      Moderately Important                      Of Little Importance*  
*Unimportant*

C) Lack of contact with other team members/colleagues.

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important*                      *Important*                      *Moderately Important*                      *Of Little Importance*  
*Unimportant*

D) Concern about disclosing difficulties to colleagues

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important*                      *Important*                      *Moderately Important*                      *Of Little Importance*  
*Unimportant*

E) The organisation's attitude towards professional reflection

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important*                      *Important*                      *Moderately Important*                      *Of Little Importance*  
*Unimportant*

F) High workloads or competing demands

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important*                      *Important*                      *Moderately Important*                      *Of Little Importance*  
*Unimportant*

G) Other comments regarding factors that restrict your ability to reflect on practice?

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Section 5: Affective Factors that Influence Reflective Thinking

**1) List the three most important affective factors that influence your ability to reflect on your practice, in order of importance.**

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_

**2) Below is a list of affective factors identified in the literature as influencing a professionals' ability to reflect on practice. Please comment in full, how each of the following factors affect your ability to reflect on practice and circle the most appropriate response to indicate its level of importance to you.**

A) Ability to consider problems from different perspectives

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important                      Important                      Moderately Important                      Of Little Importance*  
*Unimportant*

B) Personal commitment to continuous learning and improvement

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important                      Important                      Moderately Important                      Of Little Importance*  
*Unimportant*

C) A willingness to accept responsibility for one's professional practice

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How important is this factor to you?

*Very Important*                      *Important*                      *Moderately Important*                      *Of Little Importance*  
*Unimportant*

D) Other comments you would like to share regarding affective factors that influence your ability to reflect on practice?

Comment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Thank you for taking the time to complete this survey.**

Appendix L: Questionnaire Response Template

**Section 1: Personal Profile**

*Gender:*

*Cultural or ethnic group with whom you primarily identify*

*Age group:*

**Section 2: Training and Experience**

*In which country did you train to be a psychologist?*

*What qualifications do you hold in the field of psychology?*

*Please identify any other professional qualifications you hold*

*Which field of psychology best describes your speciality?*

*Which theoretical perspective most influences your practice?*

*Years practising as a registered psychologist*

**Section 3: Factors that Enhance Reflective Thinking**

*Three most important factors that enhance your ability to reflect on your practice in order of importance*

Most important

Second most important

Third most important

*Professional casework supervision*

How important is this factor to you

*Case reviews or discussions with professional colleagues*

How important is this factor to you

*Performance appraisal systems*

How important is this factor to you

*Ongoing professional development*

How important is this factor to you

*Client feedback on your practice*

How important is this factor to you

*A safe and trusting environment for discussing problems with  
colleagues*

How important is this factor to you

*Other comments regarding factors that enhance your ability to reflect  
on practice*

#### **Section 4: Factors that Restrict Reflective Thinking**

*List the three most important factors that restrict reflective thinking on  
practice in order of importance*

Most important

Second most important

Third most important

*Overly prescriptive casework practices*

How important is this factor to you

*Inexperience with the task at hand*

How important is this factor to you

*Lack of contact with other team members/colleagues*

How important is this factor to you

*Concern about disclosing difficulties to colleagues*

How important is this factor to you

*The organisation's attitude towards professional reflection*

How important is this factor to you

*High workloads or competing demands*

How important is this factor to you

*Are there any other comments you would like to share regarding factors that restrict your ability to reflect on practice*

**Section 5: Affective Factors that Influence Reflective Thinking**

*List the three most important affective factors that influence your ability to reflect on your practice in order of importance*

Most important

Second most important

Third most important

*Ability to consider problems from different perspectives*

How important is this factor to you

*Personal commitment to continuous learning and improvement*

How important is this factor to you

*A willingness to accept responsibility for one's professional practice*

How important is this factor to you

*Are there any other comments you would like to share regarding affective factors that influence your ability to reflect on practice*

Appendix M: Letter for Ministry of Education, Special Education  
Psychologists (Phase 2)

Registered Psychologist  
Ministry of Education, Special Education  
Central North Region

Date

Dear

My name is Andrew Rae and I am undertaking a study on the use of reflective thinking by psychologists. This research is part of my doctoral study and may result in publications.

The purpose of this research is to explore the use of reflective thinking by Ministry of Education, Special Education psychologists and the outcomes of the psychologists' reflective thinking for their practice and clients. There are two phases to the study.

Phase 1 involves identifying individual and organisational factors that enhance or restrict reflective thinking by Special Education psychologists.

Phase 2 involves working with a group of Ministry of Education, Special Education psychologists to examine the impact of reflective thinking on the psychologists' practice and their service to clients. I would like to request your participation in Phase 2 of this study.

Phase 2 uses an action research methodology. Your participation will be negotiated with you however I have provided an indication of what your voluntary participation is likely to involve:

- A) A self-completion questionnaire on factors that enhance or restrict your use of reflective thinking
- B) Gaining informed consent from one or two nominated student s, their parents/caregivers, and their classroom teachers for the researcher to interview them to identify the outcomes of your reflective thinking process for them
- C) Three cycles of action research focusing on a practice area of your choice. The three cycles will run over approximately 12 weeks

D) Four 20-minute interviews on your chosen practice area. Interviews will be undertaken at the beginning of the study and at the end of each action research cycle.

E) Weekly completion of an electronic reflective thinking exercise related to your identified cases.

Please find enclosed an Information Sheet outlining the aims of the study and the processes involved in meeting the study's aims.

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/97. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North, telephone 06 350 5249, email [S.V.Rumball@massey.ac.nz](mailto:S.V.Rumball@massey.ac.nz).

This research was approved by: The Ministry of Education, Special Education National Manager, and the Central North Regional Manager in 2004. It was also approved by your District Manager and Team Leader in July 2008.

If you require any further information please do not hesitate to contact me on (06) 8709769, or at [andrew.rae@minedu.govt.nz](mailto:andrew.rae@minedu.govt.nz). Alternatively, you may wish to contact my supervisors: Professor Ian M. Evans or Dr Roseanna Bourke through Massey University on (06) 356 9099.

If you give your consent to participate in this study, please complete the Consent Form and return it to me in the envelope supplied.

Many thanks for considering this request,

Sincerely,

Andrew Rae  
Registered Psychologist  
Ministry of Education, Special Education

Appendix N: Registered Psychologist Consent Form

**Title of the research:** Psychologists' Intentional use of Reflection as a Tool for Inquiry

**Researcher:** Andrew Rae, BA, MEdPsych, PGDipEdPsych,  
Registered Psychologist

**Contact details:** Ministry of Education, Special Education  
Cnr Warren St and Lyndon Road, Hastings  
Telephone (06) 8709769

**Research supervisors:** Professor Ian M. Evans: Head of The School of Psychology Massey University Palmerston North  
Dr Roseanna Bourke: Director Centre for Educational Development Massey University Palmerston North

I have read the Information Sheet and have had the details of the research explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time about this study.

I understand that I have the right to withdraw from the study at any time and to decline to answer any particular questions.

I understand that no names will be used in any research report that results from this study. The information will be used only for this research and publications arising from this research project.

I give my permission for the researcher to interview me for the purposes of the study.

I understand the interviews will be taped and that I have the right to ask for the tape-recorder to be turned off at any time during the interview.

I give my permission for the researcher to interview the nominated student, their parents/caregivers, and the classroom teacher, for the purposes of this study.

I agree to participate in this study under the conditions set out in the Information Sheet.

**Signed:**

**Name:**

**Position:**

**Date:**

Appendix O: Letter for Board of Trustees/Principal

The Principal  
School

Date

Dear

My name is Andrew Rae and I am a psychologist working for the Ministry of Education, Special Education. I am undertaking a study on the use of reflective thinking by psychologists. This research is part of my doctoral study and may result in publications.

The research explores the use of reflective thinking by psychologists and the benefits of reflective thinking for clients. To achieve one of the aims of this study, I have asked ..... to nominate a student s/he is currently working with as a focus for a weekly self-reflective thinking exercise.

The psychologist has nominated .....

I would like your approval for the psychologist to talk to the nominated student, their parents/caregivers, and their teacher to gain informed consent to participate in this study.

The participation of the student, their parents/caregivers, and the classroom teacher will involve two 20-minute tape-recorded interviews. These interviews will focus on the service provided by the psychologist. One interview will take place early in term 4 and the other interview later in term 4 2008. The researcher will conduct all interviews

Ministry of Education, Special Education services will not be adversely affected by an individual's decision whether or not to participate in this study.

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/97. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North, telephone 06 350 5249, email [S.V.Rumball@massey.ac.nz](mailto:S.V.Rumball@massey.ac.nz).

If you require any further information please do not hesitate to contact me on (06) 8709769, or at [andrew.rae@minedu.govt.nz](mailto:andrew.rae@minedu.govt.nz). Alternatively, you may wish to contact my supervisors: Professor Ian M. Evans or Dr Roseanna Bourke at Massey University on (06) 356 9099.

If you give your approval for the nominated student, their parents/caregivers, and the classroom teacher to participate in this study, please complete the Consent Form and return it to the psychologist in the attached envelope.

Sincerely,

Andrew Rae  
Registered Psychologist  
Ministry of Education, Special Education

Appendix P: Consent Form for Board of Trustees/Principal

**Title of the research:** Psychologists’ Intentional use of Reflection as a Tool for Inquiry

**Researcher:** Andrew Rae, BA, MEdPsych, PGDipEdPsych, Registered Psychologist

**Contact details:** Ministry of Education, Special Education  
Cnr Warren St and Lyndon Road, Hastings  
Telephone (06) 8709769

**Research supervisors:** Professor Ian M. Evans: Head of The School of Psychology Massey University Palmerston North  
Dr Roseanna Bourke: Director Centre for Educational Development Massey University Palmerston North

I have read the information provided about the study and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time about this study.

I understand that I have the right to withdraw my support for this study at any time.

I understand that any participant of this study has the right to withdraw from the study at any time or to decline to answer any particular question.

I understand that no names will be used in any report that results from this study. The information will be used only for this research and publications arising from this research.

I give my permission for the psychologist to talk to the classroom teacher, the nominated student’s parents/caregivers, and the nominated student, on the researcher’s behalf to gain their informed consent to participate in the study.

I also give my permission for the researcher to enter the school for the purposes of interviewing the student and the classroom teacher. I understand that all interviews will be tape-recorded and used only for the purpose of this research. I also understand that all participants have the right to ask for the tape-recorder to be turned off at any time during the interview.

I agree to support this study under the conditions set out in the Information Sheet.

**Signed:** **Date:**  
[Principal]..... ..

**Full Name:** **Date:**  
[Print]..... ..

Appendix Q: Letter for the Classroom Teacher

Classroom Teacher  
School

Date

Dear

My name is Andrew Rae and I am a psychologist working for the Ministry of Education, Special Education. I am undertaking a study on the use of reflective thinking by Ministry of Education, Special Education psychologists. This research is part of my doctoral study and may result in publications.

The research explores the use of reflective thinking by psychologists and the benefits of reflective thinking for their clients. To achieve the aims of this study I have asked ..... (Psychologist) to nominate a student they are working with, who will be the focus of a weekly reflective thinking exercise completed by the psychologist.

The psychologist has nominated .....

I would like your approval for this student to be involved in this study. I also request your participation in the study. Your voluntary participation will involve two 20-minute tape-recorded interviews focusing on the service provided by psychologist. One interview will take place in early in term 4 and the other later in term 4 2008. The researcher will conduct all interviews

I would like to request your consent for the psychologist to talk to the nominated student and his/her parents/caregivers to gain their informed consent to participate in the study. Their voluntary participation will involve two 20-minute tape-recorded interviews focusing on the service provided by the psychologist.

Ministry of Education, Special Education services will not be adversely affected by an individual's decision whether or not to participate in this study.

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/97. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North, telephone 06 350 5249, email [S.V.Rumball@massey.ac.nz](mailto:S.V.Rumball@massey.ac.nz).

If you require any further information please do not hesitate to contact me on (06) 8709769, or at [andrew.rae@minedu.govt.nz](mailto:andrew.rae@minedu.govt.nz). Alternatively, you may wish to contact my supervisors: Professor Ian M. Evans or Dr Roseanna Bourke at Massey University on (06) 356 9099.

If you give your consent to participate in this study and approval for the psychologist to talk to the nominated student and their parents/caregivers, for the purposes of the study, please complete the Consent Form and return it to the psychologist in the attached envelope.

Sincerely,

Andrew Rae  
Registered Psychologist  
Ministry of Education, Special Education

Appendix R: Consent Form for the Classroom Teacher

**Title of the research:** Psychologists’ Intentional use of Reflection as a Tool for Inquiry

**Researcher:** Andrew Rae, BA, MEdPsych, PGDipEdPsych, Registered Psychologist

**Contact details:** Ministry of Education, Special Education  
Cnr Warren St and Lyndon Road, Hastings  
Telephone (06) 8709769

**Research supervisors:** Professor Ian M. Evans: Head of The School of Psychology Massey University Palmerston North  
Dr Roseanna Bourke: Director Centre for Educational Development Massey University Palmerston North

I have read the information provided about the study and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time about this study.

I understand that any participant of this study has the right to withdraw from the study at any time or to decline to answer any particular question.

I understand that no names will be used in any report that results from this study. The information will be used only for this research and publications arising from this research.

I give my permission for the psychologist to approach the nominated student’s parents/caregivers, and the nominated student, on the researcher’s behalf to gain their informed consent to participate in the study.

I give my permission for the researcher to interview me and the nominated student on the service provided by the psychologist. I understand that all interviews will be tape-recorded and used only for the purpose of this research. I also understand that all participants have the right to ask for the tape-recorder to be turned off at any time during the interview.

I agree to support this study under the conditions set out in the Information Sheet.

**Signed:** **Date:**  
[Teacher]..... ..

**Full Name:** **Date:**  
[Print]..... ..

Appendix S: Letter to Parents/Caregivers of Nominated student  
Parent/Caregiver

Date

Dear

My name is Andrew Rae and I am a registered psychologist working for the Ministry of Education, Special Education. I am currently undertaking a study on the use of reflective thinking by Ministry of Education, Special Education psychologists. This research is part of my doctoral study and may result in publications.

The research explores the use of reflective thinking by psychologists and the benefits of reflective thinking for their clients. To achieve the aims of this study I have asked ..... (Psychologist) to nominate a student they are working with, who will be the focus of a weekly reflective thinking exercise completed by the psychologist.

The psychologist has nominated your child as a student they are working with who they would like to be involved in this study. I request your approval for the psychologist to talk to this student and gain their informed consent to participate.

I would also like to request your participation in this research. The voluntary participation of yourself and your child will involve each of you taking part in two 20-minute tape-recorded interviews focusing on the service provide by the psychologist. One interview will take place early in Term 4 2008 and the other interview will be undertaken late Term 4 2008. The researcher will conduct the interviews at a time and place that is convenient for you.

Please find enclosed an Information Sheet outlining the aims of the study and the processes involved in meeting the studies aims.

Ministry of Education, Special Education services will not be adversely affected by an individual's decision whether or not to participate in this study.

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/97. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North, telephone 06 350 5249, email [S.V.Rumball@massey.ac.nz](mailto:S.V.Rumball@massey.ac.nz).

If you require any further information please do not hesitate to contact me on (06) 8709769, or at [andrew.rae@minedu.govt.nz](mailto:andrew.rae@minedu.govt.nz).

Alternatively, you may wish to contact my supervisors: Professor Ian M. Evans or Dr Roseanna Bourke at Massey University on (06) 356 9099.

If you consent to participate in the study, please complete the Consent Form and return it to the psychologist in the envelope supplied. Many thanks for considering this request.

Sincerely,

Andrew Rae  
Registered Psychologist

Appendix T: Consent Form for Parents/Caregivers

**Title of the research:** Psychologists' Intentional use of Reflection as a Tool for Inquiry

**Researcher:** Andrew Rae, BA, MEdPsych, PGDipEdPsych,  
Registered Psychologist

**Contact details:** Ministry of Education, Special Education  
Cnr Warren St and Lyndon Road, Hastings  
Telephone (06) 8709769

**Research supervisors:** Professor Ian M. Evans: Head of The School of Psychology Massey University Palmerston North  
Dr Roseanna Bourke: Director Centre for Educational Development Massey University, Palmerston North

I have read the information provided about the study and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time about this study.

I give my consent for the researcher to interview me on the service provided by the psychologist working with my child.

I give my consent for the psychologist to talk to my child on the researcher's behalf, to gain informed consent from my child to participate in the study.

I also give my consent for the researcher to interview my child on the service provided by the psychologist.

I understand that my child and I have the right to withdraw our support for the study at any time or to decline to answer any particular question.

I understand that no names will be used in any report that results from this study. The information will be used only for this research and publications arising from this research project.

I understand that interviews will be tape-recorded and used only for the purpose of this research. I also understand that my child and I have the right to ask for the tape-recorder to be turned off at any time during the interview.

I agree to participate in this study under the conditions set out in the Information Sheet.

**Signed:**  
[Parent/Caregiver].....

**Date:**  
.....

**Full Name:**  
[Print].....

**Date:**  
.....

Appendix U: Letter for the Nominated student

Student

Date

**To be read by the psychologist to the nominated student**

Dear

I have been asked to read you this letter about a study that I am involved in.

The letter is from Andrew Rae who is doing a study looking at how psychologists' can work better with students. The researcher would like you to be part of this study. The researcher has been given permission from your parents/caregivers, your teacher, and the principal for me to ask you if you would like to take part in this study.

As part of this study, the researcher would like to talk to you about the work we do together.

When the researcher talks to you he would like to tape what you say, however you can turn the tape off at any time or say if you do not want to answer a question.

Your name will not be used in any report that the researcher writes.

You will be able to ask the researcher or myself questions about the study at any time.

You can also ask your teacher or your parents to ask us any questions for you at any time about the study.

You have the right to withdraw from the study at any time if you do not want to be involved any more. You can tell your parents, your teacher, or your psychologist that you do not want to be involved and they will tell the researcher.

If you would like to take part in this study, just write your name on the Consent Form and give it to the psychologist in the envelope attached. Before you make your decision, you may want to take this letter away and think about it. Maybe you would like to talk it over with your parents or your teacher first.

Do you have any questions about the study that you would like to ask now?

Sincerely,

Andrew Rae  
Registered Psychologist

Appendix V: Consent Form for Nominated Student

**Title of the research:** Psychologists' Intentional use of Reflection as a Tool for Inquiry

**Researcher:** Andrew Rae, BA, MEdPsych, PGDipEdPsych,  
Registered Psychologist

**Contact details:** Ministry of Education, Special Education  
Cnr Warren St and Lyndon Road, Hastings  
Telephone (06) 8709769

**Research supervisors:** Professor Ian M. Evans: Head of The School of Psychology Massey University Palmerston North  
Dr Roseanna Bourke: Director Centre for Educational Development Massey University, Palmerston North

The letter asking me to take part in this study and this Consent Form have been read to me by the psychologist.

The psychologist has explained the study to me and has answered my questions.

I know I can ask more questions about this study at any time.

I know that I can choose to withdraw from this study or not answer any questions at any time.

I know my name will not be used in any report that the researcher writes about this study.

I give my permission for the researcher to interview me about the psychologist's work with me.

I give my permission for the researcher to tape-record my interview. I know that I can ask for the tape recorder to be turned off at anytime.

I would like to take part in this study

**Student's name**

**Date**

I have followed the consent procedures as the researcher has set them out

**Psychologist's signature**

**Date**

Appendix W: Self-completion Questionnaire: Research Questions  
The self-completion questionnaire was designed to answer the following research questions:

**Questionnaire Section 3: factors that enhance reflective thinking**

1. What do psychologists perceive are the three most important factors that enhance their ability to reflect on practice?
2. To what extent do psychologists perceive that: professional supervision, case reviews/discussions with colleagues, performance appraisals, ongoing professional development, client feedback, and having a safe/trusting environment enhance their reflective thinking?
3. Are the perceptions of psychologists regarding factors identified as enhancing reflective thinking, different for groups of psychologists based on: gender or years of practice?
4. What themes can be identified from psychologists' comments on factors that enhance their ability to reflect on practice

**Questionnaire Section 4: factors that restrict reflective thinking**

5. What do psychologists perceive are the three most important factors that restrict their ability to reflect on practice?
6. To what extent do psychologists perceive that: overly prescriptive casework practices, inexperience with the task at hand, lack of contact with other team members/colleagues, concern about disclosing difficulties to colleagues, the organisation's attitude towards professional reflection, and high workloads or competing demands, restrict their ability to reflect on practice?
7. Do the perceptions of psychologists differ regarding factors identified as restricting reflective thinking with regard to gender or years of practice?
8. What themes can be identified from psychologists' comments on factors that restrict their ability to reflect on practice?

**Questionnaire Section 5: affective factors that influence reflective thinking**

9. What do psychologists perceive are the three most important affective factors that influence their ability to reflect on practice?
10. To what extent do psychologists perceive that: ability to consider problems from different perspectives, personal commitment to continuous learning and improvement, and a willingness to accept responsibility for one's practice, influence their ability to reflect on practice?

11. Do the perceptions of groups of psychologists differ regarding affective factors that influence their ability to reflect on practice with regard to gender or years of practice?

12. What themes can be identified from psychologists' comments on affective factors that influence their ability to reflect on their practice?

**Questionnaire Sections 3, 4, 5**

13. What individual, organisational, and affective factors support psychologist to be reflective practitioners?

Appendix X: Interview Questions (Psychologist)

1. What area of your current practice have you chosen as the focus for your reflections over the next 12 weeks?
  - Why have you chosen this area?
  
2. Can you tell me a little bit about the case have you selected and why you have selected this case?
  
3. How do you feel this area of your practice is currently working in relation to the student, parents/caregivers' and teachers?
  - In one sentence, how would you describe your current functioning in this area?
  - On a scale of 1 to 5, with 1 being needs significant work, 3 being okay, and 5 being strength, where would you place your current practice in this area?
  - On what basis have you assessed your current functioning in this area?
  
4. At the end of your involvement in this project, what would you like to have achieved with regard to your chosen area.
  - In one sentence, can you describe were you would realistically like to be in 12 weeks time, with regard to your identified area of practice?

As part of your involvement in this project, you are being asked to complete three cycles of action research focusing on your chosen area. The next part of this interview will focus on documenting your first cycle of action research.

5. Given your assessment of your current level of functioning with regard to your chosen area and your identified 12-week goal.
  - Have you identified a strategy or action that you plan to adopt, to improve your identified practice area?
  - How do you intend to implement this strategy or action?
  - What data do you intend to collect to evaluate your strategy or action?
  - How are you going to evaluate the effect of your strategy on your identified area?

Thank you for allowing me to interview you. I would like to make a time to interview you again in three weeks to see how your first action research cycle has gone. At this interview, I will ask you to reflect on your actions and support you to plan your next cycle of action research.