

CHANGING BEHAVIOUR USING
VIDEO SELF MODELLING: IT'S
TRAINING APPLICATIONS AND
PERCEPTIONS IN NEW ZEALAND
SETTINGS.

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ABSTRACT

This thesis is a case study centred around a professional development workshop, developed to teach video self modelling techniques using video self modelling to teachers and other professionals, evaluated from a practitioner researcher's perspective. Observational learning, social learning, social cognitive and self model theories are discussed as they relate to video self modelling and professional development and informed the structure and delivery of the workshop. The empirical literature base of video self model is documented. The thesis concludes with a discussion of learning that has accrued throughout this study. This learning relates to the use of VSM and the experiential learning that the author, as both researcher and practitioner has gained from the work carried out in developing, using, and evaluating the workshop to support VSM. The six participants were successful in completing a video self model. The thesis recognises and discusses the complexity of interactions between empirical and theoretical investigation. In a similar way it discusses the complexity of interactions between traditional forms of research and practitioner research.

Table 1. *Terms and Definitions*

Term	Definition as used in this thesis
Clients	The recipients of VSM videos whose behaviour is to be changed. These could be children, teenagers, and adults.
Feedback	Reminding an individual of behaviours already performed, in this context viewing video of past performances.
Feedforward	Coined by Dr Peter Dowrick to describe the creation of behaviours not yet realised that are repeated on video to give the illusion of higher frequency and or longer duration.
Participants	Adults undertaking the professional development training
Positive Self Review - PSR	An individual captured on video performing a behaviour correctly. This tape is used to remind the individual of the sequence to increase the frequency and accuracy of the behaviour.
Researcher	Teacher educator undertaking this study
Significant adult	An adult who is part of a client's environment e.g. caregiver, parent, social worker
Treatment Evaluation Inventory-TEI	A 19 item questionnaire by A. Kazdin et al. where respondents indicate their agreement or disagreement with a series of statements on a 5 point Likert scale.
Video	A movie could be presented on DVD, iPod, CD, computer or tape
Video Self Modelling - VSM	A technique where an individual is filmed and the tape edited to show only positive images of the performance of an adaptive behaviour

CHAPTER 1

Introduction

New Zealand Education has undergone significant changes in the last three decades. As a country we have systematically introduced reforms to create a new infrastructure to enable more informed processes that report on educational management and children's achievement. The Picot Report (1988) created self managed schools at the beginning of 1989. This was paralleled by radical social and economic change at the heart of New Zealand society. In 1996 the Ministry of Education released its Special Education 2000 policy (Ministry of Education, 1996). This document was the first time the policy wing of New Zealand education had provided a detailed plan to move a sector of education into the new millennium. Special Education Policy Guidelines (Ministry of Education, 1999) principle 1 states that:

“Young children and students with special education needs have the same rights to a high quality education as people of the same age who do not have special education needs.”

Schools could no longer remove students with special educational needs and were required to accommodate them in regular classrooms and schools. Some specialist schools remained but educational professionals actively encouraged parents to choose mainstreaming citing this as an inclusive practice. Previously New Zealand had separated people who presented with special needs and placed them in separatist institutions. Special Education 2000 policy created a framework for an inclusive education system. Teachers are more than ever required to cater for a diverse student population within their classrooms. Teachers and other professionals who work in and alongside schools need effective strategies to affect learning and socialisation of a diverse student population. This

study reports on a professional development workshop developed to deliver training in using a research-based strategy, Video self modelling.

Professional Development

There is little evidence in the literature to support the commonly held notion that if teachers are given enough time and resources they are able to construct their own learning and affect student achievement (Timperley, Wilson, Barrar, & Fung, 2007). In 2007 the Ministry of Education published the Teacher Professional Learning and Development- Best Evidence Synthesis Iteration (BES). The summary of findings states:

The purpose of the synthesis is to consolidate the international and New Zealand evidence around the emerging knowledge base about how to promote teacher learning in ways that impact on outcomes for the diversity of students in our classrooms.

Although New Zealand students typically achieve well in OECD surveys, disparities in student achievement are amongst the greatest in the OECD1. Of particular concern is the large ‘tail’ of underachievement, and special consideration was given to this problem. Two further contextual conditions were also given specific attention: New Zealand’s self governing administrative structures and the education community’s obligations under the Treaty of Waitangi (Timperley et al., 2007, p. xxxiii).

New Zealand education is committed to changing the school system by deploying research-based practices to affect the learning outcomes for its diverse school student population. The BES synthesis gives a clear documented pathway for teachers to access quality information and research-based practices in some curriculum areas. Moreover, it provides

content and pedagogical information for teachers and professional learning, including how learning at a professional level can be sustained.

New Zealand curriculum is situated in the constructivist paradigm (Ministry of Education 2007). Constructivist epistemology focuses on creating knowledge as opposed to discovering it. The self is at the centre of knowledge and understanding (Paul, Lavelly, & Cranston-Gingras, 2002). Constructivist approaches to learning encompass cognitive development, deep understandings, constructions of active learner reorganisation that are complex and non linear in nature (Fosnot, 2005). A central assumption of Vygotsky's cognitive development theory is that mental functioning is social in origin (Fernyhough, 2007). Vygotsky's (1978) work has led to widely held understandings within education about cognition through the zone of proximal development and understandings of scaffolding as being an important construct within education (Fosnot, 2005). Constructivist approaches to conceptualising learning share congruency with observational learning and social cognitive theory through symbolisation of observations and the construct of new knowledge by association. Learning using Video self modelling (VSM) shares common concepts with constructivism.

Video Self Model

Video self model or video self modelling (VSM) is defined as an adaptive behaviour change technique that uses self-as-a model performing tasks captured on video (Dowrick, 1991). The video is edited to show only successful performances. Performances can be low frequency incidences of behaviours or behaviours that have supports but are not depicted. Through the editing process the behaviours appear as a complete successful performance. The movies, typically under two minutes in

duration, are viewed about six times over a two week period by the model. Viewing of the self model video is the intervention. Dramatic changes usually result following one or two viewings (Dowrick, 1999). VSM is an evidence-based intervention technique that could successfully be promoted within all education sectors as a tool to support learners in literacy, self management skills, social skills with peers and staff, communication disorders such as stuttering, sporting and physical skills, reducing phobia, aid in professional learning and vocational preparation training provided that a comprehensive professional development programme accompanies the implementation.

This thesis is structured beginning with an overview in Chapter 2 of the historical context of observational learning, the foundational learning theory of VSM, its basic constructs described and the empirical evidence presented that lead to Social learning and imitation theory. The history and typology of VSM is described before the empirical evidence is presented. Literature supporting professional development and practitioner research is reported. Chapter 3 describes social cognitive theory and video self model theory that are pertinent to video self model and learning within the case study.

The practitioner researcher begins by posing questions, which in turn through the process of reflecting on their practice, raises further questions: a generative process (Paris, Eyman, Morris & Sutton, 2007). As with all types of research there is a tension between being the observer and a participant as situations arise within the context forcing the practitioner researcher to choose between the role of teacher or researcher (Arzubiaga, Artiles, King & Harris-Murri, 2008).

Research Questions

Can we learn about VSM first as a learner and make a successful transition to applying it with our clients?

In what ways can VSM support learning in a professional development context?

What challenges are encountered in a teacher educator assuming the role of critical reflective practitioner delivering a professional development programme?

What can a teacher educator learn by reflecting critically on their practice in delivering a professional development programme?

Within this case study I am both researcher and teacher educator. My role is not that of an objective researcher, as is most research reported in special education, positivism, the traditional scientific approach where measurement and control have been the central locus of investigation (Burns, 1997). As a lecturer in special education with a background as a classroom and specialist teacher I began this investigation with an understanding of research as being essentially a variation on experimental design and single subject (single-case) methodology. I was aware of interpretive forms of research but had not yet grappled with the notion of being a practitioner undertaking research into the impact of my own actions as a teacher educator. During the process of carrying out this investigation I have come to see myself as a practitioner who, as a teacher educator, is carrying out research into my own practice.

CHAPTER 2

Literature Review

In producing this literature review electronic databases of Education Complete, ERIC, Masterfile Elite and PsycINFO have been used along with books and print copies of literature available in the University of Canterbury library. This literature review is in four main parts: observational learning, video self modelling, professional development and practitioner research. The empirical underpinnings for observational learning, its pertinent debates and development into social learning theory are discussed. Video self modelling is identified and VSM in terms of its typology and literature base are described as is practitioner research.

Observational learning

We learn by observing other people. This is a fundamental tenet of human learning, although not uniquely human. Animals also pass on knowledge by having their young observe them. The construct of observational learning is derived from social learning and imitation theory based on reinforcement (Miller & Dollard, 1941, 1945) and social learning theory (Bandura & Walters, 1963). Other researchers have added to social learning theory, however, Bandura's contribution to social learning theory has been far reaching and comprehensive, giving much of the theoretical foundation as a way of explaining the effectiveness of VSM. Dowrick (2008) writes that Bandura moved modelling from a general idea that people could learn from observing to a science in which learning could be studied and measured.

In 1986 Bandura changed the name of his social learning theory to social cognitive theory (SCT) to better describe the cognition construct that he had been advocating since the 1960's (Bandura, 1986). The renaming allowed Bandura to distance himself from the behavioural basis of social learning theory and the reliance on environmental reinforcement. Bandura's social cognitive theory is discussed in Chapter 3.

Observational learning and its cognitive extensions make it possible to learn from the experiences of others (or models). If learning was limited to direct experience through trial and error, then learning would be limited to those experiential situations that were accessible, both in time and place. Our linguistic, social, cultural, and behavioural repertoires are all largely acquired by observing models in the environment, a social construct. Mere observation is not considered a learning process. There must be some cognitive processing of the experience before imitation of the behaviours is observed. Miller and Dollard (1941, 1945) proposed social learning and imitation theory based on behavioural principles of reinforcement, punishment, extinction, and imitation of models. Four factors were identified essential to learning: drive to desire something, cue to notice something, response to do something, and reward to get something.

Miller and Dollard (1941, 1945) defined learning as a study of the circumstances when a response and a cue stimulus become connected. Once learning took place the response was contingent on the cue. They argued that a change in the observer's behaviour was a direct result of the consequences of that behaviour. Miller and Dollard derived their theory from a range of studies with animals and children. In one of the studies children manipulated a lever to gain candy from a machine following a model's demonstration. In condition A, when imitation of the model's

behaviour occurred, the child was reinforced with the candy. In condition B, the opposite behaviour of not imitating the model had to be performed to gain the candy. Miller and Dollard concluded that children learned to imitate when it paid off and not to imitate when there was no pay off. Imitation in children was a function of reinforcement. Through empirical studies Miller and Dollard's theory expanded on the reciprocal relationship between behaviour and environment, however, it failed to take into account novel responses, delayed and non reinforced imitations.

Bandura furthered Social Learning Theory by hypothesising, designing experiments, analysing the empirical data gathered and drawing conclusions from the experiments. Bandura and associates designed a study to explore the determinants and mechanisms of learning by observation. He concluded that observational learning did not require response enactment or reinforcement but that reinforcement was more a motivating and informative operation.

The experiments referred to as the Bobo doll studies (Bandura, Ross & Ross, 1961) demonstrated that in context, novel behaviours could be imitated without reinforcement and not in the presence of the model. In a series of studies 36 boys and 36 girls aged from 3 years 1 month to 5 years 9 months from the Stanford University Nursery School were assigned to eight experimental groups of six children and a control group of 24. Half of the experimental group were exposed to aggressive adult models and the other half to adult models that were subdued and nonaggressive in their behaviour. These groups were further divided by gender, half being exposed to same gender adult models, the others to opposite gender adult models. The control group had no prior exposure to the adult models and was only tested in the generalisation phase. The children were observed

and rated against a set of criteria. Some of the aggressive behaviours exhibited by the adult models were sufficiently novel to not be in the children's repertoires already. Children in the aggression condition reproduced verbal and physical aggressive behaviours similar to observed adult models. The children in the control and nonaggressive groups demonstrated virtually no imitative aggression. The behaviours exhibited occurred without the model present, compared with the earlier study where the model was present (Bandura & Huston, 1961). There was a gender bias; boys were more imitative of physical aggression, whereas verbal aggression was imitated more by children of the same sex as the model. The authors explained that these findings were an assumption based on gender but they could not test for any other personal characteristic with the data collected (Bandura et al., 1961).

These experiments were not without criticism. Tedeschi, Smith, and Brown (1974) raised the issue of intent: were the children intent on damaging the Bobo doll given they had seen a stronger adult hammer and pummel it without damage? There was no report in the literature of damage to the doll, a consequence of violence. There was no evidence offered of intent to harm, considered an essential part of aggression. Siegel and Kohn (1959) claimed that a child observing an adult doing an act without consequence gives the child permission to imitate the adult. It is generally considered that a young child's brain is not sufficiently developed to be able to adequately plan and foresee the consequences of an act of aggression. The selection of the children was another area of conjecture.

Bandura et al.(1963) did not describe the children other than to state gender and an age range. There was no information given about the adult models

other than gender. Based on the location of the education facility Stanford University Nursery School, it is assumed that the children's parents were educated and middle class, not a representative sample of the population. In contrast, the response measures were detailed and descriptive. The ethics of exposing young children to acts of physical and verbal aggression and the long term effects this may have on them psychologically is a concern. It is unlikely that the experimental design would meet the current standards required for ethical approval from most University Human Ethics Committees.

Bandura went on to argue that Miller and Dollard (1941, 1945) in their experiments only demonstrated a behaviour under control of a discriminative stimulus rather than imitation because the behaviours exhibited by the observers were already in their repertoire and not new behaviours. This raises an interesting point about a definition of terms used in observational learning. Greer, Singer-Dudek, and Gautreaux (2006) suggest that there are five differences in the types of learning from observation: (a) behaviour that already resides in a person's behavioural repertoire that can be emitted as a function of observation, (b) a new operant that can be learned, (c) higher order operants that can be learned by observation, (d) conditioning of reinforcers by observing another being reinforced, and (e) a complete observational repertoire can be acquired through observation. Greer et al. distinguish between maintenance of performance behaviours, already in a behavioural repertoire and the learning of new behaviours.

A literature search for the term observational learning using Education Complete data base yielded 132 peer reviewed journal articles published from 1964 to 2009, of which only fifteen reported observational learning in

their abstracts. I would argue that a clear distinction needs to be made between new learning (acquisition) and constructs in learning (reshuffling behavioural repertoires). These concepts are not mutually exclusive, merely parts of a dynamic and changing whole. New behaviours must be learnt in order to move them into our behavioural repertoire. Once stored in memory, we can construct other repertoires by reordering existing behaviours to create more complex schemas.

Newmann, Marks, and Gamoran have led a drive for authenticity in education, a constructivist construct (as cited in Fosnot, 2005). Observational learning is authentic learning. Vygotsky's (1978) Zone of Proximal Development builds on prior knowledge (existing behavioural repertoires) and through an expert coach scaffolds the learner into increasing their behavioural repertoire by reordering and possibly adding new learning. This could be described as similar to Greer et al. (2006) observational learning types as described above. Observational learning thus far has been from the observer's (learner's) perspective. What are the characteristics of models and how are models and their behaviours viewed in observational learning theory?

Models and Modelling

Observational learning defines a model as the individual who performs the behaviour for the observer (Miller & Dollard, 1941, 1945). Modelling is the demonstration of a behaviour so it can be imitated. Models that are similar to the observer are more likely to be imitated (Kazdin, 1974). Observers pay closer attention to models that are behaviourally similar although appearance and personal background have some influence as well.

Coping models, those who initially display a flawed performance but gradually improve to criterion tend to produce more desired change among viewers than mastery (expert) models (Bandura, 1986; McCullagh & Caird, 1990). Lee, Swinnen, and Serrien (1994) suggested that observers learn more, expend more cognitive effort watching coping models receive constructive feedback than they do watching expert models.

Bandura (1971, 2007) identified three separate effects of models on observers' established behaviours: inhibitory, disinhibitory, and response facilitation. Observers can acquire new patterns of behaviour, modifying previous learnt responses by watching the performance of others. Inhibitions of previously learned responses can be strengthened or weakened by observing the model's behaviour being positively or negatively reinforced. Disinhibitory effects are observed when there is an increase in a formerly inhibited behaviour following observation of models engaged in threatening or prohibited activities without adverse consequences.

As an example, acrophobia can be reduced by observing models interacting with spiders without fear and anxiety being displayed: a disinhibitory effect. Response facilitation effects are actions of others that observers can perform but haven't because of insufficient inducements. Staring behaviour is an example of this. If we observe someone staring at something we may imitate this behaviour and stare at the same place, especially if it is unusual, but not really know what to attend to.

Bandura, Ross, and Ross (1965) replicated their earlier study but used filmed clips instead of live demonstrations. Film and television have provided a wide and diverse source of modelled behaviours that hold

attention for extended periods of time particularly through the use of camera viewpoint, colour, and sound (Bandura, Grusec, & Menlove, 1966). The observer's prior experience, and the salience and complexity of the event observed, all have a bearing on the observer's capability to interpret modelled behaviour as seen on film or television. Observing alone is not learning. There needs to be some retention of a cognitive representation of the modelled behaviour for learning to occur, an encoding into the behavioural repertoire for later recall and possible combining with other existing and new behaviours. Bandura called this symbolic encoding.

Influence of a model

Social learning analysis (Bandura, 1971) assumes the influence of a model is mainly through symbolic (i.e., cognitive, linguistic) representations rather than through stimulus-response couplings (Miller & Dollard 1941, 1945). Bandura (1977) identified four major sub-functions critical for observational learning: attention, retention, motor reproduction, and motivation.

Attentional processes govern what is attended to and how it is perceived by the observer. Controlling factors of the observer's characteristics, the modelled behaviours, and the structural arrangement of human interactions regulate the amount and types of observational experiences. Social environment determines the opportunity an observer has to view models repeat performances, and governs the types of behaviours viewed. Models command greater attention by their interpersonal attractiveness, social status, and through evoking emotional responses by using sound, gesture, and physical presence. Models lacking attractive qualities are usually ignored (Bandura, 1977).

Retentional processes rely on imaginable, verbal and image representations to cognitively process the modelled behaviour into a symbolic code for later reproduction. Verbal encoding is the primary medium for storing modelled events, however, in the absence of language, visual imagery is used (Bandura, 1977). The encoding process allows a large amount of information to be stored in an easily retrieved form. Bandura concluded that adults and children who encode using words, concise labels or vivid images retain learnt behaviour better than those who just observe or are distracted while observing. Symbolic encoding ensures retention but does not address the performance factor. Cognitive rehearsal serves as an important element in retention by allowing the individual to reorganise and recode events rather than learn by imitative repetition alone (Bandura, 1971, 2007). Overt rehearsal is not always feasible and covert rehearsal through visualisation or thoughts of the performance of the behaviour increases proficiency and retention (Bandura & Jeffery, 1973). Observational learning is maximised by organising symbolically, rehearsing covertly, and overtly enacting the behaviour (Bandura, 1977).

Motor reproduction processes express the cognitive representations of behaviours as overt actions. This process can occur immediately following observation or at some future time. Enaction will achieve as close an approximation of the observed and encoded behavioural performance as possession of the component skills that constitute the behaviour pattern makes possible (drawn from the person's behavioural repertoire). Self-corrective modifications through informative feedback refine the performance to produce the desired behaviour. Environmental feedback can aid performance perfection, but it is more likely to have a motivating influence on performance (Bandura, 1977).

Self as a model (Hosford, Moss, & Morrel, 1976) has the ultimate similarity to the observer. The cultural, social, age, and status all match perfectly and seeing oneself perform future tasks on video gives the information required to cognitively encode the behaviour for covert rehearsal and later for task performance.

Not all learning is enacted. Motivational processes in social learning theory primarily influence performance rather than learning, and are firstly, the consequences observed for modelled behaviours that have been effective (reinforcing) for others. Bandura coined the term vicarious reinforcement to define observers seeing a model being reinforced for behaviour.

Observers' adoption of the reinforced behaviour is higher if the model is positively reinforced over those behaviours having negative consequences (Bandura, et al., 1963). Secondly, the rewards or punishments experienced by the learner when the performance is enacted, and the match between the learner's motivational state and the rewards observed vicariously and known to be present in the environment, also influence performance.

Bandura (1977) suggested that attention and retention are related to learning of behaviour, and reproduction and motivation affect the performance of the observed behaviour. Patterson, Reid, Jones, and Conger (1975), Patterson (2002) have based their social learning approach to family intervention on the principles of applied behaviour analysis using observational learning to teach families the intervention techniques.

Bandura & Walters (1963) purported that theories must demonstrate the ability to predict and not just explain. Social learning theory under Bandura's influence developed more in the area of model and cognitive processes of encoded symbolisation of the observations than observation,

imitation, and reward. Bandura became increasingly dissatisfied with social learning theory as a way of explaining observational learning in terms of the environment being the major influence on learning. At this time Bandura (1977) was investigating more of the cognitive symbolisation of observations and the effects of models on learning. Through experimental investigations he researched why we learn from some models and not others. Bandura saw two distinct aspects: attributes of the model and processes of symbolic encoding (cognitive).

Video Self Model (VSM)

The studies reviewed were selected from electronic database searches. The first search PsycINFO, Education Research Complete, ERIC and Masterfile Elite used the descriptors, “self model” or “self modeling” or “self modelling”, in the abstract, resulted in 194 publications, 132 being journal articles published between 1974 and February 2008. Between 1974 and 2001, 71 journal articles were published while from 2002 to 2008 60 journal articles were published.

Empirical studies over the last 38 years document the prevalence of VSM as an adaptive behaviour change technique in psychology, education, medicine, and sports coaching. This review outlines the historical development of VSM and describes feedforward and positive self review and its typology with examples from the literature. The aim of this review was to determine the extent VSM has been used as an adaptive behaviour change technique across population groups and its effectiveness. In addition, how practitioners have been trained to use VSM was explored.

Historical Perspective

The term self model was first reported in the literature by Creer and Miklich (as cited in Dowrick, 1999) while Hosford, Moss, & Morrell (1976) introduced the term self as a model. These terms almost exclusively describe VSM (Dowrick, 1999).

Creer and Miklich (as cited in Dowrick, 1999) described a self model intervention using video with a hospitalised child with asthma role-playing effective social skills. The boy rehearsed some adaptive coping scenes and then was videoed. A satisfactory scene was edited and played back as a video self modelling video. A multiple baseline evaluation demonstrated that the boy had made good gains from viewing his five minute video as compared to just role-playing the coping skills. Viewing the videotape had a positive effect on his behaviour, whereas, the role playing did not (Dowrick, 1991). In contrast, Hosford et al. (1976) described a self model intervention using edited audio tape to reduce the frequency of stuttering in an adult. The use of repeated fluent examples produced a diminished stuttering rate.

Dowrick began investigating ways of producing self-modelling videos in the mid seventies with children. He used video to record target behaviours. These video segments were often repeated several times to give the illusion of a longer period of time (Dowrick, 1991, 2008). Verbal and physical prompting were carefully edited out at the time of filming. The resulting video showed the child demonstrating the behaviour independently, a future potential behaviour. Dowrick coined the term *feedforward* (Dowrick, 1991) to describe the creation of future behaviour repertoires from existing behaviours. This was a difference to the previous positive

self review (Dowrick) tapes, which maximised the best possible current performance.

Typology of VSM

In general terms video self modelling is the viewing of positive images of oneself engaged in a particular adaptive behaviour that was previously not able to be performed without support, or had a low frequency of performance (Dowrick, 1991, 1999). Usually the depiction is quite specific and of short duration. The viewing of only successful images of the tasks differentiates video self modelling from sport and skill training video feedback, where all footage is viewed, and in therapeutic settings where video self-confrontation is viewed. These two examples have self efficacy (Bandura, 1997) undermined by error viewing, and are therefore not considered to be part of VSM. Self modelling can incorporate audio and still picture models and natural mental processes (Dowrick, 2008).

Dowrick (1999) differentiates VSM in two sub categories: positive self review and feedforward. It is important to differentiate between these. Positive self review (PSR) reconstructs an achieved behaviour (already in a behavioural repertoire) in contrast to feedforward which constructs a previously unachieved but possible future behaviour. Reviews of the available literature confirm the sub-classifications (Bellini & Akullian, 2007; Dowrick, 1991, 1999; Hitchcock, Dowrick, & Prater, 2003; Mechling, 2005.). Dowrick (2007) has introduced a third term, creating futures, where possibilities are visually depicted without specific target behaviours being explicitly modelled.

Positive Self Review

Positive self review has been applied successfully in a range of settings to change behaviour (Delano, 2007; Dowrick, 1978; Dowrick & Raeburn,

1977; Greelis & Kazaoka 1979; Johnson, 1989; Schunk & Hanson 1989; Woltersdorf, 1992). Positive self review interventions have increased on-task behaviour through presenting the participants with self modelling tapes of on-task behaviour in the settings concerned. Kehl, Clark, Jenson, and Wampold (as cited in Dowrick, 1999) recorded video in a class where on-task behaviour was 53%. Selective editing produced an 11-minute video of on-task behaviour for each of the four target students. To test the effect, three students viewed just the positive self review tapes, while the fourth student viewed unedited video. On-task behaviour increased from 47% to 88% for the three students after five days of a daily viewing. In contrast, on-task behaviour for the remaining student dropped from 53% to 45%. Dowrick (1999) proposed that the student had been influenced by viewing his inappropriate behaviours. After two subsequent viewings of the student's edited tape, his on-task behaviour increased to 86%. This level of on-task behaviour was within the range of the other three students. Studies implemented by Hagiwara and Myles (1999) and Coyle and Cole (2004) also reported gains in on-task behaviour. Positive self review has also been used successfully for improving mood-based disorders in women 18 – 50 years who were mildly depressed or anxious (Dowrick & Jesdale, 1990).

Recalling seldom used skills is another application of PSR. Dowrick (1999) referred to this as engagement of a disused or low-frequency skill. Dowrick (1991, 1999) described a university student who created short self model mastery video clips of repairs to military medical equipment by engineers. These clips starring the engineers were made at the end of initial training sessions. The tapes were used by the engineers to remind themselves of their previous procedures in repairing equipment, an aid to recall after a time lapse. Each engineer had a complete set of the short

tapes and could review the pertinent tape just prior to having to make repairs. The intervention was reported as successful making savings in time through increased maintenance efficiency in the field. PSR are simply existing behavioural repertoires that are low frequency. Viewing a PSR VSM raises the likelihood the behaviour will reoccur given the stimulus.

Feedforward

The successful use of feedforward, transferring specific behaviours from one setting to another, has been documented (Buggey, 2007; Charlop-Christy & Freeman, 2000; Dowrick & Hood, 1978; Dowrick, Kim-Rupnow & Power, 2006; Power, Dowrick, Ginsburg-Block, & Manz, 2001; Franks & Maile, 1991; McGraw-Hunter, Faw & Davis, 2006; Pigott & Gonzales, 1987).

Rickards-Schlichting, Kehle and Bray (2004) reported on high school aged students who manifested public speaking anxiety. VSMs were made of each student performing a prepared speech without an audience. Two three second segments of peer audience participation were inserted into the tape, one at midway and the other at the end of the speech. A follow up phase one month after the intervention was a return to baseline conditions. The study reported a large effect size 2.7 to 4.9 and substantial decreases in behavioural symptoms of speech anxiety as measured on the Behavioral Assessment of Speech Anxiety (BASA). Similar results were achieved when children with selective mutism viewed feedforward VSM tapes (Dowrick & Hood, 1978; Holmbeck & Lavigne, 1992)

A further application is the use of supports or prompts that enable the individual to show competent outcomes beyond the demonstrated ability of the student. The supports are carefully edited out of the video so the

individual views himself exhibiting the behaviour independently. This technique is mostly suited to acquisition of physical skills as reported by Dowrick and Raeburn (1995) where 14 of 18 studies suggested that VSM was more successful than other conditions. In a study, Dowrick and Dove (1980) used a therapist as a support with a child to demonstrate independent swimming performance by editing out the therapist, while Holman (as cited in Dowrick, 1999) used swimming fins as aids to teach adults textbook arm strokes. Both studies reported successful outcomes in swimming performance.

The recombining of component skills has application in learning. Feedforward was used in the ACE Reading program in Hawaii to increase the reading rates of children by editing out supports and prompts from carefully orchestrated video sequences (Dowrick, et al., 2006). The children were videoed reading challenging text with a tutor. The tutor read the passage and the child repeated the passage. These segments were assembled with quick cutaway shots of the tutor to make a VSM with the child reading more complex text at an increased rate of fluency. The child viewed his video over a two week period. The authors reported statistically significant improvement in fluency in nine out of ten students in tutoring and video plus tutoring, however, the greatest gains were during the feedforward condition. The authors suggested that images of future success could make a powerful contribution to learning, with or without tutoring (Dowrick, et al.).

In another study Dowrick and Ward (1997) worked with a native Alaskan male in his late twenties with an intellectual disability and a history of institutionalisation and paedophilic behaviours. Video was used to display self control elements visually. The results reported rapid acquisition of the

elements that were sustained over time. Anecdotal evidence by staff and follow up evaluations nine months later showed the continuation of the self control strategies. The authors noted that VSM reduced the reliance on language skills making the control strategies less culturally and cognitively reliant.

The rehearsal through role play and subsequent creation of a video is at the beginnings of VSM. Behavioural rehearsal alone has poor generalisation (Creer & Miklich, 1970). The addition of VSM acts as a positive self review of past successful behaviour and it can be feedforward if the role play is performed in parts and combined to form a possible future behaviour repertoire (Dowrick, 1986, 1991; Perry, 1989).

Creating Futures

The depiction of futures through video based futures planning (VBFP), known also as creating futures and video futures, is where possibilities for people with disabilities are visually depicted without specific behaviours being targeted (Dowrick, 2007; Dowrick & Skouge, 2001; Dowrick, Tallman, & Conner, 2005). Making a video of an adult with a cognitive disability going to buy a car, demonstrating locating a car, talking to the seller and asking for a mechanical check of the car are all future behaviours that would need to be performed and that could conceivably be part of someone's future in the community (Dowrick & Skouge, 2001). The VBFP is not designed to specifically teach behavioural repertoires but more to raise the awareness of a possibility of a future lifestyle, dreaming on video.

Dowrick (1999) identified the following seven categories:

increasing adaptive behaviour currently intermixed with non-desired behaviours, transfer of setting specific behaviour to other environments, use of hidden support for disorders that may be anxiety based, improved image for mood based disorders, recombining skills, transferring role-play to the real world, *and* (re) engagement of disused or low-frequency skills (p.26).

These seven categories form the typology of VSM, with the PSR and Feedforward being sub categories. Creating futures is included in feedforward.

Literature review of VSM

Thelen, Fry, Fehrenbach, & Frautschi (1979) reviewed efficacy of videotapes and film modelling in the treatment of clinical problems. They concluded that it was a promising intervention strategy provided more robust methodologies and procedures were applied. Since the early 1990's six reviews have been conducted reporting video modelling and VSM (Bellini & Akullian, 2007; Dowrick, 1991, 1999; Hitchcock, Dowrick and Prater, 2003; Mechling, 2005; Meharg & Woltersdorf, 1990). Each review documented different applications of VSM to a range of populations.

Meharg and Woltersdorf's (1990) review focused on clinical, institutional, and school-based settings. They evaluated 27 studies across six variables: (1) year of publication or presentation, (2) authors, (3) subjects, settings and major diagnostic category, (4) dependent variable, (5) experimental design and (6) the reported effectiveness. Meharg and Woltersdorf concluded that VSM was effective across a range of applications in the identified settings, however, the lack of rich description of the procedures didn't allow for a standardised empirically based comparison of VSM use.

Dowrick reviewed the literature on VSM from three perspectives. Dowrick's (1991) review focused on methodology and included a number of published and unpublished sources. He raised issues of subject preparation, efficacy compared to other interventions including video feedback and peer modelling, and the application of the different forms of VSM to disruptive behaviour, selective mutism, depression, anxiety, sports, social skills, physical disabilities, and training applications. Dowrick concluded from reviewing 150 studies that applications were either an extension of peer modelling or a description of personal success. The most successful interventions were those that emphasised the image of future success, feedforward.

The previous VSM literature reviews included interventions in school-based settings while Hitchcock, Dowrick, & Prater's (2003) review focused solely on school-based settings. Hitchcock et al. identified 200 studies. Studies that only reported non-quantifiable outcomes, verbal reports, or anecdotal information were excluded. This resulted in 18 studies of 129 students that met the five criteria: students aged three to eighteen years with identified disabilities in school-based settings, used quantitative academic measures, and VSM with another independent variable e.g. self efficacy and self evaluation published before 2001. These studies typically addressed academic and behaviour in low achieving students. This review confirmed the functional control of targeted academic and behavioural VSM interventions and the efficacy of VSM to improve student outcomes.

Mechling (2005) reviewed the literature of participants who had a diagnosed disability. This review included journal publications only from 1999 to 2003 and excluded those covered by the previous reviews above, leaving 24 studies that met the criteria. The review focused on published

literature with empirical evidence of instructor created video programmes, a wider review than just VSM. Results reported were positive, demonstrating the effectiveness of video as an instructional medium. However, the findings were inconclusive on whether video model was as effective or less effective than VSM. Mechling stated an area requiring further research was virtual reality and the possible effects of this technology on VSM.

In contrast, Bellini and Akullian (2007) investigated VSM with children and adolescents. Bellini and Akullian restricted their meta-analysis to the following criteria: single subject designs that reported individual data on the effectiveness of video model and VSM with children and adolescents with autism spectrum disorders (ASD), published in peer reviewed English language journals that focused on behaviour, social and communication, or functional skill outcomes. Horner et al. (2005) criteria of evidence-based practice was applied to video model and VSM. Their findings suggested that video model and VSM met the criteria of evidence based practice and were effective in changing behaviour, social communication, and functional skills.

Studies where single subject or single case designs (Cohen, Manion, & Morrison, 2000) are used provide the opportunity for empirical data to be used to evaluate the effectiveness of the intervention and provide opportunity to contrast studies statistically. Kazdin (1981) has argued along with Sheridan and Kratochwill (1992) that AB designs are valid provided the following conditions are met: objective data is collected on multiple occasions, the problem is stable, a pronounced and immediate intervention effect is noticed and the subjects are heterogeneous. Procedural reliability is stable in VSM as the intervention (video) is always

the same, viewing conditions can vary but can be controlled for by ensuring that they are always similar (Billingsley, White, & Munson, 1980). Teachers and other professionals are working in often quite accessible settings where it may be impossible to control for all variables when viewing VSM videos.

Often the desire to make a change in the behaviour of the client can override robust research procedures in the field. Teachers and other professionals often suffer from limited time and personnel to adequately construct a researched investigation. This is evidenced by the low number of empirically validated studies found in the reviews (Bellini & Akullian, 2007; Dowrick, 1991, 1999; Hitchcock, Dowrick & Prater, 2003; Mechling, 2005; Meharg & Woltersdorf, 1990; Thelen, Fry, Fehrenbach, & Frautschi, 1979).

The use of video has been reported in professional development learning (e.g. Borko, Jacobs, Eiteljorg & Pittman, 2008; Whitehead & Fitzgerald, 2007), however video has been primarily used to mediate discussion around teachers' practice and to augment reflective practice. There are few reports in the literature about the training of people in VSM techniques. Dowrick (1991) describes the process of VSM creation however the technology used is now outdated. Bugey (2007) describes some of the processes and techniques of videography, however it would be difficult to replicate without support. There is paucity in the literature of reporting about professional development training of teachers and related professionals in using VSM with their clients. In addition, no studies where VSM has been used by teachers and other professionals while engaged in professional development about VSM were reported.

Professional Development (PD)

Quality PD has been recognised as the key component in making changes in the practice of teachers (Darling-Hammond, 2005; Guskey, 1986, 2002; Guskey & Huberman, 1995; Timperley et al., 2007). Professionals need to meet competences to maintain their registration. Teachers have to attest to undergoing professional development as part of their performance management appraisal process (NZ Teachers Council, 2001). Health practitioners have to meet competencies through professional learning for Health Practitioners Competence Assurance HPCAA (Ministry of Health, 2003). To be quality assured the professional development must meet the respective agencies standards.

Knowledge and skill development is viewed by Hargraves and Fullam (as cited in Stein, McRobbie & Ginns 1999) as development in self understanding and social change. Joyce and Showers (1988) suggest PD is most effective when looked at in terms of individual needs, the needs of schools, learning programmes in place and student needs, abilities and characteristics. Guskey's (1986) model of effective staff development focuses on teachers being encouraged to alter their classroom practice to experience improvements in student learning outcomes. Timperley et al. (2007) would concur. Others have attempted to isolate key characteristics of quality PD.

In a comprehensive synthesis of research on effective PD carried out by the American Institutes for Research cited in Guskey & Yoon (2009). Analysis of 1300 studies that purported a positive effect of PD on student learning outcomes, only 9 studies were considered to be well-designed investigations, less than 1%. Guskey et al. stated the well-designed studies included a workshop that focussed on implementation of evidence-based

instructional practices, involved active learning experiences for participants and provided opportunities for teachers to adapt the practices for their situations. These workshops were primarily delivered by outside experts facilitating implementation and involved post workshop follow-up. The professional development workshop reported as a case study in this thesis was designed as a workshop with active participation, delivered by an outside expert and provided the participants with opportunity to adapt the practices for their situations. Guskey analysed 13 different lists of the characteristics of effective professional development programmes from a range of published articles within the last decade (1990s). He concluded that the research rarely included rigorous investigations between the relationship of noted characteristics and improvements in instructional practice or student outcome. As part of the evaluation of the case study the researcher engaged in practitioner research.

Practitioner research

Practitioner research is described by Campbell, McNamara, and Gilroy, (2004) as belonging within the contextualist tradition which emphasises “context as providing the background to any social inquiry, none more so than educational inquiry” (p.7). A key concept of traditional research is the emphasis of context providing background to any social inquiry. Popper (1971) argued that science should look for falsifiability, a hypothesis submitted to rigorous testing in an attempt to disprove it (Burns, 1997). Popper also claimed it was not possible to justify universal knowledge by reference to finite observations; moreover, these observations were dependent upon the assumptions made by the researcher. Knowledge was therefore provisional, always the subject of further inquiry. The term “frame of reference” was used by Popper to describe context, providing the basis for observations to begin. Conclusions reached and applications of

the conclusions are context dependent. In turn, generalisation of the research would be difficult. However, to a contextualist, this would be a shedding of a positivist tradition, scientific research. Teacher-initiated research is more likely to follow the contextualist tradition, practitioner research being a form of this. The scientific approach to research, mounting large scale surveys or case studies would be beyond the resources of most teachers (Campbell et al.).

Schön (1983) introduced the term reflective practitioner, a teacher who thinks through critically on their actions while in their working environment. Applying Popper's (1971) "frame of reference," to a teacher reflecting on their practice, could be described as the beginnings of a teacher researcher.

Brookfield (1995) described four lenses that a critical reflective practitioner could use to view his / her teaching:

- Autobiographical as a teacher and learner, personal self reflection, our own beliefs and assumptions
- Student's eyes, from a student's perspective on power interplays, intended meanings
- Colleagues' experiences, critical conversations, seeing practice in a new light through conversations, observations
- Theoretical literature, multiple interpretations of the familiar, illuminating idiosyncratic processes.

Multiple perspectives allow the practitioner researcher to critically reflect on delivery, content and interactions, viewing teaching from differing viewpoints, thereby reducing the effects of bias and assumptions.

Practitioner research, as a methodology sits within what Cohen, Manion, and Morrison (2000) described as the critical approach to discussing behaviour. They identified three distinct areas: normative, interpretive, and critical as a way of conceptualising the contributions of research to society and the inevitable political and social power interplays. Habermas (1972) posed a theory of three knowledge-constitutive interests: technical, hermeneutic, and emancipatory. Technical interests are about control and predictability, hermeneutic is understanding others' views and perspectives, and emancipatory is about equality, democracy, freedoms and empowerment, individually and collectively. Habermas argued that exposure to the ideological interests in curricula are needed to allow teachers and students to take control of their destiny for the collective democratic good.

Clough and Nutbrown (2002) argued that research paradigms, qualitative, and quantitative are false dichotomies and lead to evaluations based on methodology, normative or interpretative. Normative is seen as objective, interpretative as situational, persuasive, purposive, and political. Investigations that are conceptualised in this way require “researchers to *justify* their *particular* research decisions, from the outset to the conclusion of their enquiry” (Clough & Nutbrown, p.18).

In contrast, Brookfield (1995) directs the critical practitioner into seeking out assumptions and hegemonies while Clough and Nutbrown (2002) direct the social scientist towards radical practices: radical looking, radical reading, radical listening and radical questioning. Paris, Eyman, Morris, and Sutton, (2007) conceptualised the practitioner researcher being in a privileged position to understand the culture and stories and is therefore able to pose questions that are relevant to the context. In turn, the

practitioner researcher is to problem-solve solutions relevant to the context. The practitioner researcher observes and yet is actively involved in the process. Mohr and MacLean (as cited in Cockley, 1993) referred to this as observing from an involved distance. Engaging in the process of reflective practice leads to deeper knowledge (Paris et al.) and improved practice (Cockley, Paris, et al.).

The practitioner researcher examining his practice may uncover disparities between what is believed and what is occurring (Cockley, 1993, Paris et al., 2007). As Paris et al., stated

By intentionally capturing and examining aspects of their practice, they uncovered what proved to be surprising and humbling gaps between their beliefs and goals and their actual practice (p.418).

The practitioner researcher begins by posing questions, which in turn through the process of reflecting on their practice raises further questions: a generative process (Paris et al.). As with all types of research there is a tension between being the observer and a participant as situations arise within the context (Arzubiaga, Artiles, King & Harris-Murri, 2008) forcing the practitioner researcher to choose between the role of teacher or researcher.

Observational learning was developed into social learning and imitation theory with Bandura and his associates focus on experimental methods. He quickly moved from a stimulus - response theory to a form of learning theory more about the processing of observations and the role models play in the learning experience. Bandura concluded that learning includes imitating motor acts, attitudes, values and emotions. How these were encoded in cognitive representations and recalled became the focus of his

social cognitive theory. Bandura broadened observational learning to include learning from film and video. Social Cognitive theory is discussed in chapter 3.

CHAPTER 3

Theories

Bandura Social Cognitive Theory

With the publication of *Social Thought and Action: A Social Cognitive Theory*, Bandura advanced the theory of social learning by stating individuals exercise a measure of control over their thoughts, feelings, and actions. There can be “reciprocal escalating processes, as when frightening thoughts arouse internal turmoil that, in turn, breed even more frightening thoughts” (Bandura, 1986, p.25).

People are neither driven by inner or pulled or pushed by external forces but by an interacting triadic reciprocity between behaviour, cognitive and other personal factors, and environmental events according to social cognitive theory (SCT) (Bandura, 1986). This is a major shift from Miller and Dollard’s (1941, 1945) social learning and imitation theory based on behavioural principles of reinforcement. Bandura used the terms symbolising, forethought, vicarious, self–regulatory and self reflective as basic capabilities of people to define SCT theory.

Being able to use symbols and having symbolic capability allows people to transcend time and place, creating novel courses of action through turning previous learned (modelled) experiences into guides for future action. Learning is often tested symbolically before being implemented, thereby reducing actual trial and error. This testing doesn’t necessarily make

people objectively rational, as thought can be a source of human distress and failing, as well as accomplishment (Bandura, 1986).

Bandura claimed that behaviour is regulated by forethought rather than a reaction to the immediate environment or enacting previous learning. The ability to anticipate the consequences of possible actions helps in setting goals, and having determination over one's future. This does not necessarily assume success, as ineffective and detrimental plans of action can be anticipated along with futures that show foresightful behaviour even when current conditions aren't necessarily conducive. Forethought is actioned through self-regulated mechanisms (Bandura, 1986). Vicarious capability is learning by observing other's behaviour. Vicarious learning is not limited to observing in real time. The proliferation of print, picture, film and television depictions have increased the exposure to exemplars for vicarious learning.

Self-regulatory capability is the ability people have to evaluate and adjust their behaviour according to an internal set of standards mediated with external influences. Individuals compare their performances with internalised criteria for quality, rate, quantity, originality, sociability, morality, and deviancy. In addition, individuals make judgements on personal standards, referential performances, value of activity and performance attributes. Individuals form self reactions that are evaluative, tangible and or neutral (Bandura, (1989). Self regulation allows people to move from being controlled by others (e.g. parents) to being self controlled. Discrepancy production (goal setting) and reduction (work to reach a goal) play an important part in motivation. Once a goal is reached, new goals are set that are usually higher, creating a new challenge to aspire to. If goals are not attained, measures are taken to rectify the situation to

achieve the goal. Motivation can be internal as in self pride in reaching goals or external as in a reward for reaching the goal. Self efficacy governs much of what we self model.

Bandura (1986) considered the ability to generate symbols, reflect, forethought and self regulate as being the most distinctly human traits. The interacting triadic reciprocity between behaviour, cognitive and other personal factors, and environmental events is a dynamic process that at any time can have any of the three areas as a locus. Cognitive processes play a critical role in Bandura's social cognitive theory.

Self Model Theory

The twentieth century saw the introduction of investigations into human learning and behaviour. Observational learning was first documented by Miller and Dollard (1941, 1945) with social learning and imitation theory. Others expanded the precepts but none more than Bandura. His evolution of social learning theory into social cognitive theory has advanced our thinking about how we might learn.

Bandura's findings and subsequent theory that we learn by observing others, that learning can occur with or without imitation (cognitive process) and with or without reinforcement was a significant contribution to learning theory. A second major contribution was in reciprocal determinism, the triadic reciprocal relationship between behaviour, environment, and person. The dynamic interplay of these three entities is inextricably linked and symbiotic in nature. The third contribution is in defining models and the functions of models.

Dowrick (2008, p.3) raises the questions, “Why do we imitate so selectively from potential models in our environment (Dowrick, 2006)? Why is behavioral change so rapid and sometimes extreme, with *self* modeling (Bandura 1997, pp.87-101)? Why is descriptive praise more reinforcing than other praise?” Dowrick has proposed advancement in the theory and practice of psychology by offering an explanation by way of a self model theory: as yet unpublished.

Dowrick (2008) raises the issue, if we learn by observing, why do we not imitate all behaviours we see? Dowrick identifies two conditions about selectivity in learning from models. One condition is based on the concept that there is no similarity or not enough similarity to imitate the behaviour. Dowrick proposes that this accounts for the lack of encoding by the observer, so retention is lost or there is a lack of motivation to formulate a suitable goal for the observed behaviour. The second condition is based on the necessary action being obscured or the component skills not being attended to. The traditional explanations of model attributes: similarity or status, a coping or mastery model are not adequate at explaining why these two conditions occur. According to Dowrick, the empirical evidence reports significant differences but the evidence does not identify the informing processes underlying the phenomena.

To explain this, Dowrick (2008) draws on a discussion by Byrne and Russon (1998) that recognises the goal and pivotal sub-goals of functional behaviour. The observer draws on their own behavioural repertoire to achieve the goal in the future context. In support of this argument Dowrick refers to two findings: (a) a fine grained analysis reveals less correspondence between the observed and reproduced acts; (b) the observer already has the component behaviours required. From this

Dowrick concludes that there is a shift from imitating behaviour to function of behaviour and secondly, the observer draws on their existing skills in order to enact the behaviour. Observationally learned behaviour is at some level achieved in terms of self representations of functional behaviour, the behaviours are not new, just the combinations or groupings of them are new.

An example: a driver possess all the skills necessary to be successful in starting a car, pulling out safely from the kerb, changing gears and to continue along the road in a safe manner. He is able to drive at the speed limit and successfully steer and stop his car. He has all the component skills of driving but does this make him an expert driver capable of travelling safely at high speed on a twisting shingle road where he will be required to enact simultaneously skills of drifting, braking, gear changing and steering? It is how he is able to effectively combine the skills without consciously thinking that determines whether he is an expert driver.

Dowrick (2008) proposes that although his theory represents a minor shift from observational learning theory, it has the potential that could have a far reaching effect on how we view modelling, shifting from “better others to better selves” (p.6).

“The feedforward principle (*L. principium*, beginng; *Fr.princeps*, initiator) is the premise that teaching and learning have to do with building the path from a present state to a future state.” (Dowrick, 2008, p.20). The motivation is the goal of the behaviour not yet achieved. Dowrick draws a clear distinction between positive self review which can illustrate a pathway to a desired goal but the pathway is achieved by focusing on past examples of behaviour as opposed to constructing a future. An image of a

future behaviour or a future context of a current behaviour is created by feedforward. When placed in a challenging situation of needing to acquire a skill or improve performance, feedforward is used by creating a “superior guiding construct” (Dowrick, p.21) and by way of imaging actions leading to a future goal, based on present skills or behaviours. Video is the most convincing way of creating the construct, because of its manipulability.

Self Model Theory Propositions

Dowrick (2008) states three learning and behaviour propositions:

“All modeling is self modeling” (p.24). The observer constructs a self model from already held component behaviours or a skill set.

Secondly, “All performance (of behavior) is based on the selection of a self model (image) from a hierarchical set” (pp.22-23). Current and future behaviour is guided by self model mechanisms. Thirdly, “Learning is most rapid when it is achieved with feedforward,” (p.23). In the first proposition, observation of our own or others’ behaviour enables encoding of a construct of adaptive self model images, if available.

When self models are not present or lacking, features are extracted from related contexts to construct or adapt our self models. The basis for the first proposition is empirical study findings that self model is an effective learning procedure. Similarity and status of a peer model increases efficacy, albeit to varying degrees. Effective feedback and self confrontation includes what the individual has done well or could do well. If observed behaviours are not in the repertoire of the individual or recognised as such, learning does not occur. If goals are of no interest or value, encoding of the observed behaviour does not happen.

The second proposition for self model theory has individuals drawing on a cognitive response hierarchy characterised as an ordered list specific to that

challenge. When faced with a challenge, the immediate cognitive response is to choose an image near the top of our hierarchical list that best matches the situation. Enactment of that image is the individual's response governed by self efficacy. Self efficacy is a quality or strength of the image influencing the images selection, yet rarely influences its hierarchical order. Dowrick (2008) states that all learning experiences merely reorder or clarify existing images in the cognitive response set. Responses are not deleted from the list, merely moved down when punished. The definition of punishment in operant theory is a consequence that decreases the probability of a behaviour reoccurring. Conversely, reinforcement of a behaviour moves it up the list. The conclusion of this proposition is that all training and therapeutic strategies have a common goal; shuffling of the cognitive response hierarchy.

The most rapid learning is realised when an observer chooses to make a connection of the future to the present, the third proposition feedforward. Feedforward adds responses to cognitive response hierarchies and or radically changes positioning on the hierarchy list. The creation of an apparent new behaviour is the assembling of component images into a new behavioural response and the subsequent insertion high on the cognitive response hierarchy.

Dowrick (2008) has drawn the following conclusions: as a reaction to any challenging situation we call upon self images (cognitive) which are hierarchical and then selection is made as to which response is applied, given the constraints of the specific context. Learning adds, reorders or clarifies images in a response set, and performance is a function of the images or behavioural responses in a set. Maintenance is the stability of the images in the hierarchical list and generalisation can be reconceptualised in

terms of how hierarchies are identified. Self efficacy helps determine selection of a self model response from the available responses in a situation. Radical behaviour change can be explained by elevation to the top of the list of a very different response. Video enables compelling self images to occupy a stable position at the top of the list. Bandura (1969) used the term “self-stimulation” in the act of encoding observed behaviours. Dowrick sees this as the extraction of the self model image from an observation. In other words, we observe and then encode into a self model the observation, adding it to our cognitive hierarchical response set ready for performance in the future. When we perform the behaviour, we have moved the response (self model image) to the top of our hierarchical list.

Dowrick’s (2008) self model theory offers an explanation to the previously unaccounted for aspects of observational learning. Without personal relevance and attention to an inferred learner goal, learning from observation does not occur. The variability of learning from peer models is explained by the extraction of the relevant behaviours governed by the inferred goal of the observer and the subsequent cognitive encoding of this information. Differing therapies each contribute to the construction of self models. Repetitive practice can be explained as rehearsals of self models where new encoding improves the performance by the observer (self). Pure mental rehearsal has been shown to be poor (Jordet, 2005), whereas, extracting the sequences from practice and re-encoding these, and moving them to the top of the cognitive response hierarchy set for that context improves the performance. Descriptive praise can be seen in self model theory as drawing attention to a low frequency behaviour that is pivotal to successful performance, thereby elevating it to the top of the hierarchical

response set. This aspect may play an important part in self reflective practices and subsequent self improvement.

Self as a model is the fundamental way to learn, peer model is a substitute. Dowrick (2008) writes that Bandura moved modelling from a general idea that people could learn from observing to a science in which learning could be studied and measured.

CHAPTER 4

Method

This study is a case study that is centred around the delivery of a professional development package to teach professionals how to implement video self modelling with their client groups. A case study design was selected because it gave opportunity to identify unique features that may not have been detected in other methods and allows the situation to be viewed from the participants' perspective (Cohen, Manion, & Morrison, 2000). Stake (as cited in Cohen et al.) identifies three main types, (a) intrinsic, cases that are undertaken to understand the particular case in question, (b) instrumental case studies, gaining insight into an issue or theory and (c) collective case studies providing a fuller picture. This case study type is intrinsic.

Burns (1997) gives some guidance regarding data collection in a case study. Multiple sources of information allow for converging lines of inquiry, improving reliability and validity of data and findings. A researcher can keep a chain of evidence through questionnaires (Burns 1997), interviews (Cohen, et al.), observations (Cohen et al.) and by recording data at the earliest opportunity to minimise the fallibility of human memory (Burns, 1997). A journal was kept by the teacher educator to jot down notes and later to reflect on.

A major validation could be seen as the participant's vicarious experience; each participant relating the case to their own context inferring the quality of contribution the case makes to their own situation (Burns, 1997). External validity according to Burns (1997) is not of great importance because a case is a bound system, a presentation, interpretation and

investigation around a single unit, the case. Reliability can't be shown in the traditional sense, however dependability of the results derived from multiple sources and are agreed on by all concerned act as the reliability check (Burns, 1997). Whether the case is typical or atypical determines to what extent the findings can be generalised. In this study each participant made a PSR video for later viewing.

Ethics

The overarching legislation governing ethical issues is the Privacy Act (Ministry of Health, Ministry of Education & Department of Social Welfare, 1996). Informed consent and informed choice is about an individual's right to freedom and self determination (Cohen et al.). A letter explaining the purpose of the study was given to each participant and to each client the participant would work with. The letters included information that participation was voluntary, they could withdraw at anytime and anonymity would be maintained. Two versions of the consent form were prepared to cater for clients over the age of 18 years and for minors. Given that a fundamental tenet of VSM is the desire to change behaviour (Dowrick, 1991) every endeavour was made to explain the procedure in terms the client could understand. Permission was sought from guardians and parents, where applicable. Permission to use the client's VSM tape was sought separately (Appendix E).

A statement was made that not giving consent for the use of the VSM tape did not in any way impact on an individual's involvement in the research project. This information was given to ensure informed choice and informed consent (Right 6 and Right 7) in accordance with the Code of Health and Disability Services Consumers' Rights (Crown, 1996). Ethical

clearance was granted through the Christchurch College of Education's ethical clearance committee.

It was important to stress to the participants that no data, especially ranking and comments that could be inferred as a criticism of the employer, would be given to their employers. Group A were participating in the training as part of their professional development arranged by their employer. The consent forms assured the participants of confidentiality, however, the teacher educator reiterated that confidentiality would be maintained at the beginning of Group A's training in response to a casual question before the session began.

Participants

Criteria for selection of participants

Participants who worked with a student or client group were sought to participate in the study. A general invitation was made to a national organisation. A regional group of eleven centred in the North Island offered to participate (Group A). However, eight months after participating in the two day training, only one participant was ready to work with a client. A further cohort was sort for the study.

Participants and Clients

The participants formed two groups, Group A and Group B.

Group A

Eleven professionals participated in the initial training. These participants did not select to be involved, but were required to attend as part of a scheduled professional development session. Most participants travelled from regional areas to attend professional development within the North

Island. The teacher educator travelled from his home in the South Island for the training days. The participants' ages ranged from 20 years to 60 years of age, with the median age band being 31-40. All participants described themselves as European/Pakeha. Their qualifications ranged from diplomas to a doctorate. Most of the qualifications were in the behavioural sciences, with one in early childhood teaching. The participants' roles within their organisation were professionals who worked directly with adult clients in community settings developing programmes for support workers to implement.

At the completion of the second training day, four volunteered to continue by developing VSM interventions with their clients. At the end of the study only one participant, Alan, (pseudonym) remained in Group A.

Group B

Nine professionals, therapists and special education teachers, participated in the initial training. These participants volunteered as part of their own continuing professional development. All participants described themselves as European/Pakeha aged from 20 years to over 60 years, median age band 41-59. All the participants worked within the education sector, three worked as an integrated team of therapists, two worked in another setting as a team and the third team came from a special school. Group B's client base was school aged students to 21 years of age. From the nine participants, five continued on to plan interventions using video self modelling. Group B consisted of Jenny, Alison, Rachel, Sue, and Mary (pseudonyms).

Setting

Group A

The training took place in a seminar room in a regional office provided by the organisation. The participants sat at tables with room for their laptop computers; only four had these. There was a breakout room adjacent and throughout the day management withdrew some of the participants for short meetings, thus interrupting the continuity of the training. The second training day was located in another regional office. The only room available was small, cluttered, poorly ventilated, and cramped.

Group B

A small classroom was used at one of the schools for both training sessions. Desks were available for laptop computers with plenty of space for the nine participants to comfortably use their equipment, all had access to a computer in the room.

Apparatus and Materials

The following equipment was used by the teacher educator :

Laptop computer running Microsoft Windows XP™ with DVD read/write drive

Windows XP Professional Office™ including PowerPoint

Data projector and screen

A whiteboard and pens

Set of amplified speakers

Microsoft Office Suite Professional, PowerPoint

Microsoft Movie Maker 2.0, a digital editing program supplied with

Microsoft Windows XP

Camtasia 4.0 A movie screen capture program for recording computer screen activity

Videozilla a conversion program used to change video formats

Examples of VSM on DVD

Microphone headset for recording voiceovers

Digital camcorder, IEEE1394 cable and recording media

The participants used the following:

Laptop computer running Windows XP with CD/DVD read/write drive

Microsoft Movie Maker 2.0 a digital editing program supplied with Windows

CD containing notes, video clips of screen actions, still images

Microsoft Movie Maker training videos made by Microsoft and the author

Microphone headset for recording voiceovers

Digital camcorder, IEEE1394 cable and recording media

A set of paper notes, storyboard blanks, and consent package.

Procedures

Data Collection

Questionnaires

Two questionnaires (Burns, 1997) were administered to collect information regarding computers skills, attitudes to professional development, and VSM knowledge. The pre-questionnaire was administered at the beginning of the first training day to ascertain specific information on current computer and digital literacy and knowledge of VSM as an intervention (see Appendix A).

The second questionnaire was administered at the completion of the second training day. The participants were asked to rate the training day and evaluate the training, and to rate their growth in confidence using computers. The questionnaire was designed to allow a minimum amount of

time to complete. Participants are more likely to engage in a quick response system at the conclusion of a training session (see Appendix B).

Interviews

A structured interview (Cohen, et al., 2000) was designed that gave opportunity for the participant to provide responses that further informed how they engaged with the training package and how they viewed their own learning. The interview was administered after the participants had completed an intervention using VSM with their clients.

Integral to professional development is the notion of goals and relevance to real world situations for successful learning (Speck, 1996). To determine the effectiveness of the training, questions were asked that elicited responses about motivation, relevance, and affective responses. The first question addressed the issue of participation in the training. Adults need to know why they need to learn something before undertaking to learn it (Speck, 1996). The second, third, and fourth questions examined the motivation and prior knowledge of the participants while delving into their perception of task difficulty. The next bank of questions examined how supportive the learning environment was, the structure of the sessions and the effectiveness of the modelling in the training. The review of material presented and comments around the content and organisation of the sessions completed this block of questions. Some questions asked similar things but from different perspectives (see Appendix C).

The positive self review video and its usefulness along with the feelings about seeing oneself on video were explored. The last block of questions asked about technical issues and barriers including working with the client to create a VSM, expert assistance, and access to assistance.

The interviews took between twenty and thirty minutes to administer, with the researcher recording the answers. The answers written down were verified by the participant at the end of the interview ensuring that the participant's responses were recorded as they intended, a validity check (Burns, 1997). During the interview the teacher educator was responsive and encouraged the participants to provide any additional comments (Burns, 1997; Neuman, 1997).

Follow up telephone interview

For group B an additional interview was conducted by telephone six months after the last training day. Questions covered what effects the participants felt their own VSM had on their learning, and had they created any more VSM interventions. The participants reflected on how they were using VSM and how they viewed VSM as an intervention technique (see Appendix C).

Data Recording

The researcher kept a journal in which pertinent notes were recorded regarding the training sessions, and served as a reminder for reflections on the professional development package. It was not possible to make notes as teaching fully engaged the available time. During the scheduled breaks conversations were held around the training and related issues. Following the training sessions notes were written. The researcher self reflected on the notes and at times discussed the notes with a colleague, further notes were made. The participants were issued with A5 blank journals to record questions, thoughts, reflections and comments about the learning processes they were going through, VSM and editing, and particularly any issues that they wanted clarification on.

Treatment Evaluation Inventory – Short Form (TEI-SF)

The TEI-SF form (Kelley, Heffer, Gresham, & Elliot, 1989) is a series of short statements of the acceptance of an intervention which is rated using a likert scale (Burns, 1997). Respondents read descriptive statements of treatments and record their rating using the form

For this study the TEI-SF form (Kelley et al., 1989) was modified for use in the settings. The word ‘child’ was changed to ‘student’, and ‘children’ to ‘students’ to reflect a more age appropriate term. A custom header based on Kelley et al. form was added above the table containing the nine items. Kelley et al. were acknowledged in the footer along with the teacher educator’s name, year and university. The instructions were minimal at the top of the form. (see Appendix D). The significant adults in the settings of the clients were asked to think of the client after the VSM intervention, and rate how they felt about VSM as a treatment using the modified (TEI-SF) (Kelley et al., 1989) form. The form was supplied to the participants to give to the significant adults at least six weeks after the viewings of the video by the client. The significant adults were asked to complete the form and return it to the participant. Participants returned completed forms to the researcher. The TEI-SF was not administered in the conventional way, so only served to gauge the feelings of the significant adults about their experience of VSM through the client and is not valid as a TEI – SF.

Training package

A training package was developed incorporating video, digital editing, and the principles of VSM (Dowrick, 1991). The training was delivered on two separate days with an intervening time to allow for the participants to create a positive self review movie depicting them successfully working at the computer editing video footage. The video footage of the computer

screen activity was created by using Camtasia Studio by TechSmith, a screen capture utility. The participants filmed each other at their usual computer and combined this footage with the screen videos supplied, thereby producing a positive self review movie of them editing video at the computer.

By creating the positive self review (PSR) videos the participants were able to remind themselves of the steps required to both implement a VSM intervention and edit it using a digital platform. This PSR became a “just in time” reminder to the process and detail of the professional development training in digital video editing.

A Compact Disc (CD) containing the notes, video clips of screen actions in editing, and still images to be used in compiling a PSR movie was supplied to each participant. The disc contained additional resources that could be useful to the participants: a Microsoft Digital document describing Microsoft’s multi-media software products and how to use them, and some short videos demonstrating how to edit in Microsoft Movie Maker.

Workshop Structure

The ten hour training package was constructed to be delivered on two separate occasions with intervening days allowing the participants time to create their PSR videos. The sessions were designed to meet the needs of participants who knew little about using a video camera or camcorder . The sessions could be changed in response to the skill level of the participants. It was not scripted word for word however the slides did keep the researcher following a set sequence. Opportunity was given for more able participants to support their peers (Speck, 1996; Bandura, 1977). Collective problem solving strategies were encouraged in the sessions.

The workshop sessions were based on a modelling format where the learning was introduced by the researcher, observed by the participants, followed by guided practice (Kameenui & Simmons, 1990). The participants were actively engaged in the learning by following the instructor, using their own equipment in the guided practice task. Discussion was encouraged in the guided practice sections along with questioning to scaffold participants' learning (Vygotsky, 1978). An application phase ensured participants could perform the learnt skill or skills independently before moving onto the next skill or behaviour. A cumulative review (Kameenui & Simmons, 1990) in the form of a short practical task followed each block of skills, and questions were addressed as they arose.

In this way the necessary component skills of creating well framed varied sequences in video, utilising smooth panning and a fixed camera viewpoint were learnt. The basics of good lighting and composition and how to achieve a visually pleasing result were covered to ensure a high success rate of the participant's first experience creating a VSM. Essential tips were used to punctuate the blocks of learning and provide the participants with less cognitive challenging tasks. These were introduced by using a scenario setting the event and the tip provided as the solution.

An example: "Have you ever videoed someone talking only to find that you missed the first few words and the last few words they said?" (Participants would respond by nodding or a verbal response). "Here's how to avoid this, the two second rule. Start the camera, count one Mississippi two Mississippi (two seconds), silently of course, and cue the subject to start talking by giving them a visual signal, for example, a dropping hand.

When they have finished, count the two seconds, silently once again, and then stop the camcorder. Why? The camcorder takes about two seconds to come up to speed with the tape and start recording onto the tape, flashcard or hard drive. So what happens at the end? The camcorder rolls back when stopped to give a clean cut from one scene to the next, thus erasing a small segment of the last piece of the preceding recording. Following the two second lead in and lead out rule avoids clipping the sound track.”

Cumulative review (Kameenui et al.,1990) was used to review a series of skills or behaviours to ensure that retention for all participants was maximised. Scaffolding (Vygotsky, 1978) was offered as the participants performed the skills to ensure acquisition of the techniques. The handout had space where participants could record pertinent points, and cloze responses were included. These activities were designed to aid recall after the training session, ensuring that the repertoires were high on the hierarchical response list (Dowrick, 2008).

Ethical considerations were introduced at the beginning of session one when the researcher explained about the research. The first training session covered basic techniques of videography and the conceptual basis of recording images and sound to represent time. That is, time can be truncated on video; real time does not have to be used. An illustration of truncating time is watching someone walk to a door and enter it. It is not necessary to see every step taken, it is sufficient to see the person setting out for the door and a cut to them arriving at the door as a depiction of walking to a door.

To demonstrate a VSM project the participants viewed two examples. Skills the client gained were outlined. Other examples were presented to

illustrate a wide range of behaviours that could be addressed using VSM. Discussion about the types of behaviours that could be addressed and how they might be made in VSMs took place. Examples were selected that were not of a high technical standard to further illustrate that VSM is not about technical excellence but more about depicting a series of positive images of the client engaging in the adaptive behaviour. This strategy applied Bandura's (1977) coping model, that you do not have to be an expert in video to create a successful VSM, thereby strengthening participant self efficacy (Bandura, 1986). In this case the "model" was the person who made the VSM video although unseen. The message was conveyed that videos do not need to be technically perfect. In the intervening time between the sessions participants made their PSR videos using some of their own footage and the supplied footage on the CD. The footage supplied were screen videos of editing procedures: capturing from the camcorder, splitting clips, assembling clips, checking timelines and adding a sound track authored by the researcher. The finalising or rendering of the movie project was the last clip needed to complete the PSR video. A sound track could be added, the clips supplied were mute.

The second session consisted of a review of the first session, problem solving issues and planning the VSM for their client. The researcher modelled how to access help by purposely faltering when a question was asked. One example was the use of sound and whether you could delete just the audio track recorded when the video was taken (in MS Movie Maker). Help was used and a solution found. The "observed message" was to ask the help function built into the program, a good self help problem solving strategy. At this point the researcher was acting as a coping model (Bandura, 1986) reinforcing the concept that expert knowledge is not always required. Observational learning was also used

when the researcher modelled processes to problem solve, namely where and what to look for. Opportunity was given for participants to storyboard their ideas for the client's VSM.

Towards the end of the session an overview was given as to what was required to be done for their client VSM. Data recording sheets were shown, procedures for viewing the VSM with their client and a reminder about journals. At this point no one had used the journal to record ideas. The requirements of following the ethical procedures when dealing with their clients and caregivers/parents were covered again along with the research procedures regarding interviews.

Following the training sessions participants were supported by the researcher by phone and email contact when planning their specific workplace VSM interventions.

The data collected from the first day questionnaires was read by the researcher the night following the training. The researcher made some notes and reflected in thought about the written comments. Some modifications were made to the second training day material based on the reflections from the data.

The two separate training sessions (Group A and B) followed the same format. As far as possible the researcher kept the procedures the same, however as they were at different times and with different groups of participants, total consistency was not possible. The powerpoint slides were kept identical other than dates changed.

CHAPTER 5

Results

Initial Questionnaire

The results of the initial questionnaire are summarised, and reported in Tables 2 to Table 5 as comments. All the participants in the training sessions, eleven participants in Group A, and nine participants in Group B completed the initial questionnaire.

Question 6: Rating of professional development

All participants rated professional development as very important.

Question 8: Rating of a past professional development experience is shown in Table 2.

Table 2
Professional Development Experience Ratings (previous PD)

<i>Q8 Professional Development Experience Ratings (previous PD)</i>				
	Group A (n=11)		Group B (n=9)	
Still thinking of the skill or technique from above, how would you rate the following:				
The skill was easy to remember	strongly agree/ disagree	10 1	strongly agree / neutral	6 2
The skill was easy to use	strongly agree / neutral	7 2	strongly agree / neutral	6 2
The skill was useful for a wide range of situations	strongly agree / neutral	9 1	strongly agree / neutral	5 3
Learning the skill was a waste of time	strongly disagree	11	strongly disagree / neutral	8 1
The skill was not relevant for my situation	strongly disagree	11	strongly disagree / neutral	7 2
The skill was too difficult to remember	strongly disagree	11	strongly disagree / neutral	1 6 2

Questions 9 - 12: Computer use is shown in Table 3

The participants' overall rating of knowledge of computer skills was either fair or good. In contrast, computer skills overall were rated excellent or good. Participants rated their competency of performing some basic functions (questions 13 to 24) as a verification of their computer skill level.

Table 3

Computer use

<i>Q9 Computer use</i>				
	Group A (n=11)		Group B (n=9)	
Q9 Do you use a computer?	home and work	8	home and work	8
	work only	3	home only	1
Q10 Number of hours per week using a computer	more than twelve	7	more than twelve	5
	nine to twelve	2	nine to twelve	2
	five to eight hrs	2	five to eight hrs	1
			two to four hrs	1
Q11 How long have you been using a computer?	more than twelve yrs	4	more than twelve yrs	3
	nine to twelve yrs	3	nine to twelve yrs	1
	five to eight yrs	4	five to eight yrs	1
			two to four yrs	
Q12 How do you rate your knowledge about computers?	good	4	good	3
	fair	7	fair	5
			poor	1
Computer tasks skill level overall	excellent or good	6	excellent	5
	fair	4	good	2
	poor	1	fair	1
			poor	1
		no answer		

Questions 37 – 42: Use of digital equipment is shown in Table 4.

Overall the participants were familiar and used a range of web based tools. It is interesting to note that none of the participants had had any experience editing video. At least two thirds of the participants had prior knowledge of some of the fundamentals of video camera use.

Table 4
Use of digital equipment

<i>Questions 37 – 42 Use of digital equipment</i>				
	Group A (n=11)		Group B (n=9)	
Use Web	yes	10	yes	9
Browser	no	1		
Use Email	yes	11	yes	9
Use a film camera	yes	8	yes	9
	no	3		
Use a digital camera	yes	9	yes	9
	no	2		
Use a video camera	yes	8	yes	6
	no	3	no	3
Use a digital video camera	yes	4	yes	7
	no	7	no	2
Use a movie camera (film)	no	11	yes	1
			no	8
I edit my videos	no	11	no	9

Question 45: Prior knowledge of VSM is shown in Table 5

In Group A, half of the participants had prior knowledge of VSM, whereas, for Group B most of the participants had knowledge.

Table 5
Prior knowledge of VSM
Question 45 Prior knowledge of VSM

	Group A (n=11)		Group B (n=9)	
Have you heard about Video Self Modelling?	yes	6	yes	8
	no	5	no	1

In summary, the participants used a range of software programs and digital technologies. There were no novice computer users in either group.

Post Training Questionnaire

A short questionnaire comprising eight statements with 5 point Likert scales is shown in Table 6.

All participants in Group A who participated in the training days completed the questionnaire. In Group B, only those who completed the VSM submitted the questionnaire. The other participants were given the questionnaire but did not return it. There was opportunity for the participants to comment on the bottom of the form and some chose this area to highlight aspects of the training. The five Group B participants who went on to plan a VSM intervention handed the completed questionnaire back.

The participants all reported that the training was interesting, the notes were useful, and that the presenter made it easy to ask questions. Most participants reported that they felt confident to implement a VSM intervention and that they had enjoyed making the positive self review video.

Table 6
Post Training Questionnaire Results
 Post Training Questionnaire

Question	Group A (n=11)		Group B (n=5)	
The course was interesting	agreed / strongly agreed	11	agreed / strongly agreed	5
There was a good mix of theory and hands on learning	agreed / neutral	8 / 3	agreed	5
The instructor made it comfortable to ask questions	agreed or strongly agreed	11	agreed / strongly agreed	5
I feel confident to try Video Self Model with my team	agreed / strongly agreed / neutral	10 / 1	agreed / strongly agreed	5
I found it easy to take notes	agreed / strongly agreed	11	agreed / strongly agreed	5
I enjoyed making the Positive Self Review video	agreed / strongly agreed / neutral / no answer	8 / 2 / 1	agreed / neutral	4 / 1
It would be better if there was one computer for each of us	agreed / strongly agreed	11	4 agreed / strongly agreed / neutral	4 / 1
My computer skills have increased	agreed / strongly agreed / neutral	10 / 1	agreed / strongly agreed	5

When the pre and post questionnaire data for computer skills was compared, all participants reported an increase in computer skills. The comments made by Group A and Group B participants at the bottom of the Post Training Questionnaire are reported below. Group A participants comments reflected the difficulties with technology not being made available by the organisation and resourcing. It was interesting to note that only eight of the eleven Group A participants had actually reported that making the Positive Self Review video had been a positive experience. In contrast, Group B participants had no issues with technology. Both Groups participants were positive about implementing VSM.

“ Simple process and concept with huge potential been made difficult by technical (in-house) issues.”

“You made it very easy and comfortable to ask questions – very non-threatening.”

“Have technical issues (on my side) sorted before course.”

“Great once I go out and do it. I think many clients I work with will find it useful – Whenever I have videoed people in the past they have found it really empowering and useful.”

“Extremely frustrating not having the resources within the work environment to support the VSM learning and application. Resource issues i.e. lack of equipment will prevent this VSM intervention from being practised or used at present.”

“I was and am frustrated about the lack of opportunity and practise(sic) of use (of) this skill due to resourcing constraints, but feel confident that with the resources you (researcher) have provided I could continue with my learning at any time.”

“(like) access to the resources required as a team for this to be another regularly used strategy rather than the exception or some can do some can’t.”

Group B comments

“The whole process was a really positive experience. I can see huge potential for the use of VSM with students I work with and can see it becoming an integral part of my intervention process.”

“Very valuable training as VSM is an intervention that is applicable to my practice.”

Interviews

The participants were interviewed following the completion of their client VSM. In Group A only one participant completed an intervention, whereas in Group B, four completed the VSM intervention. Another participant from Group B planned an intervention but had difficulty carrying it out because of the client's ill health; however the interview was still conducted. The participant went on to complete the client VSM.

Examples of the participant comments from both groups are reported below.

The interview included questions on VSM, the training, technical issues, barriers, and motivation. Common themes identified are recorded below the participants' responses.

Table 7
Interview

<i>Question 1 Why did you choose to participate in the training?</i>	
Alison	<i>"Wanted to learn Video Self-Model. I knew the theory but I didn't know how to put it into practice. Editing, I also wanted to learn the skill of digital editing."</i>
Rachel	<i>"Didn't know anything and (colleague and participant) had talked about VSM and I have a real interest in technology."</i>
Alan	<i>Enjoy learning new skills, the opportunity was there."</i>
Jenny	<i>"..had read about Video Futures, in a cognitive strategies paper. Learnt some things doing the cognitive strategies paper and also from a colleague. Training was not around in "technology when I was actually doing my training, so everything I've learnt about technologies is upskilling."</i>
Comment	All participants reported a need to learn VSM as an intervention strategy. The actual comments revealed where the information and motivation came from.
<i>Question 2 At any time did the training become seemingly too difficult? If yes, what did you do about it?</i>	
Mary	<i>"Yes, I contacted the trainer and spoke to a colleague (name) who was also doing the training. I also spoke to (name's) husband who was computer savvy."</i>
Sue	<i>"The first section I was technically challenged and quite daunted as well one other and I asked questions of the instructor, also a peer."</i>
Others	<i>No</i>
<i>Question 3 How would you rate your motivation for doing this on a scale 1 to 5, where 5 is the highest?</i>	
All participants	Five rated a 4, one a 5. .
Comment	The self perceived motivation to do the training and learn VSM as an intervention strategy was high.

Question 4 Did you feel you had some knowledge coming into the training? How important was that knowledge?

Alan	<i>“No knowledge of MovieMaker and he didn’t know anything about Video Self-Model but he had been working on Windows and worked with cameras before but not digital video and no video skills, only still cameras.”</i>
Rachel	<i>“No, other than talking to a peer and I was quite comfortable with using technology, so I had some technology knowledge.”</i>
Sue	<i>“I had a little. I had seen (Colleague) Video Self-Model that she had made and I knew what it was about. I had done Cognitive Behaviour therapy and backchaining behaviour and also some OT teaching skills that I had so I had some knowledge but not actually how to do it.”</i>
Alison	<i>“Yes, I had post-graduate studies in which Video Self-Model was covered. It was covered from the cognitive aspect through Otago Polytechnic and I knew Bandura’s theory behind it.”</i>
Jenny	<i>“Yes, I had the theoretical background to it, the theorists. Had worked in a team who videoed a student in the past, but the teacher had edited the video but it was more theoretical knowledge.”</i>
Mary	<i>“I had no knowledge of VSM coming into the training and little to do with computers.”</i>
Comment	It is interesting to note that all participants had knowledge of computers and three had the theoretical underpinnings.

<i>Question 5 What features of the training were helpful?</i>	
Alan	<i>"The practical aspects, the panning, the zooming. The VSM CD (referring to the CD supplied) I found quite straight forward."</i>
Rachel	<i>"The disk was helpful (referring to the CD supplied). I like to be shown how to do things and then figure them out before using the support."</i>
Sue	<i>"The easiest was being able to contact the instructor (researcher). That was really helpful and I learnt a lot about the computer I didn't know while I was busy learning how to edit."</i>
Alison	<i>"The CD (referring to the CD supplied) was good to refer back to. The handouts I found were useful. I also downloaded Microsoft Movie Maker from the Web and had a play with that. The practical language and the short shots in class I found useful and talking about students with the trainer(researcher) and who and how I might go about doing some of these aspects."</i>
Jenny	<i>"The practical aspects, taking shots, putting into the computer, playing with them at home."</i>
Mary	<i>"Being able to do a practical as well as the theory as we went along, so I was learning the theory and the practice at the same time."</i>
Comment	In summary, the CD resource, the practical application and the instructors accessibility appear to be helpful in the training package.

“

<i>Question 6 What features of the training were not helpful?</i>	
Alan	<i>"Got lost in individual technicalities (Group A training)."</i>
Rachel	<i>"No, nothing."</i>
Sue Alison	<i>"The condensed nature.(referring to the first session). My prior knowledge was good. The second training was familiar. I felt I didn't really need that."</i>
Jenny	<i>"slow pace of the second session."</i>
Mary	
Comment	

<i>Question 7 How useful was the gap between the training sessions? What did you use this gap for in relation to VSM?</i>	
Alan	<i>"It was good to do the personal video (Positive Self Review). It was good to get problems ironed out and follow-up with a doing straight after (the training). It was a chance to see the issues that arose and bring them up at the next training session."</i>
Rachel	<i>"Really useful, meant I could process and practice the information that I had gathered and I could think about who to use it with before coming back for the second session."</i>
Sue	<i>"I would have liked the sessions closer together, so a smaller gap (between session 1 and 2). I wanted to complete I was in a bit of a rush. The gap was good to play around with it, I worked with a peer."</i>
Alison Jenny	<i>"Good to try things out and what was needed. It was good to have the next session to ask questions that arose."</i>
Mary	
Comment	

Question 8 How effective did you find the modelling in the training?

Alan	<p><i>“Useful, highlighted the problems, highlighted the problems and illustrated them and gave on the spot problem solving.”</i></p> <p><i>“Very useful. Once I’ve been shown something I pick it up easily and can easily vary it to suit my situation.”</i></p> <p><i>“Good, it’s the way I like to learn, to see something and then try it out, with some guided help.”</i></p>
Rachel	
Sue	
Alison	
Jenny	
Mary	
Comment	

Question 9 Was the review at various points throughout the training useful?

Alan	<p><i>“Did we use that? Researcher explained what they were. Useful and it was good to consolidate the skills at that point”</i></p>
Rachel	
Sue	
Alison	
Jenny	
Mary	
Comment	Most replied they were good.

<i>Question 10 Do you have any other comments around the content and organisation of the sessions?</i>	
Alan Rachel	<i>“The second session (I) was fairly confident using the software. Felt further ahead and already done it. Quite interesting though.”</i>
Sue Alison	<i>“I would have preferred it to have been all together, suppose its me and my learning style. I’m more concrete and sequential, so I would have enjoyed doing this step by step.”</i>
Jenny	<i>“..would have liked to be able to choose which session I went to.”</i>
Mary	
Comment	

<i>Question 11 Were there aspects that made the learning easier? Please specify.</i>	
Alan	<i>“Step by step was good. The demo and do opportunity, that was good. Talk and do, that gave an opportunity to iron out problems.”</i>
Rachel	<i>“The instructor (researcher) easily available and able to access him in different ways – phone, email. Made it a lot easier to actually solve my problems.”</i>
Sue	<i>“Doing it with another in the same workplace was great peer support and I had technical skills at home if I needed it.”</i>
Alison	<i>“Having two peers to bounce ideas off and talking about it was good..(sort) any little niggles. The CD resource was good to refer to. I also used the instructor (researcher) to bounce some ideas off.”</i>
Jenny	<i>“The practical and the modelling and the trying it out at home.”</i>
Mary	
Comment	

Question 12*Making the Positive Self Review video (CD)**Was this a useful exercise?**How did it help?**Were there any aspects that were difficult?**What do you think about seeing yourself editing video?*

Alan Rachel	<i>"Found it quite useful and it was good to get to know Movie Maker by doing that. Didn't mind seeing myself on video."</i>
Sue Alison	<i>"Good but it was quite long. Didn't like seeing self on video so took a shot of over the shoulder."</i>
Jenny	
Mary	<i>"Wasn't useful as a video self model. It was useful to do it as a trial run for the real thing. That's what I found useful about it."</i>
Comment	

Question 13 *Did you view it before making your VSM? If so, how many times? If not, do you envisage viewing it before you make a VSM?*

Alan	<i>"Two times, sometime before I remembered the steps. I opened up Movie Maker again and it all came back. The notes were helpful. I used the notes and manuals as well and just going back through the handout."</i>
Rachel	
Sue	<i>"No. Yes in the future."</i>
Alison	<i>"I'd forgotten to do that and maybe I will (in the future)."</i>
Jenny	
Mary	<i>"No and no."</i>
Comment	

Question 14 If you haven't made a VSM yet, what are the barriers for you?

Alan Rachel Sue Alison	
Jenny	<i>"Difficulty accessing the child (client), health issues with the child being away and the right equipment. I have a new laptop now."</i> Researchers note: Itinerant service so don't have access to client everyday, can be once a week or fortnight.
Mary Comment	There was only one participant who hadn't made the VSM with the client, but had planned it.

Question 15 Thinking about technical issues now, were there any you wish to mention?

Alan	<p><i>“Interfacing, the formats, the tape, they were all difficulties that I had, because of the equipment that had been purchased was mini DVD, problematic in terms of the format that it produced. I had incredible trouble with that.”</i></p> <p>Researcher’s note: considerable time spent converting material and finding a workable solution for the organisation to use.</p>
Rachel	<p><i>“My laptop was insufficient, had insufficient RAM and it kept freezing the Windows, very frustrating.”</i></p>
Sue	<p><i>“Well, Vista downloading had to be solved by someone else. Had great troubles with working with Movie Maker on Vista.”</i> Researchers note: Loan machine.</p>
Alison	
Jenny	
Mary	<p><i>“Would have been nice to have had a computer we could use at work all the time.”</i></p>
Comment	<p>Two participants (same workplace) had no Windows computer capable of editing video. An Apple was available in one of the classrooms, but wasn’t portable. The researcher supplied a loan of a laptop for ten weeks for them to use.</p>

Question 16 Working with your student

Were there aspects that would have helped you do this better?

What supports did you use while working on the VSM for your student?

(E.g peers, instructor, internet, manuals, notes)

How many times did the student view the video?

Alan	
Rachel	<p><i>“Positive expression with student, significant adult was not onboard, it was difficult to get their support and help. There was a positive result though, certainly others saw the learner as a superstar.”</i></p> <p><i>“I used peers, instructor (researcher) manuals and the notes and of course the training disk.”</i></p> <p><i>“Seven. The key part at the end of the video is when the teacher says, “Yes, you’ve got it.” And that was difficult to get.”</i></p>
Sue	
Alison	<i>“Five times.”</i>
Jenny	
Mary	<p><i>“The time of the year was wrong - a very disruptive timetable and students were not settled.”</i></p> <p><i>Used my husband, a peer and the instructor (researcher).”</i></p> <p><i>“Six.”</i></p>
Comment	Others haven’t reported this data.

Question 17 Having access to the instructor – was this a significant part of the support?

Alan	<i>“Certainly significant, the answers to problems, made it easier to successfully complete the video.”</i>
Rachel	<i>“Yes.” x2</i>
Sue Alison	<i>“It was certainly a valuable thing to do.”</i>
Jenny	<i>Useful but not significant, peers were good problem solvers, good at solving things myself.”</i>
Mary	<i>“50/50”</i>
Comment	

Question 18 How confident (prepared) do you feel to implement other VSM interventions? 5 very confident to 1 not confident at all.

Comment The five participants who orally responded didn't hesitate in rating this question. Four rated Very confident (5) , two rated a (4) confident.

Question 19 Are there any other comments you'd like to make?

Alan	<i>"I would like to play with some other parts, helping clients, even the student that I worked with tells others how good it was and it worked. It was good, a huge boost to the student that I worked with, building his self-esteem. Already planning my next VSM."</i>
Rachel	<i>"A really positive experience had been using skills, still photos, taking it to the next step and a phenomenal result with the student. It was part of my work and it's going to become part of my work to come."</i>
Sue Alison	
Jenny	
Mary	<i>"Have a whole row of students (clients) lined up to do VSM."</i>
Comment	

Question 20 Having experienced this training, do you think that you could have learnt this from a self paced individual training package where video delivered the instruction?

Alan	<i>“Yes, I could have learnt Movie Maker from this, but I actually enjoyed the interactions with the group although I didn’t end up with support from my group. However, I did think it hugely useful support for specific technical problems. That’s a major thing that you need to have. Some of it could be delivered by self-instruction pack, dialogue for support. Some of his other colleagues had had a try with VSM as well although they hadn’t participated in the study.”</i>
Rachel	<i>“First yes, wouldn’t have enjoyed the lack of support or the lack of peer interaction and I also found it useful from the instructor, having interaction with the instructor.”</i>
Sue	<i>“No, with more experience now with the technical aspect I feel a lot happier with it, but I wouldn’t have got that from a self-paced video instruction system.”</i>
Alison	<i>“No, have to talk to others about it. The verbal dialogue with others is what is good in making a group situation work. I find it important to interact with my peers.”</i>
Jenny	<i>“Yes, useful to have group doing it though. If this was the case, if that was going to be delivered, then that would be good to have a group there and problem solving in groups and it would be good coz you could go through it at pace, so it could be totally self-directed.”</i>
Mary	<i>“No, there are always questions, which arise as the situation goes (along) and having an instructor allows extra individual answers to be addressed.”</i>
Comment	The participants found the CD resource useful, and the making of the Positive Self Review video useful because it was an application of the skills learnt. The instructors support was seen as important in problem solving along with peers and peer support in the workplace. Technical issues are seen as a hindrance to successful completion of videos.

The follow-up interview was conducted over the telephone. The responses to the four questions are reported below; additional comments made are included also.

Table 8
Group B Follow – up Telephone Interview

<i>How many client VSM have you created?</i>	
Rachel	2
Sue	1
Alison	3
Jenny	2
Mary	1
Comment	
<i>Did you view your PSR when you created your first client VSM?</i>	
Rachel	<i>“No, I didn’t have to review.”</i>
Sue	<i>“No.”</i>
Alison	<i>“No.”</i>
Jenny	<i>“No, I didn’t need to. I remembered it.”</i>
Mary	<i>“No, we’re doing it, it was still in my mind.”</i> (started a week after the training)
Comment	All participants created their first client VSM a week after the training day. They worked together supporting each other.

Have you viewed you PSR when creating subsequent VSMs?

Rachel	<i>"No."</i>
Sue	<i>"No."</i>
Alison	<i>"No, I created my first client VSM in the first week and my second one four to five weeks later. I did my third eight weeks after that."</i>
Jenny	<i>"No, I didn't need to I remembered it."</i>
Mary	<i>"No, I would need to now though after six months to refresh my memory"</i>
Comment	Both Sue and Mary had not made a second VSM but both intimated they would review PRS video to help remember. Alison, Rachel and Jenny felt they knew it well as they had been making videos. If they had not continued doing it, they would have needed to review it.

What effect did viewing yourself creating a VSM have on your learning?

Rachel	<i>"No, it was the doing it that helped me."</i>
Sue	<i>"No. It was the process that I created it, I learnt by doing it".</i>
Alison	<i>"Because I'm a physically hands on person a visual learner."</i>
Jenny	<i>"No. It was the doing it that made the difference."</i>
Mary	<i>"No. If I do something I retain it more."</i>
Comment	All participants were confident in using computers so the activity of PRS was not outside their skill level.

A selection of additional comments pertinent to communities of practice and their learning

Rachel	<i>"If I had gone on my own I would not have been able to bounce ideas off the others, what they remembered."</i>
Sue	<i>"We talked a lot (Mary)The only way I learn is by someone guiding me (refers to researcher)but doing it myself. In response to will you use VSM again? Yes I will."</i>
Alison	<i>"remind each other how to do it" (refers to Alison and Jenny)</i>
Jenny	<i>"its dependent on schools being on board and supporting what you are doing. Its relatively time consuming"</i>
Mary	<i>"I'm going to do it with....." In response to, will you use VSM again?</i>

Rachel, Alison and Jenny had worked collaboratively and supported each other in creating VSMS and teaching another therapist to use the techniques. Jenny stated, “It surprised me the other day when showing Jane the process and talking her through, I remembered it all.”

These participants have been using a VSM of handwriting as a model to teach in their in-service courses. Jenny stated that they were recommending others to go and learn how to create VSMS, and stated “it’s a valuable tool.”

Treatment Evaluation Inventory – Short Form

The TEI-SF was given to the significant adults by the participants. Six treatment forms were returned from four participants. Three forms came from one client setting and had notes written on the bottom, and one each from the other three settings. The scores were added up according to the scoring sheet. The results are shown in Table 9

Table 9

Treatment Evaluation Inventory – Short Form

<i>Client Z1</i>	<i>37,31, 39</i>
Client Y1	34
Client Y2	41
Client Y3	35

Some respondents chose to add comments on the form, while others filled in the TEI-SF scales. All forms were completed by the adults in less than two minutes. One client, an adult, filled in the form as well.

The TEI-SF score tally is considered to be acceptance of a treatment if it tallies 27 or over (Kelley et al., 1989). The higher the score the more

acceptable is the intervention. Three forms came back with comments on them.

“Since watching the video the positive attitude has helped the person.”

“Cannot state emphatically that this treatment is the sole cause of (name) improved behaviour but there has been a notable improvement in his handling of stressful situations lately.”

“I think this treatment is a good way of dealing with an individual’s behaviour, however, the individual it has been used on, I feel its consistency with staff at Day Service around him and his way of dealing with issues. At times he has used words on the video in a positive manner.”

One client filled in a Treatment Evaluation Inventory – Short Form. This has not been included in the data set because no other client provided this information. The client wrote, “I enjoyed the video. I have been walking away.” His video was a strategy of walking away when in stressful situations usually with other individuals. Anecdotal comments about this client state that he is actively encouraging others to have videos made.

CHAPTER 6

DISCUSSION AND REFLECTION

This chapter is both a discussion and a reflection on the process and learning in the context of a case study of a professional development workshop. The case will be examined in terms of meeting the objectives of a professional development. The case is critiqued for procedures used and is related back to the theories of observational learning and video self model theory. The results are discussed in terms of the research questions. Brookfield's four lenses will be used to provide a framework for the reflection on the overall process of research as a practitioner researcher.

As a teacher educator I straddle two worlds, firstly that of a teacher with two decades of experience immersed in school culture and secondly, as a teacher educator I want to teach effectively, improve my practice, and as a researcher I need to investigate. The tension between the two worlds is dyadic, yet as an evolving practitioner researcher I introduce a third perspective, a triadic participant, that of participant, making sense as I go along. As a teacher educator I want to be successful. The notion of success is a drive to better myself. We judge ourselves against the cultures we live in. We cannot separate ourselves from others' influences.

Brookfield (1995) suggests four lenses in which to view the world: personal perspective, participants' perspective, colleagues' perspective and a literature perspective. Taking the analogy of a lens we will examine what a lens does. A lens focuses the rays of light to a point of focus, in so doing it causes an intense pinpoint of light. A researcher wearing a lens could have an intense look at a small detail. Wearing a personal perspective lens

allows me as a researcher to focus on what I see as important, to the exclusion of other aspects around. This is not Brookfield's intention.

What can we learn from the literature? The rich source of different wisdoms and thought can inform us of dimensions we had not thought possible. We gain a differing perspective on things but this is not Brookfield's intent. We could use the other two lenses in a similar way. I see Brookfield saying to a researcher; use different approaches, let the "what" govern "how" you engage in your research topic. All research pursues a question. Multiple perspectives challenge us to see differently, question differently.

Applying Brookfield's lenses to my teaching lets me see what assumptions I make about my teaching. Popper (1971) uses the term frame of reference. The study of implementing a workshop training package and evaluating it will be our frame of reference; the context in which we explore the learning of the participants, the researcher, the teacher, and the practitioner researcher.

What can a teacher educator learn by reflecting critically on their practice in delivering a professional development programme?

The purpose of a professional development is to influence positively student outcomes (Guskey & Yoon, 2009; Timperley et al. 2007). The participants reported that their clients were successful in meeting the goals of the target behaviour chosen for the VSM. In terms of this outcome the professional development could be described as being a success. At the start, by their own admission, participants could not exhibit all the behaviours to make a VSM, although some of the component skills were present as evidenced by the responses to questions 9 -12. Timperley et al.

identified cueing prior knowledge as being an important factor in successful learning along with integrating new skills and practices into current practices. This is self regulatory behaviour, which shuffles our behavioural repertoire to increase the likelihood of the reoccurrence of the behavioural schema (Dowrick, 2008). Self regulatory behaviour happens in the presence of goals (Bandura, 1989). Comments like “already planning my next VSM,” “have a whole row of students (clients) lined up to do VSM” are examples of goals being set.

The training was well planned, resourced appropriately and delivered in a way that participants could observe and participate without feeling inadequate. Mary and Sue reported feeling daunted, however, they felt comfortable enough to seek help from the researcher. Social Cognitive Theory (Bandura, 1986) describes the place emotions play in learning. Examining the learning in terms of observational learning theory, I could say that the behaviours observed already existed in the participants behavioural repertoires and I was merely allowing them to reorder and create new schema in order to meet the challenge of learning VSM. This could be conceptualised in terms of Dowrick’s (2008) self model theory: The participants create a feedforward cognitive video the first time they observed actions and thereafter, this becomes a PSR for cognitive rehearsal. This behavioural repertoire eventually becoming automatic as the schema was shuffled to the top of the hierarchical behavioural repertoire, becoming the preferred choice of schema to respond to a stimulus. This is constructivist learning (Fosnot, 2005), however constructivists may be uncomfortable with the notion of reinforcement governing their choice of schema. This still leaves new learning unexplained unless one holds to the premise that all learning is a shuffling of pre-existing components to create new combinations, schema. When

these schema become automatic responses they in turn became components ready to be combined to build new more complex schema. This raises the issue of the instructional sequence and the ability of the teacher to manipulate the learning experiences to capitalise on prior knowledge and create feedforward conditions in order for participants to learn. This was illustrated by the comment that Learning in the workshop was made easy. Manipulation of the learning tasks by using prior knowledge and feedforward is an essential part of a teacher's pedagogical knowledge.

Vicarious learning was evidenced in the teaching models provided by the researcher, the other participants and the examples demonstrated on video. Modelling is an essential feature of all teaching, however we need to be careful that we exhibit intentional behaviours consistently. Creating a video captures a set of behaviours and allows them to be repeated exactly. Thereafter the identical sequence can be observed repeatedly, a faultless instructional set (Kameenui & Simmons, 1990). This is not possible in real time observations because we cannot exactly repeat a behavioural sequence; we can only control for variables, not completely eliminate them. Learning may be more rapidly progressed with exact repetitions of a behavioural sequence as demonstrated in VSM. This has implications for classroom teachers and professional development providers. Consistency of instructional delivery through faultless communications is not new, Engelmann and Becker developed the Direct Instruction model on this premise (Kameenui & Simmons 1990). Depicting it visually is a subtle shift.

The VSM example videos warrant further scrutiny. In this instance the model is unseen, but only known by their artefact, the VSM video.

(Bandura, 1986; McCullagh & Caird, 1990) used the term coping model, a more plausible model because their performance was less than perfect, more plausible because it was closer to the observer's perceived self. Feedforward results in changed behaviour and has the most rapid uptake but perhaps feedforward is all new learning situations, all observations. Dowrick's self model theory (2008) has all learning being encoded into cognitive videos and may explain why we learn so rapidly from visual depictions. This is a shift from Vygotsky (1978) who purported that learning was encoded in language scripts for later recall and enactment. With the advent of fMRI technology scientists may well be able to further the notion of cognitive encoding, however implications for teachers are that modelled sequences have visual components and using VSM feedforward is the most rapid way of teaching behaviours. A disinhibitory effect is created by PSR and this has potential to change attitudes of teachers and other professionals if used in professional development learning.

The creation of the VSM by the participants was an opportunity to engage them in learning the skills required to edit video. Technical issues were raised by several participants, especially Alan who had great difficulties with employer supplied equipment. This created a barrier to be overcome. Sue stated technical aspects were a barrier in learning as well. Minimising technical issues may lighten the cognitive load when it comes to complex learning. If too many component skills are missing the behavioural repertoire cannot be successfully completed, new schema are not created and shuffling of the behavioural repertoire does not occur, hence no learning. Abandonment may be the result, Group A participants who did not complete may have abandoned because of technical issues.

My original intent was to create a computer based stand-alone teaching package using interactive multi-media. The feedback I got from the participants in general was that the social aspect of the learning was as important as the actual skills. One participant noted that having increased her technical skills she could learn from a self-paced multimedia package, but it wasn't her preferred option. The interaction between colleagues within teams and the wider group, and the researcher were all useful in achieving the desired goal of learning. This is in keeping with the findings of Bandura, (1986); Guskey, (2002); Guskey and Yoon, (2006); Timperley et al. (2007). Social interactions are learning opportunities participants gain from the vicarious learning opportunities they present.

In evaluating the materials given to the participants I would combine the notes and create the journal in one A5 spiral bound book, everything in one place. It was interesting that no one returned their journals, they did not use them, preferring to discuss issues in work place groupings. A video journal would be an interesting way of capturing this data in future. A researcher could then make informed changes based on self reflections.

In what ways can Video Self Modelling support learning in a professional development context?

The experience of making the PSR video was positively received by all the participants. Only one used it as intended, the others did not need revision because of the compressed timeframe between the last training day and creating their client VSM. PSR has potential in recalling techniques learnt in a workshop professional development however participants commented that had there been a time delay, they thought they would use it. PSR was used successfully by the US military medical engineers to review low frequency behaviours following a time lapse (Dowrick 1991, 1999). Using

PSR would have potential to maximise workshop learning and potentially act as a disinhibitor. PSR could be used as a shadow coach (Timperley et al.,2007). Feedforward has applications too in professional development learning. For teachers who are not quite able to perform behavioural repertoires, feedforward could quickly give them the necessary skills. Twelve minutes of video watching (2 minutes six times) could be a very effective intervention. This aspect is one that further research could make a dramatic change in how professional development is delivered. Pre and post scoring instruments would need to be carefully selected to ensure that robust empirical data could be extracted from the study. Rich qualitative data could be collected alongside the quantitative data providing a different perspective.

Can we learn about VSM first as a learner and make a successful transition to applying it with our clients?

The participants in this study did learn how to create a VSM for their clients and successfully implement the intervention. In doing this, some interesting issues arose over how professionals view professional development. Group B were a coupling of two from one setting, and a trio from another. In response to question 11 asking about making the learning easier, participants commented that peer support was a factor. This confirmed what I observed in the working environment. These were professional groupings with established working relationships. These groupings were maintained in the professional development workshop where participants chose to sit in the established groups. Learning was mediated outside the two workshop times using these groups with access to outside support when necessary. One group used the researcher and one therapist's computer literate partner, the other three used each other and were able to problem solve successfully. Creating a VSM first for yourself

and later for the client was an effective way to teach digital editing to the participants. A follow up a year later would be interesting to see whether the PSR videos have been viewed or whether making them in the beginning ensured the skills were strong enough.

What challenges are encountered in a teacher educator assuming the role of critical reflective practitioner delivering a professional development programme?

The challenge of maintaining participants is of real concern. When people choose not to be involved in research they do so for a range of reasons. It is not ethical to return and ask why. This is an inherent difficulty for researchers, but a fundamental right not to be involved. This issue is compounded when research is conducted as part of a degree requirement. Time and energy can be expended only to have participants withdraw, leaving limited time to find new participants. Initial designs need to ensure that opportunity to collect more data than is required in case of setbacks. This is one of the tensions of being a teacher researcher.

A challenge for me as a teacher moving into a critical reflective practitioner is not knowing what I don't know. As a teacher I design a learning experience around learning outcomes. I have a measure to evaluate against. As a critical reflective practitioner I grapple with deeper meanings and what is important. My background has been absolutes and now I'm asked to question the very fabric of my tacit knowledge. The challenge has been to unlock why I teach and how I teach. This has forced me out of my comfort zone. I have begun to see different ways of viewing learning situations. Observational learning to me is the basic tenet of learning. Social learning theory and social cognitive theory help me understand and unlock some of my practices and beliefs. Self model theory

helps view learning from a different point of view and makes me think more deeply about how I learn, and how this can be related back to student learning and my own learning. The challenge is having thinking room and time to discuss and critique these ideas. My challenge now is to create time to think, to observe and ponder, discuss and debate. Becoming a critical reflective practitioner has made me think about why and how the challenge is in what direction.

Limitations of the study

The case study followed standard research methods, a pre and post test and an interview all appropriate ways of gathering data to evaluate a case (Burns 1997). The survey instruments did gather data but not on the learning that happened. I missed being able to critically step aside from my teaching role and look deeply at how I teach, how I model, how I guide and the reactions of others to this. Reflecting on this it occurred to me that I should have videoed my teaching for further analysis. Burns (1997) talks of fallible memory in reflecting on a situation. Using video to recall situations and re-examine situations has implications for researchers. Aside from ethical and privacy issues, time to view and review becomes a factor along with encoding systems to cope with large amounts of data.

The interviews gave opportunity to listen to the participants and I am grateful to have had opportunity to interact with them one to one. Recording these would have been a better way of documenting these, taking notes was difficult. The notes I took were read back to the participants to verify that I had recorded comments correctly. Developing more open-ended questions would have allowed for more discussion opportunities. The questions developed were too structured to evoke deep discussion with the participants.

Having the researcher conducting the interviews may have been difficult for some of the participants. It can be awkward to critique when the person responsible for the workshop is also interviewing you. Having a neutral party conduct the interviews could overcome this but the rich nuance in data would be lost. Data collection is of utmost importance. Techniques that allow reflective practice by researcher lead to deeper understanding to develop from repeat viewings. However, this raises another issue, how do we control learning from self viewing when what we are viewing is potentially flawed? Alison mention the difficulty of viewing her own image, It may well produce an inhibitory effect. This raises issues of trust between the researcher and participant. I'm very mindful of the privileged relationship that participants and researchers share.

I found it difficult to comprehend why only one participant continued on from Group A. Technical difficulties were an issue, particularly access to a suitable computers and camcorders, however Alan overcame those by using his own equipment. In contrast, in Group B, nine completed the training and five continued on to completion. Interestingly, Alan had sought out the researcher at breaks on the two workshop days and engaged in conversations around using cameras and other related technologies. A rapport was established with Alan. The initial questionnaire identified similar skill levels and attitudes to Group B. The major difference between the groups was in choice to undertake the training. Group A were required to attend as part of their professional development provided by their employer. They all responded positively toward professional development and VSM in completing the initial questionnaire, however, attendance was compulsory. Group B participants were all volunteers. The majority of Group A participants had no prior relationship with the researcher and only

saw the researcher at the two training sessions. The researcher may have been seen as remote (residing in another island and city and the perception of not easily accessible although email, phone numbers, and the invitation to call and be phoned back were made at each session.

Group B participants were all in the same city as the researcher and had met the researcher through professional networks and professional development courses prior to volunteering for the training. The motivation was high as Group B participants chose to undergo the training as part of their continuing professional development, part of their registration. They were all given release by their employers to undertake the training. Group B participants felt comfortable to phone and discuss their interventions with the researcher. Of the four who did not continue to produce a VSM, only one had direct contact with the researcher. The reported difficulty was in gaining permission from the parent / caregiver to produce the video. The other participants who did not go on to make a VSM for their clients did not respond to an email request for an interview.

When I used the TEI-SF I chose to use it in a non standard way. This was my mistake so the validity of these results is questionable. The significant adults completed the forms viewing the client as an example of the VSM intervention. Some chose to make comments on the bottom of the forms. One client wrote, "I have been walking away." His VSM was about walking away from confrontational situations. The participant reported that the client had been encouraging other peers to have videos made because his video helped him. An area of further research could be revisiting the TEI-SF and following the procedure stringently. VSM would be one of the treatment scenarios.

Practitioner researcher

The final lens of Brookfield (1995) perhaps is the most inspiring, viewing issues from those you are engaging with, the participants. Listening, hearing, and seeing requires a receptive manner. We are our most vulnerable (Paris et al., 2007; Speck, 1996) as people, when we live and work among others, sharing our aspirations. The researcher needs to view, question, review, and seek to understand all aspects of those they are working with, likewise, participants get to know and understand the researcher. The interviews of the participants were most revealing. I had assumed that everyone liked to see images of themselves. Alison disclosed that she was uncomfortable looking at her image, and certainly not on video. I suggested that she be filmed from behind looking over her shoulder. Alison reported that she did not need the PSR as she had made her tape within the week of finishing training. She did concede that had there been a delay she would have needed to view the PSR video to recall the steps, but she may have chosen not to

In planning the professional development training package I was quite monocular. VSM was a research based technique and to teach others how to use it would be straight forward. I enjoyed working with technology and this gave me the opportunity to combine both. Reflecting on my practice as a teacher, struggling to be both researcher and teacher has engaged me further in exploratory work which has rekindled the passion for inquiry within me. I have begun unravelling my tacit knowledge and am relating it the theories and research I read. As an emerging researcher I am beginning to see the importance of building networks based around research interests. My passion is teaching, my drive to be better at this and now a broadening of my horizons into research. The learning about myself, the ways I work, who I need to collaborate with and how to investigate are developing.

The practitioner as a researcher is vulnerable, none the less exceedingly privileged. The triadic participant working between teaching, researching, and practitioner roles is often perplexing, allows teachers to explore their role from other viewpoints adding to a wealth of knowledge and understanding of others. The practitioner researcher is not replacing traditional researchers but more adding to the ever inquiring nature of human social interactions. I work in different paradigms with my teaching, transcending traditional practices and I am developing into a new role as a practitioner researcher. The ability to learn from deep reflection on my own practices intrigues me; somewhat like learning from self modelling.

Conclusion

This study started out as an evaluation of a training package, teaching video self modelling skills to teachers and other professionals. The application of positive self review (PSR), a type of VSM, was an interesting twist to teach participants how to make VSM interventions.

My learning was extended, wider and deeper than just answering the research questions. The questions I asked started this investigation, they have been answered. However as I reflect, there are questions that have arisen out the interactions I have had with the participants, my colleagues and discoveries in the literature. Questions are raised around what is valued by professionals in a professional development, how do we use our memory are all examples? This process, cyclic, is Brookfield's (1995) message. In addressing my four research questions I see a direction in my own work, an area of research I wish to pursue. I see areas I wish to develop technology applications in and explore professional development delivery using video and multi-media technologies.

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APPENDIX A

PRE-QUESTIONNAIRE

Changing Behaviour using Video Self Model

Workshop

Name: *Participants questionnaire layout was easier to read.*

(1) Are you? Male Female

(2) What age group are you in? (Ages in years.)

under 20 20-30 31-40 41-49 50-59 60 and over

(3) Which ethnic group do you identify with?

European/ Pakeha NZ Maori Samoan Tongan Cook Island Maori
 Niuean Tokelauan Fijian Chinese Indian Other Pacific Island Other
 Asian Other

(4) Highest Qualification held

School Certificate Sixth form certificate University Entrance Higher School Certificate
 University Bursary Polytechnic certificate Polytechnic degree
 University bachelors degree University Masters degree University Doctorate no
 qualifications

(5) Years of experience in your current position?

under 1 1-2 3-5 6-10 11-20 20 and over

(6) Professional development is

Very Important Somewhat Important Little Importance Not Needed

(7) Think of a skill or technique from past professional development experiences. Name the skill or technique.

(8) Still thinking of the skill or technique from above, how would you rate the following:

the skill was easy to remember

Strongly Agree Agree Neutral Disagree Strongly Disagree

the skill was easy to use

Strongly Agree Agree Neutral Disagree Strongly Disagree

the skill was useful for a wide range of situations

Strongly Agree Agree Neutral Disagree Strongly Disagree

learning the skill was a waste of time

Strongly Agree Agree Neutral Disagree Strongly Disagree

the skill was not relevant for my situation

Strongly Agree Agree Neutral Disagree Strongly Disagree

the skill was too difficult to remember

Strongly Agree Agree Neutral Disagree Strongly Disagree

(9) Do you use a computer for

Work Home Both

(10) How many hours a week would you use the computer?

one hour two to four hours five to eight hours nine to twelve hours more than twelve hours

(11) How long have you been using a computer (in years)

one year two to four years five to eight years nine to twelve years more than twelve years

(12) How do you rate your knowledge about computers

Excellent Good Fair Poor No knowledge

Rate the following statements

(13) I can turn on the computer

Strongly Agree Agree Disagree Strongly Disagree

(14) I have trouble with almost everything else

Strongly Agree Agree Disagree Strongly Disagree

(15) I can save and delete, open and close programs on a computer but not much else

Strongly Agree Agree Disagree Strongly Disagree

(16) I understand most of my software and have little trouble learning new software

Strongly Agree Agree Disagree Strongly Disagree

(17) I completely understand my software

Strongly Agree Agree Disagree Strongly Disagree

(18) Switching between computer programs without exiting

Excellent Good Fair Poor No knowledge

(19) Copying or moving files between folders (directories)

Excellent Good Fair Poor No knowledge

(20) Printing documents

Excellent Good Fair Poor No knowledge

(21) Formatting documents

Excellent Good Fair Poor No knowledge

(22) Copy information from one document to another

Excellent Good Fair Poor No knowledge

(23) Saving documents

Excellent Good Fair Poor No knowledge

(24) Finding solutions to problems that occur with a computer

Excellent Good Fair Poor No knowledge

Next page

What types of computer programs do you use?

(25) Word processor (e.g. MS Word, WordPerfect, MS Works)

Yes No

(26) Spreadsheet (e.g. Excel, Quattro Pro, Lotus 1 2 3)

Yes No

(27) Presentations program(e.g. MS Powerpoint, Corel Presentations)

Yes No

(28) Database program (e.g. MS Access, Paradox, Fox Pro)

Yes No

(29) Desktop publishing program (e.g. MS Publisher, Pagemaker)

Yes No

(30) Drawing program (.e.g. Illustrator, Freehand, Corel Draw)

Yes No

(31) Photo editing program (e.g. Photoshop, Paint Shop Pro, Photo Elements)

Yes No

(32) Video editing program (.e.g. Ulead Video, MS Movie Maker, Premier Elements)

Yes No

(33) An audio editing program (e.g. Sonic, Audacity)

Yes No

(34) I program computers (e.g. C++, Jade, Basic)

Yes No

(35) Web browsers (e.g. Internet Explorer for accessing the internet)

Yes No

(36) Email programs (e.g. MS Outlook, Pegasus Mail, Web mail)

Yes No

I use or have used:

(37) a film camera

Yes No

(38) a digital camera

Yes No

(39) a video camera

Yes No

(40) a digital video camera

Yes No

(41) a movie camera (e.g. film Std 8, Super 8, 16mm)

Yes No

(42) I edit my videos

Yes No

Some questions about behaviour change and video self modelling

(43) What behaviour change techniques do you use now?

Box for answer

(44) Overall how would you rate their success?

1 High 2 3 4 5 Low

(45) Have you heard about Video Self Modelling?

Yes No

(46) If yes, then briefly describe video self model

Thank you for completing this questionnaire. Your comments will be most helpful in evaluating the workshop you are about to start. The results of this questionnaire are for the purpose of evaluating the workshop training. Confidentiality is assured and no individual will be identified in my writing

APPENDIX C

INTERVIEWS

Interview Questions

Confidentiality is assured, no individual will be identified in my writing.

Thank you for agreeing to take part in this project. I am going to ask you some questions and I'll record your answers. These questions are designed to evaluate the training that you have received in using video self model. I'm particularly interested in how you found the training and how it was to implement a Video Self Model intervention following the training. The final part of my data collection is a modified treatment evaluation inventory to be completed by those who work in the environment where your student is. This will take place at least 6 weeks after the viewings.

1. Why did you choose to participate in the training?
 - a. Comments?

2. At any time did the training become seemingly too difficult? If yes, what did you do about it? *Did the instructor pick up on this? Who solved the problem?*

3. How would you rate your motivation for doing this on a scale 1 to 5 where 5 is the highest.

4. Did you feel you had some knowledge coming into the training? How important was that knowledge?

5. What features of the training were helpful?

6. What features of the training were not helpful?

7. How useful was the gap between the training sessions? What did you use this gap for in relation to VSM?

8. How effective did you find the modelling in the training?

9. Was the review at various points throughout the training useful?

10. Do you have any other comments around the content and organisation of the sessions?
11. Were there aspects that made the learning easier? Please specify.
12. Making the Positive Self Review video (CD)
 - a. Was this a useful exercise?
 - b. How did it help?
 - c. Were there any aspects that were difficult?
 - d. What do you think about seeing yourself editing video?
13. Did you view it before making your VSM? If so how many times? If not do you envisage viewing it before you make a VSM?
14. If you haven't made a VSM yet, what are the barriers for you?
15. Thinking about technical issues now, were there any you wish to mention?
16. Working with your student.
 - a. Were there aspects that would have helped you do this better?
 - b. What supports did you use while working on the VSM for your student? (E.g peers, instructor, internet, manuals, notes)
 - c. How many times did the student view the video?
17. Having access to the instructor – was this a significant part of the support?
18. How confident (prepared) do you feel to implement other VSM interventions? 5 very confident to 1 not confident at all.
19. Are there any other comments you'd like to make?

20. Having experienced this training, do you think that you could have learnt this from a self-paced individual training package where video delivered the instruction?

Thank you for your participation in this interview.

Follow-up Telephone Interviews (6 months after training) Group B only

Brief chat as a catch up.

Question 1

How many client VSM have you created?

Question 2

Did you view your PSR when you created your first client VSM?

Question 3

Have you viewed you PSR when creating subsequent VSMs?

Question 4

What effect did viewing yourself creating a VSM have on your learning?

Question 5

Is there anything else you would like to say?

APPENDIX D

TREATMENT EVALUATION SHORT FORM (TEI-SF)

Please complete the items listed below by placing a tick ✓ in the box that best indicates how you feel about the treatment (Using Video Self Model). Please read the items carefully because an accidentally placed tick may not represent the meaning you intend.

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I find this treatment to be an acceptable way of dealing with a student's behaviour.					
2	I would be willing to use this procedure if I had to change the student's behaviour.					
3	I believe that it would be acceptable to use this treatment without the student's consent.					
4	I like the procedures used in this treatment.					
5	I believe this treatment is likely to be effective.					
6	I believe the student will experience discomfort during the treatment.					
7	I believe this treatment is likely to result in permanent improvement.					
8	I believe it would be acceptable to use this treatment with individuals who cannot choose treatments for themselves.					
9	Overall, I have a positive reaction to this treatment.					

APPENDIX E

ETHICAL CONSENT FORMS AND INFORMATION

Information Sheet for Participants

Project:

Changing behaviour using video self modelling, its training and perceptions in New Zealand settings.

Kia ora

I'd like to introduce myself. I'm Lawrence Walker, a Masters student at the Christchurch College of Education conducting my research thesis. I'm interested in finding out about peoples' attitudes to video self modelling, a behaviour change technique that uses video. I'd really like to know what people think about seeing themselves in the videos and whether it has helped them do things they couldn't do.

What is video self modelling?

Over the last 30 years video self-modelling has been documented as a recognised adaptive behaviour change technique across a range of settings, participants and behaviours. Self as a model can be presented in a number of different ways. The use of audio and or pictures to present a positive self review sequence. The behaviours have ranged from self management skills, e.g., organising materials between school and home for a boy with ADHD, social skills with peers and staff, speech and language disorders such as stuttering, sporting and physical skills, reducing phobia, and vocational training such as interviewing.

I have developed a teaching package to help others learn to use video self modelling to help the people they work with learn new skills. I'd like to evaluate this package as I teach you the skills of Video Self Modelling. You will produce some video clips that can be used to review how to make video self modelling tapes. We will be using digital video and digital editing on a computer. You will be taught the skills necessary to do this successfully. The training is about ten hours.

I will interview you as part of my data gathering, check your skill development and ask you about your attitude to the training and video self modelling. You will make a video self model for one of your clients and we will evaluate the effectiveness of this. You will be asked to keep a journal and some basic records. Support throughout the process is offered through a variety of ways. The adults in the setting where the student learns will be asked to evaluate Video Self Modelling as well.

When I write up the results of my research, no participant or client names will be in the papers I write. The College rules state that I must keep all the data I use in a secure place for at least five years. So that no-one will be able to know your information pseudonyms will be assigned.

If you have any questions please contact me on (03) 345 8153, cellphone 021 329 813. Because it is important that no one is forced to take part in research when they don't want to please be aware you may withdraw at any time.

The Christchurch College of Education Ethics Committee has reviewed and approved this study.

Should you have any complaint concerning the manner in which this research project is conducted, please do not hesitate to contact the Ethical Clearance Committee.

The Chair

Ethical Clearance Committee

Christchurch College of Education

P O Box 31-065

Christchurch 8030

Telephone

Ka kite ano

Lawrence Walker

Information Sheet for Clients

Project:

Changing behaviour using video self modelling, its training and perceptions in New Zealand settings.

Kia ora

I'd like to introduce myself. I'm Lawrence Walker, a Masters student at the Christchurch College of Education conducting my research thesis. I'm interested in finding out about peoples' attitudes to video self modelling, a behaviour change technique that uses video. I'd really like to know what people think about seeing themselves in the videos and whether it has helped them do things they couldn't do.

I have developed a teaching package to help others learn to use video self modelling to help the people they work with learn new skills. Video self modelling uses video to show people how to do things they can't do at the moment. They are the stars in their own video. People see themselves doing these things and after a times watching their video they find they can now do the things they have seen in the video. We call this learning from a self model.

You will have a video made for you and you will be the star. Some questions will be asked of you and your answers written down. You will be able to see your video and watch yourself. Staff will watch it with you and write down what you say. Later staff will be asked some questions on what they think about video self modelling.

When I write up the results of my research, no real names will be in the papers I write. The College rules say that I must keep all the information I use to write my paper for at least five years in a secure place. So that no-one will be able to know your information different names will be used.

If you have any questions, you can ask your parent or guardian to contact me on the number on their information sheet. Because it is important that no one is forced to take part in research when they don't want to, no person can take part in this research unless they and /or their parent or guardian has said they want this to happen. You can stop being in the project at anytime by telling me or your key worker.

The Christchurch College of Education Ethics Committee has reviewed and approved this study.

Should you have any complaint concerning the manner in which this research project is conducted, please do not hesitate to contact the Ethical Clearance Committee.

The Chair

Ethical Clearance Committee

Christchurch College of Education

P O Box 31-065

Christchurch 8030

Telephone

Ka kite ano

Lawrence Walker

Declaration of Consent - Participant

I consent to participate in the project,

Changing behaviour using video self modelling, its training and perceptions in New Zealand settings.

I have read and understood the information provided to me concerning the research project and what will be required of me if I participate in the project.

I understand that the information I provide to the researcher will be treated as confidential and that no findings that could identify either me or my setting will be published.

I understand that my participation in the project is voluntary and that I may withdraw from the project at any time without incurring any penalty.

Name: _____

Date: _____

Signature: _____

Declaration of Consent - Client

I consent to participate in the project,

Changing behaviour using video self modelling, its training and perceptions in New Zealand settings.

I have understood the information provided to me about the research project and what will be required of me if I participate in the project.

I understand that the information I provide to the researcher will be treated as confidential and that no findings that could identify either me or the place where I live will be published.

I understand that my participation in the project is voluntary and that I may withdraw from the project at any time without incurring any penalty.

Signature: _____

Name: _____

Parent/Guardian

I give permission for _____ to participate in the project,

Changing behaviour using video self modelling, its training and perceptions in New Zealand settings.

I have read and understood the information provided to me concerning the research project and what will be required of participants.

I am satisfied that _____ understands what will be required of participants in the project.

I understand that the information participants provide to the researcher will be treated as confidential and that no findings that could identify either them or where they live will be published.

I understand that participation in the project is voluntary and that either I or the participant may choose to withdraw from the project at any time without incurring any penalty.

Name: _____ Date: _____

Signature: _____