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**Beyond Training:
An Evaluation of Transfer from the Tertiary Setting to the
Corporate Environment**

**A thesis presented in partial fulfilment
of the requirements for the degree of
Doctor of Philosophy
in Psychology
at Massey University**

Catherine Anne Collinson

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Abstract

This evaluation research investigated the extent to which work-related knowledge, skills, abilities and attitudes transferred from a post-graduate level, university-based training course back into the workplace. Respondents were rehabilitation case managers employed by a large public sector organisation concerned with all levels of rehabilitation provision and associated financial compensation. The longitudinal, multiple cohort study was designed to investigate not only the extent to which participants learned new work-related skills and attitudes on the course but also the organisational factors which facilitated or impeded the transfer and maintenance of new behaviours within the workplace. Participants in the study included: (1) four cohorts of case managers; (2) their workplace supervisors, and, (3) a group of case managers not enrolled in the training programme who comprised a randomly selected no-training control group. Cohort 1 was used as the pilot study group. Five surveys, linked to the different stages of the training programme, were administered to the trainees. There were significant problems associated with collecting reliable control group and supervisory data. These problems are discussed in terms of the various organisational barriers to effective learning which existed within the respondents' workplace. The main results showed that trainee characteristics were not associated with transfer; there were differences between the cohorts in their perceptions of their levels of occupational self-efficacy; over time the trainees increased their understanding of the course modules; during training the modules were perceived as relevant to their work but this was not sustained over time. The course content was sometimes transferred to the workplace through self-reported behavioural changes affecting clients, colleagues, stakeholders and caseload management. However, the trainees were somewhat dissatisfied with the level of support they received from their managers in transferring their training in rehabilitation into the workplace. According to the trainees organisational support for the training was not strong and management practices impeded the implementation of new ideas and did not provide on-going support or encouragement. These findings are interpreted using the perspectives on organisational learning provided by theorists such as Argyris and his colleagues and Dixon (1994, 1999). The discussion contextualises the research and provides reflections on the design and the process of the evaluation research and offers possible reasons for the lack of clear outcomes.

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“There is a tide in the affairs of men,
Which taken at the flood leads on to fortune
Omitted, all the voyage of their life
Is bound in shallows and in miseries
On such a full sea are we now afloat
And we must take the current
When it serves
Or lose our ventures”
(Shakespeare)

This thesis is dedicated to the memory of my grandfather
A. H. Hart
All Black, 1924

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Chapter 1

Introduction

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This thesis arose out of an opportunity provided by the Accident Rehabilitation and Compensation Insurance Corporation (ACC), a Crown-owned entity undergoing substantial change. As part of its change process, ACC invested in a training programme for its rehabilitation practitioners employed as case managers and commissioned an independent evaluation to examine the effects of the training on the organisation. The author was engaged as the research officer.

ACC's mandate is to compensate and rehabilitate people who have suffered accidental injury and return them to independence. It provides its claimants, who are potentially all New Zealanders, with free access to financial compensation, medical treatment, social and vocational rehabilitation when they are injured. Additionally, medical treatment is available to visitors to New Zealand for accidental injuries that occur while they are visitors in this country. Although ACC may appear to have limitless resources to meet its fiscal and social goals, ACC is tightly constrained by legislation, regulations and policies.

In practice, conflicts arise and the organisation is faced with a myriad of problems. One of the main problems is that ACC is beset by the fundamental structural contradictions underlying all social welfare organisations. It continues to be a state agency which aims to alleviate suffering incurred through accidental injury whilst, at the same time, aims to control expenditure through its policies and practices and through the prevention of injury. Simultaneously, it has a role that involves the organisation in the prevention of claimants becoming dependent on the scheme. This has required periodic tightening of regulations. So, on one hand ACC is a beneficent institution and on the other hand it is a regulatory power. These dual roles are often misunderstood by the public and, at times, by its own employees, and are discussed in more depth later in the thesis.

With a problematic political mandate, ACC is laden with contradictions and ambiguity which impacted on the evaluation research and are highlighted in the thesis. Thus, to give a clearer understanding of the problems encountered, the thesis examines the political and organisational setting and the evaluator's role in the process.

Chapter 1 introduces the thesis and gives a brief history of the structure and function of the organisation. These contextual details are relevant to the progress and outcomes of the study in that they provide a powerful and influential background. The chapter then outlines case management, a model of service delivery, which ACC had introduced as its new work practice. Finally, the chapter details the organisation of the thesis.

1.1 Background

Having invested millions of dollars in a training programme (outlined and discussed in Chapter 2) for a group of its rehabilitation practitioners who are front-line employees, ACC's General Manager Operations was keen to know the extent to which the knowledge, skills, attitudes and abilities acquired during the training programme would transfer back into the workplace. Hence, an independent evaluation was commissioned and focused on the transfer of training from the tertiary setting into the work environment.

It was intended by the researcher that the evaluation research would lead to decision-making and contribute to ACC's organisational learning. However, various political and organisational features compromised the process and progress of the evaluation research and the thesis discusses these features. So while the evaluation was commissioned to provide an independent evaluation of training transfer, the thesis examines the evaluation research and highlights the attendant political and organisational issues that impacted on the design and the implementation of the study. It also examines the effects of the training on the organisation and the effects of the organisation on the transfer of training.

The symbiotic relationship between the impact of an organisation on the transfer of training and the impact of transfer of training on the organisation itself is examined within the framework of organisational learning. The theoretical perspectives of organisational learning are those postulated by Argyris and Schön (1978, 1996), Argyris (1982, 1990, 1993, 1996, 1999) and Dixon (1994, 1999). The Baldwin and Ford (1988) model of the transfer process is used to examine the transfer of training. The problems, issues and barriers to organisational learning and transfer of training discussed in the

literature will be described within the context of ACC. Thus, the thesis places the evaluation research in a specific organisational context and highlights the effects of organisational politics on applied research.

The design of the evaluation was constrained by various organisational and political problems within ACC and these features are discussed in the thesis. As Argyris (1999) understands “Rigorousness is to a researcher what efficiency is to an executive: an ideal state that is always aspired to, never reached, and continually revered” (p.440).

1.2 The Organisation

ACC is a non-profit making, public sector corporation whose stakeholders are the people of New Zealand. Control of ACC is vested in the government and day-to-day management responsibility resides with the Board, Managing Director (MD) and General Managers. The government funds ACC and holds it accountable for the effective expenditure of public resources.

Thus, the ACC Board and management are bound by statute and directly responsible to the Crown whose role is to ensure statutory law and fiscal forecasting are adhered to. Further, ACC is vulnerable to the vagaries of the political climate and the possibility of a change of Government every three years. During the course of this research, for example, there were four different Ministers of the Crown appointed to the ACC portfolio (Hon. Bruce Cliffe, Doug Kidd, Jennifer Shipley, and Murray McCully). During the writing of the present thesis there has been a change of government in New Zealand and Labour’s Michael Cullen has replaced National’s Murray McCully. Clearly, ACC operates in political and uncertain environments.

Figure 1 presents the structure of ACC at the time this research took place. As the figure shows, the organisation has a classic, public sector, and bureaucratic structure and is managed on behalf of the Crown by a Board of Directors, appointed by the Minister for ACC. The role of the Board is to ensure the efficient and effective administration of ACC. Responsibility for operational management is delegated to the Board appointed MD beneath whom are ten senior managers viz., four General Managers (executive services, operations, information technology, management services), Senior Manager

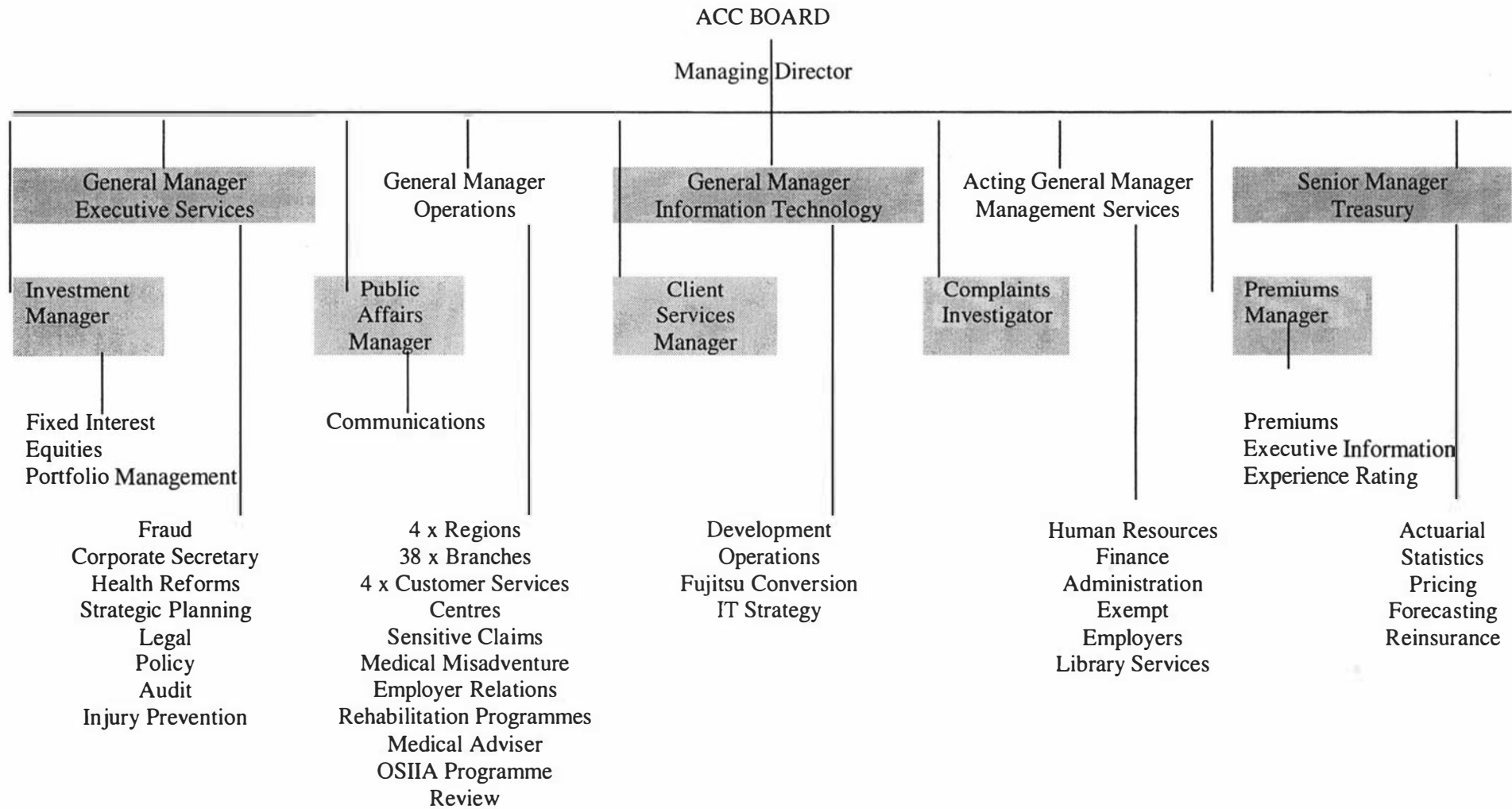


Figure 1. The Structure of ACC (Cliffe et al, 1995, p.48)

Treasury, Investment Manager, Public Affairs Manager, Client Services Manager, Complaints Investigator and a Premiums Manager. These senior managers are responsible for areas such as human resources, research, policy development, operations, strategic planning and finance throughout the organisation. At the time the present study began there were 38 branch offices throughout four geographic regions of New Zealand (viz., Auckland, Waikato, Wellington, Southern).

New Zealand's accident compensation scheme began 1 April, 1974 and provided a comprehensive, no fault, 24 hour a day system of compensation for those who suffered injury by accident, including industrial diseases (Duncan & Nimmo, 1993). It replaced common law claims for damages based on fault, the workers' injury compensation scheme (provided for by the Workers Compensation Act, 1956), a compulsory third-party motor vehicle accident insurance scheme and the Criminal Injuries Compensation Act 1963. All these were litigious and favoured those who could afford either private insurance against such actions or the financial security to withstand such actions.

The scheme was based on the recommendations of a Royal Commission of Inquiry chaired by Mr Justice Owen Woodhouse that reported in 1967. The recommendations were themselves based on five principles known as the Woodhouse principles (community responsibility, comprehensive entitlement, complete rehabilitation, real compensation, and administrative efficiency) which, at that point in time, were considered cornerstones of New Zealand social policy (Cliffe et al., 1995).

Basically, the scheme was created from the idea that New Zealanders should share responsibility for the consequences of accidental injury no matter the cause or fault, and that the injured should be treated effectively and returned to their role in the community as soon as possible and without significant personal financial loss. In fatal cases, the scheme provides entitlements to deceased workers' dependants (Duncan & Nimmo, 1993).

The scheme recognised that common law processes based on fault had resulted in unfairness in terms of the benefits received by accident victims. Consequently, common

law rights to sue for compensation for injuries covered by the scheme were terminated by legislation (Cliffe et al., 1995).

ACC receives funding from five sources: employers, earners, motor vehicles, government and investment. Employers are taxed by way of premiums, earners through PAYE (pay-as-you-earn) taxation. The earners' premium covers non-work accidents that occur in the home, during sport or recreational activities or at other times when a person is not working or using a motor vehicle. Part of the annual registration fee for motor vehicles is an ACC premium and a tax on all petrol sales goes to ACC to cover motor vehicle accidents. ACC is required to maintain reserves equivalent to six months expenditure: these reserves are invested and income is derived (Statistics New Zealand, 1996).

Duncan and Nimmo (1993) note that the Woodhouse report is the policy document of a time of low unemployment, high productivity, affluence and traditional gender roles. "Women" and "workers" were separate categories in the report. Interestingly, as a housewife, a woman was said to make it possible for "the productive work to be done" by the "working man". Accordingly, her contribution to society was essential and she was to be covered by the scheme but as a non-earner. The cover was limited. As housewife she was entitled to compensation for permanent disability only.

Given the affluence of New Zealand in the 1960s, it was assumed that the scheme would remain affordable (Duncan & Nimmo, 1993). However, the period between the 70s and 90s, in New Zealand, was characterised by increases in oil prices, increases in raw materials for the manufacturing sector, global competition for markets, unemployment above 10% and the impact of increased social welfare spending. Increased social welfare spending was problematic for the government in that there was no direct employer to whom it could levy an ACC rate to insure against any possible claim that beneficiaries might make. (All beneficiaries, including the unemployed, sickness beneficiaries, domestic purpose beneficiaries (DPB), war veterans and school age children (Universal Family Benefit), derived their income from taxation sources and were entitled under the scheme.) These market features directly impacted on the employers' and earners' ability to pay sufficient premium to offset the increase demands

placed on the ACC. Further, there were cost increases, which had resulted from the accumulation of claims as a consequence of law changes and decisions, by the appeal authority and the Courts (Cliffe et al., 1995). The policy and principles espoused by the Woodhouse report remained intact and espoused as social policy whilst on the other hand both financial and political forecasters were indicating the inherent problems in maintaining the status quo (Duncan & Nimmo, 1993).

Over time, the financial cost of the original scheme has been problematic. From the early 1990s, for example, annual expenditure had exceeded its income and reserves (Source: ACC Annual Report 1993). Between 1977 and 1992 annual increase in expenditure had been 22% (Duncan & Nimmo, 1993); new claims in 1992 comprised 59% of all claims paid but they accounted for just 21% of all compensation costs. Long-term claims, the “tail”, created the biggest financial costs and were becoming increasingly onerous (Duncan & Nimmo, 1993). Although there was a steady increase in claimants entering the “tail” on long-term weekly compensation between 1980 and 1990 and a slight decrease between 1991 and 1994, only 7-10% of claimants in the “tail” leave the scheme each year (Cliffe et al., 1995). Over the previous two decades costs total expenditure had grown to \$1.6 billion and were forecast to grow to \$2 billion by the year 2000 (Cliffe et al., 1995).

The size and the nature of the scheme determined that steps be taken to address the scheme’s estimated annual cost to best meet the needs of all New Zealanders. ACC’s scheme is unlike other insurance schemes in that, for example, it does not contain thresholds designed to exclude minor claims. It is funded on a ‘pay as you go’ basis rather than being fully funded (i.e., current year’s premium do not cover the future costs of today’s accidents) and payments paid by taxpayers cover those who are not earning. Financial and social goals were conflicting; sustainability of the scheme and accountability within the Woodhouse principles were uncertain.

To address short-term problems and claims not envisaged by the Woodhouse Commission of 1967, the scheme had undergone 11 major reviews between 1974 and 1994 (Cliffe et al., 1995). The Accident Rehabilitation Compensation Insurance (ARCI) Act 1992, introduced under a National led government, was intended to make the

scheme financially affordable and equitable. According to Duncan and Nimmo (1993), the government proposed to change ACC “from a social insurance agency into an organisation operating on commercial insurance principles paying tightly defined entitlements to injured persons covered under the Act” (p.294).

Duncan (1995) notes that aspects of the ARCI (1992) Act indicated a long-term policy goal of deregulation of the injury insurance market. However, even though the Insurance Council of New Zealand (1995, cited in Duncan, 1995) and the New Zealand Employers’ Federation (1995, cited in Duncan, 1995) strongly supported public sector involvement in service delivery, calls for deregulation of ACC were rejected by Cabinet. Private sector involvement was considered “difficult to implement” due to unspecified “practical issues” (Cliffe et al., 1995, pp.30-31). The National government’s minority position and Labour’s opposition to any form of privatisation of ACC may have contributed to the difficulty of implementation. Service delivery remained exclusively with the state.

However, ACC claimants, funders and service providers recorded service delivery in the state monopoly as poor and a cause for concern. There had been a “clamour of complaints” against ACC’s interpretation of the 1992 Act (Duncan & Nimmo, 1993, p.295) and a judicial inquiry into the procedures of the ACC (Trapski, 1994) found ACC’s handling of sensitive claims to be below the standard expected by private sector insurers. In the 1994 Annual Report (ACC, 1994) a summary of customer satisfaction surveys shows that the ACC rated lower on average than medical and general insurers by injured persons, employers and health care practitioners. In a 1994 CM Research survey of injured persons there was an overall mean rating of moderate satisfaction (Duncan, 1995). Moreover, on all service performance factors, 50 to 75% of participants reported they received a less satisfactory service than they expected. Professional and empathetic communication, ease of use of forms and rehabilitation quality were factors strongly affecting the ratings (Duncan, 1995). Significantly, the key to return-to-work, social independence and for controlling the costs of the scheme is rehabilitation (Duncan, 1995).

Service delivery was an issue raised in the Wilson, Armstrong, Burry, McKenzie and Stewart (1994) report of the ACC regulations. The report noted that claimants and service providers spoke of problems they had experienced in their course of consultation with ACC staff. For example, claimants mentioned ACC staff would not assist claimants in filling out forms and that information about entitlements was not generally available for claimants. Claimants, assessors and service providers spoke of delays in getting decisions on entitlements and that there were inconsistencies in the results of assessments of claimants with similar injuries. Other concerns were that files were regularly lost and appointments with specialists were being made without the claimants' approval.

As an outcome of the 1994 Ministerial review, the government chose to embark on a programme of change to minimise the problems that had emerged. The programme of change was also established to reconcile the problems between stated social policy and obligations and ACC's ability to pay for them. The change signalled a significant shift in philosophy.

The organisation was concentrating on meeting "minor claims" and injury prevention under the ARCI Act 1992. Of the 1,332,929 new claims registered by ACC in the 1994 financial year, 91% were classified as "minor claims" defined as those involving medical expenses only and not exceeding \$150 in compensation (Cliffe et al., 1995). The number of these claims rendered ACC a transaction processing agency and detracted from rehabilitation of the more seriously injured.

In 1994, the Board of ACC planned to move towards a fully managed care programme which would encompass early intervention, stakeholder partnerships, integrated rehabilitation, risk management and injury prevention. The overall aim was that claimants would experience a fast and permanent return to pre-injury independence. At the same time, ACC management indicated that claims for bulk payments for injury would cease from 1995, a change introduced by the 1992 Act (Cliffe et al., 1995).

Thus, in an internal working paper made available for public education and scrutiny upon request, ACC top management outlined the organisation's strategic direction for

the period 1994-1997. In this document ACC management presented its vision, which “the Board of ACC planned to work through to enhance the services of the Corporation” (Cliffe et al., 1995, p.55). The vision, similar to other visions statements long on rhetoric but short on substance, was summarised in the following five main points:

1. New Zealand is at the forefront of injury prevention, accident insurance and rehabilitation thinking and practice
2. All New Zealanders understand the role and respect the performance of ACC
3. Services are flexible, responding to the community’s evolving needs
4. Claimants are treated with integrity and respect
5. A reasonable balance is struck between the distinct interests of claimants and premium payers (ACC, 1994a, p.5).

While the vision points convey the ACC Board and top managers’ intention to re-locate ACC as a responsive and responsible organisation, the vision points also convey a sense of ACC’s complex and often contradictory role in New Zealand. These structural contradictions may be seen to be given expression in ACC’s vision statement (discussed below) and in its organisational defences (see Chapter 3). The following analysis, therefore, examines the ACC’s vision statement in an attempt to expose problems within ACC’s social role.

The first vision statement “New Zealand is at the forefront of injury prevention, accident insurance and rehabilitation thinking and practice” is perhaps a little glib and grandiose. The statement potentially raises the issue of accountability. Inasmuch as the rhetoric taps at the core business of ACC, it may be that the ideal is immeasurable and an untenable aim. The statement begs two questions: How would New Zealand get to the forefront of injury prevention, accident insurance and rehabilitation thinking and practice? How would excellence be measured?

Secondly, inferred in the second point of the vision statement that all New Zealanders understand the role and respect the performance of ACC, is the perception of the public’s lack of understanding of the purpose of the organisation. Indeed, the organisation is known by the acronym ACC (Accident Compensation Corporation) not its full acronym, ARCIC. It may be that the title of the organisation with an emphasis

on accident 'compensation,' not 'rehabilitation,' contributes to the lack of understanding. Claimants may perceive compensation as a re-capitalisation of tax and / or an 'unalienable right' because of economic necessity and provided for by legislation. Thus, the aim of the second point may be to shift the public's focus away from 'compensation' and the expectation of continued, unlimited compensation to the organisation's focus on 'rehabilitation'.

However, the second point is problematic as it appears to be impossible, if not preposterous, to expect *all* citizens to understand the role of a complex, bureaucratic institution. In light of the first point, it could appear that the organisation itself does not understand its role in the community and that the fragmented understanding of ACC's role is a more widespread phenomenon permeating those inside and outside of ACC.

Thirdly, the point that "services are flexible, responding to the community's evolving needs" is somewhat dubious given the overarching inflexibility within ACC. Claimants' entitlements are set in inflexible regulations and legislation and the premium payers' levies are also inflexible. Entitlements to receive and responsibility to pay are prescriptive. It is regulated inflexibility rather than flexibility that guides work practices. Wilson et al., (1994) note the regulations require staff to depend on a 'rule book' rather than look for flexible and innovative solutions. Thus, it is the regulations that can form a barrier to effective management of claims (Wilson et al., 1994). Indeed, Wilson et al., (1994) state, "Regulations by their very nature tend to be very prescriptive, detailed and inflexible in their approach" (p.5). With such prescription it is difficult to see how staff could apply a flexible approach and it is difficult to see how reasonable balance between the distinct interests of claimants and premium payers might be struck.

Fourthly, the point that claimants be treated with dignity and respect appears to call for a systemic shift in the values and culture of the organisation in order to effect a change in the attitude to claimants. The statement may be seen to give acceptance to the view (discussed above) that claimants were not always treated with integrity and respect but rather with indifference. Nevertheless, treating claimants with respect and dignity has, at times, been the reason why ACC has not had the sought after respect of some sectors

of society. For example, a high media profile case concerned a \$10,000 payout to a prisoner who incurred injury in his bid for freedom. A contradiction may be identified, therefore, in the supposition that by treating claimants with dignity and respect ACC will gain respect. Because there are a number of stakeholder interests it is likely that this supposition is flawed.

From time to time, the performance of ACC is accompanied by high media profile especially when decisions involve cases of perceived injustice or controversial payments. In such cases the performance of ACC has been publicly vilified. Society looks at contributing factors to accidental injury and the ensuing service delivery in a subjective and highly judgmental way. This public scrutiny is unsurprising given that employers, employees and all motor vehicle owners partially fund the scheme and have a vested interest in the performance of ACC.

Thus, it may be in some cases, regardless of the integrity and respect shown to claimants, the performance of ACC will not win favour with the public. Rather than the public's respect of ACC hinging on claimants being treated with respect and dignity, the respect may hinge more on changes at policy level. Instead of the responsibility for ACC's reputation resting on the performance of its front-line employees, the responsibility may need to be shifted to ministerial and policy making advisers. It may be that no matter how the front-line employees carry out their duties, the over-riding policies and regulations may negate public respect for the performance of ACC.

Further tension between, and confusion in ACC's dual mandate may be identified in the third and fifth statements that call for a flexible and responsive approach to service delivery and a balance between the interests of claimants and premium payers. On one hand, the vision calls for "flexible services responding to the community's evolving needs" reflecting ACC's beneficence and, on the other hand, it calls for control, wielding its authority as a regulatory power.

While the above discussion gives one level of analysis of the organisation's vision to show contradictions in ACC's mandate which may account for confusion in its rhetoric, at another level of analysis the vision addresses the core business of ACC (injury

prevention, accident insurance and rehabilitation practice), the problems of service delivery, ACC's reputation and its relationships with claimants and premium payers.

To enact the vision outlined in the 1994 document and implement the desired change ACC introduced case management. The following section briefly outlines the models of case management and the model adopted by ACC.

1.3 Case Management

The introduction of case management was one of the first steps introduced by the Board of ACC to enact its vision and implement change. Prior to the introduction of case management, ACC clients had a client officer and / or a rehabilitation officer to take care of their claims. The client officer handled all the paperwork, organising payments and approving or declining requests for items such as further medical treatment, beds, ramps etc. Client officers often had hundreds of clients on their books and, therefore, were not able to get to know their clients all that well, nor meet their needs. Generally, there were also one or two rehabilitation officers per branch. They had responsibility for the long-term clients (people who had been on the scheme for more than 52 weeks) and worked with the clients to prepare them for a return to work. So, rather than simply processing claims in a reactive manner, ACC instituted case management as the new way to plan the management of a claim. Case managers would be required to gather information, co-ordinate actions, anticipate future needs and review the claim over its life. In general, case management applies to any process of linking, managing or co-ordinating services to meet the needs of clients. Thus, it is managed service delivery and usually includes client assessment, service coordination and follow-up (Zawadski & Eng, 1988).

The move to case management by ACC in 1994 followed the new focus on case management which had emerged during the 1980s. But according to Ashley (1988) case management is neither a new activity nor is it a new concept. Case management, proclaimed as "the wave of the future" (Redford, 1992, p.5), can be traced back to 1863 when the first Board of Charities was established in the United States of America to co-

ordinate public human services and to protect public monies used in the care of the poor and the sick (Ashley, 1988; Bailey, 1989).

In New Zealand, case management has emerged as a preferred delivery approach in public agencies including Work and Income New Zealand (WINZ), Crown Health Enterprises (CHEs) and Inland Revenue Department (IRD) as well as ACC. Internationally, case management has emerged as a preferred service delivery approach in public and private agencies and used in programmes as diverse as children's services, services for the chronically and mentally ill, AIDS patients and community-based long term care (Austin, 1990) and geriatric care (Joshi & Pedlar, 1992).

Case management models have their roots in the care-planning task. Care planning is the process in which assessment information gets translated into an operational plan for implementation of treatment or care (Austin, 1990). According to Merrill (1985) and Knable (1986) there are, generally, three accepted models of case management: the social model, the primary care model and the medical model. Social case management, in the United States for example, aims to maintain the health of clients and keep them out of institutions. The focus is on the wellness of a person who requires basic support and services such as help with meals, chores or financial advice. This form of case management is undertaken by a social worker (Knable, 1986; Mazoway, 1986).

Primary care case management focuses on medical support. This model sees the physicians as responsible for decision-making in terms of hospital admission, length of stay and treatment. Medical-social case management is undertaken for a population at risk and, as such, goes beyond services offered in the social and primary models. It involves long term care of clients and there is no single individual who functions as case manager (Knable, 1986; Mazoway, 1986).

Knable (1985) argues for a fourth model of case management, comprehensive case co-ordination. Comprehensive case co-ordination advocates one person to co-ordinate all aspects of the case, co-ordinate all the service providers and keeps all parties informed (Knable, 1986).

Each model of case management has four common steps. These steps include (1) assessment and planning (2) co-ordination and referral (3) treatment and (4) continued monitoring. Thus, in the first step of any of these case management models, the case manager determines the individual's condition and what services and resources are needed. The second step sees the people and the services all brought together and the third step follows with treatment or intervention. The fourth step, continued monitoring, ensures that the recommended programme is carried out and that the health of the client is being maintained.

It is the comprehensive case co-ordination model, which compares to that adopted by and introduced into ACC. The organisation defines case management as "a strategic approach to processing, communicating and decision making on each claim with the express goal of minimising the impact of an injury on the claimant, community and premium payer". In practice, it means that every claimant has one staff member to deal with for any particular claim - his or her personal case manager. The case manager is responsible for co-ordinating all the claimant's treatment, compensation and rehabilitation requirements (medical, social, vocational and financial). According to the ACC literature, the case manager should be proactive in planning the management of a claim by gathering information, co-ordinating actions, anticipating future needs and reviews the claim over its duration.

Unlike the case management models described by Knable (1986) and Mazoway, (1986) which embody four steps, ACC's model has six elements: (1) determine the level of assessment needed; (2) understand individual needs and set priorities; (3) develop a costed case management plan (CMP); (4) implement the CMP; (5) monitor the quantity and quality of services; and (6) review the CMP for effectiveness and appropriateness. The essence of case management, aside from the number of steps, is thinking and planning in order to achieve effective relationships between the claimants, the service providers and the case manager, management of treatment and the continued monitoring of progress.

Whereas social case management is performed by a social worker, primary case management by a physician, and the medical-social model in which no one person is

responsible for the client, the ACC model, in line with the comprehensive model, employs one single case manager. In ACC case management was intended to be carried out by a rehabilitation practitioner.

On 7 March 1994 all new and existing claims transferred to the case management system, a system developed by board members, staff and management. It was intended that case management would evolve over time as staff training progressed and procedures and protocols were developed in consultation with health, rehabilitation and other professionals as were deemed appropriate.

At that time employees who were job titled rehabilitation officers and claims officers were re-named case managers. Although the job title changed and interim training was provided by the organisation, the comprehensiveness of the new job role was not developed sufficiently and a training programme for case managers was proposed to accommodate the new model of practice. Thus, in March 1994 the renaming of rehabilitation officers and claims officers as case managers was operationalised.

Because intensive and comprehensive training in case management did not precede the name change, the organisation's case managers remained engaged in work practice primarily processing claims. This method of work practice did not comply with the holistic model of rehabilitation embodied in the new model of case management.

Case management competencies were developed in 1995 and an intensive training programme for case managers, the Diploma in Rehabilitation Studies for Case Managers, was designed to be delivered from August 1995 to move case managers from a clerically based, reactive practice to an holistic, clinically based, proactive practice. Chapter 2 outlines the training programme.

As mentioned above, ACC contracted an external, independent researcher to examine the transfer of training. Not only was the researcher external to ACC but also to the training provider. In the course of the research, problems arose between the researcher and the training provider and these will be discussed in Chapter 2.

1.4 The Present Study

The background, detailed above, briefly outlines the organisation in which the evaluation research occurred. ACC is a Crown entity seemingly independent but actually highly dependent on the government it serves. Furthermore, it is subjected to changing and competing social and economic forces. ACC commissioned and fully funded a new training programme for a number of its front-line rehabilitation practitioner staff, case managers. As part of the training initiative ACC commissioned this evaluation research in order to obtain an independent assessment of the effects of the training programme. In light of the outline above, the main aim of the thesis is to contextualise the applied research drawing on the literature on organisational learning and transfer of training. The thesis will show that whilst an organisation may commission or sanction research for its benefit, its actions (and inactivity), and the internal organisational constraints overlaid by external expectations and legislative requirements, may be counterproductive to transfer of training and to organisational learning. Additionally, the problems are exacerbated by the complexities of the relationship between ACC, the researcher and the training provider. As this thesis will show the political and organisational context in which this study was embedded exerted a powerful influence upon the design and carrying out of the evaluation research itself.

1.5 Outline of the Thesis

In this section an outline of the organisation of the thesis is presented. The preceding sections of this chapter introduced the thesis. Chapter 2 focuses on the training programme and issues associated with the training of rehabilitation practitioners. It also addresses problems encountered by the researcher in carrying out the research. Chapter 3 focuses on organisational learning by outlining its theoretical basis and illustrates aspects of the theory with examples from the current research. Chapter 4 presents the theoretical basis and development of the concepts of evaluation, evaluation of training and the transfer of training. Chapter 5 provides an integrative review of the relevant literature of the concept of transfer of training and summarises past research. Chapter 6 outlines the research rationale and the method used in the main study (the pilot study is attached in Appendix B). The method section includes the design of the study, the participants, the procedure and instrumentation. Problems in implementing the design are discussed. The next chapter, Chapter 7, reports the results of the study merging the

qualitative and quantitative analyses that address each research question. The final chapter, Chapter 8, presents a discussion of the results and offers a critical self-analysis of the strengths and weaknesses of the data collection and statistical analysis, and the strengths and weaknesses of the design and its implementation as they relate to organisational learning. The chapter concludes with ethical considerations, directions for future research and offers final remarks.

1.6 Chapter Summary

In this chapter the organisational context of the thesis has been presented and a brief history and the structure of ACC have been given. ACC operates within legislative and budgetary constraints and under pressure from the individuals, community and the government it serves. It exists in a complex, uncertain, political and social environment in which inconsistencies can prevail. With a statutory obligation to uphold the Woodhouse principles whilst endeavouring to control spiralling costs, ACC faces manifold challenges. The introduction of case management was a significant step to change as it shifted the organisation's focus from claims processing to the strategic management of claims with increased emphasis on rehabilitation. Initial on-the-job training in case management was followed by the development of the Diploma in Rehabilitation Studies for Case Managers and the evaluation research into training transfer was commissioned. The complexities inherent in the organisation impacted on the research and the following chapter, which introduces the training programme further contextualises the evaluation research.

Chapter 2

The Training Programme and Associated Issues

Chapter Contents

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Chapter 2 is divided into four sections. Firstly, the chapter provides a background to the training programme by describing its origins, its rationale and the perceived organisational benefits. Secondly, the chapter outlines some issues associated with the training of rehabilitation practitioners by referring to the literature and, in particular, to the growing body of literature in New Zealand. Thirdly, the chapter profiles the training programme and outlines the course content. The criteria for admission to the programme are explained and anomalies are revealed. Finally, the chapter describes the relationship between the training provider and the researcher. That relationship, moderated by ACC's project manager, was problematic and had an effect on this evaluation research.

2.1 Background to the Training Programme

Since the introduction of case management in March 1994 into ACC, there had been criticism both internally and externally of the lack of professional qualifications of staff in the position of case manager (Potts, 1995). Not only did the staff lack professional qualifications, they were untrained as case managers. As discussed in Chapter 1 the job titles of rehabilitation officers and client officers were changed to case manager and this change was accompanied by transitional information on case management.

In the report of the ACC regulations review panel (Wilson et al., 1994) to the Minister of ACC, the authors noted that the impact of the introduction of case management had been widely commented on by many groups, including ACC staff. While the move to case management was generally seen as positive concerns were raised. Specifically:

- “concern was expressed about the ability of ex-Client Officers to assess adequately the rehabilitation needs of claimants with complex injuries.....;
- there was criticism of some Case Managers' negotiation skills and maturity, and their ability to deal with medical specialists and employers;
- ...concern that the caseloads are too high to provide effective case management on each claim.....;
- concern.... about the efficiency of requiring experienced Rehabilitation Co-ordinators to perform a claims processing function through case management;
- caseloads are cluttered with minor injuries;

- ..regulations impede the introduction of case management;
- case management has meant the advocacy role previously performed by Rehabilitation Co-ordinators has been lost;
- the appointment of 40 Maori Case Managers was announced, but none have yet been appointed...” (p.55).

In January 1995 the General Manager Operations at ACC proposed that a training programme be designed to quickly provide case managers with an internationally recognisable, tertiary qualification in the field of rehabilitation studies. The training programme was intended to develop a professional case management culture within the organisation, improve the understanding of case management and improve case management practice. It was intended to contribute to organisational outcomes in terms of reducing claim costs, reducing the duration of claims and improving the quality of service delivery by case managers.

According to Potts (1995), in a paper prepared for the organisation, the perceived “quantitative benefits” (Potts, 1995, p.2) of the training to the organisation would be:

- more rapid response to claimants’ needs
- higher productivity
- reduction in claim duration
- better management of long term claims
- reduction in case manager numbers
- effective control of the medical environment
- stakeholder perception of the organisation’s professionalism
- retention of staff
- better stakeholders’ service
- improved self-image of case managers
- claimant satisfaction
- future recruitment.

While the case management training programme was espoused to develop a professional case management culture within the organisation, improve the

understanding and practice of case management, the perceived benefits were primarily focused on cost savings. Of the 12 listed, eight can be seen to targeted to cost savings, e.g., reduction in claim duration; retention of staff; reduction in case manager numbers; and effective control of the medical environment. Potts (1995) inventory of the perceived benefits of the training presents gives further expression to the contradictions inherent in ACC and provides an example of failure to face the problems within the organisation. These points are elaborated below.

Firstly, Potts' (1995) paper fails to take into account the interests of the full range of stakeholders and confines itself to the interests of one sector of ACC viz., that of top management. In stating that one of the benefits of the training would be the reduction in case manager numbers, clearly, the interests of neither case managers nor the claimants were afforded consideration.

Another potential benefit perceived by Potts, which is ambiguous, is "higher productivity". Higher productivity could have different implications for the various interest groups in the organisation and these implications are not necessarily compatible. For example, middle and top management may see higher productivity as cost savings through mechanisms such as the case managers more efficient processing of claims, fewer cases and reduced duration for people on the scheme. Certainly, cost savings must have appeal for several interest groups (e.g., the Crown, premium payers, top and middle managers) since Potts (1995) claims that in 1994 case managers, on average, paid out \$2.6 million in entitlements. Therefore, a reduction of payouts by 1% for each of, for example, 120 trainees could result in a saving \$3,120,000.

For the claimants, another interest group, higher productivity could imply more money and / or timely payouts and that service delivery would be accelerated, with better remuneration and better service provision. Or conversely, it might imply reduced services and be seen negatively. Alternatively, another interest group, the case managers might regard higher productivity as implying that they would have more claimants to case manage and with less time available.

Secondly, Potts' inventory may mistake ACC's jurisdiction in the nation. For example, "effective control of the medical environment" implies that ACC's control of the medical environment is ineffective or it may imply that the medical environment is out of control. Potts' perceived benefit seems to imply that, once trained, ACC case managers will have the ability to contain the "medical environment". Contrary to Potts' notion of control, ACC does not have jurisdiction over the medical environment. Potts seems to be aligning the organisation in a regulatory role outside of its function and by adopting such a role places itself in a control of services contradictory to the vision statement advocating flexibility.

The statement assumes that the medical environment can be adapted and modified by internal changes made by ACC specifically through the training of its case managers. It may be that after training the case managers would be in a better position to detect fraudulent claims made by medical professionals and instigate action to counter fraud. This is particularly important for ACC management which expresses perceptions that the medical profession is too lenient in its assessment of disability (ACC, 2000, [http](http://)) and this leniency can lead to inflated payouts, especially over the long term. However, beyond that, ACC is reliant on the judgement of the Courts. The somewhat glib statement "effective control of the medical environment" gives expression to the fragmented understanding within the organisation.

Thirdly, Potts states that the potential benefits are "quantitative benefits" yet there is no indication as to whether these benefits were to be measured or how they might be measured. They may be insubstantial. The perceived benefits therefore, espoused by a top member of the organisation, may appear to lack clarity; they show ambiguity and can be seen to be biased towards one stakeholder group, viz., top management. They were, nevertheless, perceived as the potential benefits of the training programme.

As well as the benefits, it was intended that the qualification obtained by the trainees upon successful completion of the programme be transferable and recognised by the New Zealand Qualification Authority (NZQA). This was to ensure that the case managers would have a professional qualification with a minimum recognised standard that would be valued internally and externally to the organisation. Currently, a majority of industrial

training programmes, especially those affiliated with government agencies, come under the auspices of NZQA, a government agency which sets the unit standards and ensures the moderation of these standards.

A tertiary institution was contracted to provide ACC with a programme of study, which could be delivered in a short time frame and which would enable a large percentage of front-line staff the opportunity to complete the tertiary qualification. An alternate programme comprising several years of extra mural study was an option but the General Manager Operations did not see it as meeting either the individuals' or the ACC's needs.

As a post-graduate diploma it was intended that successful students could transfer the papers into a masters' degree and complete that qualification by thesis. In the event, the qualification was not NZQA approved (Source: NZQA) and could not be. Universities are autonomous and do not come under the auspices of NZQA. It is possible that ACC top management was unaware of the new vs. the historic accreditation processes because the trainees were told that their qualification would be transferable and recognised by NZQA. The Rehabilitation Studies for MA (Applied) was not offered for new enrolments in 1999 (Victoria University of Wellington, 1998).

The training programme in the field of rehabilitation studies (see 2.3) was designed collaboratively between the training provider and the organisation. It was a targeted course of post-graduate study specifically for ACC's case managers whose role and function of obtaining social and vocational rehabilitation, and financial and medical compensation for its claimants compares with the role and function of rehabilitation practitioners. The following section discusses the issues associated with the training of rehabilitation practitioners.

2.2 Issues in Training of Rehabilitation Practitioners

The importance of professional education and training of rehabilitation practitioners in New Zealand and the issues surrounding their education is evidenced by the growing body of literature in the area (e.g., Biggs & Flett, 1995; Biggs, Flett & Voges, 1995;

Flett, Biggs & Alpass, 1994). The issues include the role and function of rehabilitation practitioners, the development of rehabilitation competencies, the level of education required for effective practice, and the impact of the training on the practitioners and their clients.

Whilst rehabilitation counselling may be characterised as an emergent profession in New Zealand (Biggs & Flett, 1995), the authors trace the emergence of the rehabilitation profession in the US back to the 1950s. Early competencies of rehabilitation practitioners were determined in association with the curriculum needs of the then newly funded training universities. Biggs and Flett argue the importance of rehabilitation agencies and rehabilitation educators working closely together in order to match professional competencies to local and changing environments. This notion may differ from the 1950s iteration of competency development since matching curriculum needs of a university with rehabilitation practice may not necessarily meet the local and changing environments of rehabilitation practitioners.

Studies have given insights into the diversity and complexities of rehabilitation practitioners' roles (e.g., Muthard & Salamone, 1969; Wright, Reagles & Scorzelli, 1973) and others have examined the level of education required of rehabilitation practitioners. A study into the job requirements of rehabilitation practitioners, Wright and Fraser (1975), gave several insights into task relevancy and educational qualifications required of rehabilitation counsellors from the supervisors' perspectives. Specifically, the results suggested "(a) post masters university training was required for 49 of the 294 job tasks, primarily administrative and supervisory tasks, (b) a master's degree was rated as necessary for 97 tasks concentrated in areas of counselling and client planning or assessment, and (c) a bachelor's degree was regarded as necessary to perform 86 tasks in areas of referral, job placement, case management, and in some interviewing situations" (Biggs & Flett, 1995, p.4). The rating of 294 tasks was undertaken by a sample of supervisors in the US, not practitioners, which does call the validity of the inventory into question. Nevertheless, the study draws attention to the diversity and complexity of the job requirements and to the level of education considered appropriate for effective rehabilitation practitioners.

In a further study Shapson, Wright and Leahy (1987) asked practitioners to rate the 114 competency items on importance to their professional responsibilities and their own perceived competence in each. They found that counsellors with master's degrees in rehabilitation "reported significantly higher...competency attainment that did their colleagues with unrelated master's degrees or bachelor's degrees" (p.142). The results, therefore, suggested that self-perceived competence was related to the completion of higher professional education specific to rehabilitation.

Similarly, Flett, Biggs and Alpass (1994) note that several studies focusing on populations of clients with severe disabilities have shown significant relationship between master's level education and case management and client outcomes. They note that the indices of performance were a narrow band and included the number of clients, case closure rates and service costs.

Wheaton and Berven (1994) identified six clusters on eight caseload management measures. The two counsellor clusters with the most positive performance profiles, "efficiency experts" and "severe disabilities specialists", had higher levels of professional education than the "worrisome cluster". The study found that the level of professional education was related to case management profiles. Those counsellors who showed more positive client outcomes tended to have higher levels of professional education relevant to rehabilitation counselling.

Rather than a professional education having an affect on rehabilitation practitioners' performance, a study by Flett et al., (1994) examined the psychological effects of professional training on rehabilitation practitioners. In a study of 52 rehabilitation service providers, Flett et al., (1994) investigated the links between ongoing education of rehabilitation practitioners and occupational stress, job tension and psychological wellbeing. In a pre-test post-test design the trainee rehabilitation practitioners showed significantly greater reduction of job tension and job stress than the non-training control group of rehabilitation practitioners. The training course participants also showed a significant increase in positive affect at four months post-training compared with the control group. There was no difference between the groups for negative affect. Whilst the authors note the limitations of a small sample size and a non-random

sample the study, nevertheless, gives insight into possible benefits of advanced education on the psychological wellbeing of rehabilitation practitioners.

In summary, the literature suggests that for the effective and efficient rehabilitation of clients and for happier, less stressed rehabilitation practitioners, education is significant. An important feature of the education is its specificity in rehabilitation studies at a minimum level of a bachelor's level. Through training and on-going education practitioners can gain competencies which directly impact on their work performance and as Flett et al., (1994) and Biggs and Flett (1995) propose can act as a buffer against stress and tension.

2.3 The Training Programme

The Diploma in Rehabilitation Studies comprised a 27 week programme of professional education and training which involved six, one-week modules completed over the course of a 12-week period with directed study and group work time built into each alternative week. In total, it consisted of eight modules (300 classroom contact hours plus 200 hours of directed learning) and a work-based practicum (525 hours of directed learning). During that time the trainees completed assignments associated with each module and explored how learning from each module might be applied back in the workplace. Video conferencing and electronic mail were used to facilitate learning and practice exchanges between the trainees and practitioners in the field.

On the satisfactory completion of a practicum learning contract each trainee carried out a 70-day period of supervised practice back in their workplace where they completed two practice studies and a rehabilitation project.

At the end of the practicum the trainees returned to the tertiary institution for a call-back module to review and evaluate the learning contract and report on project findings.

2. 3.1 The course content

The following is a brief summary of the course content extracted from the contract document prepared for the General Manager Operations by the training provider:

“Students enrol in 5 papers..... They are offered learning opportunities that combine personal reflection and enquiry, formal presentations involving practice specialists and researchers from the health and rehabilitation field, small group tasks, activity-based learning in video and computer skills laboratories, personal and professional skill development, and directed study. Every alternate week, students are expected to use computing and skills laboratory facilities to carry out research, complete assignments and extend practice skills in the use of new technology and interpersonal communication being introduced into work environments across the human services.

Module 1 Rehabilitation Policy in Practice (27-hour teaching module)

An examination of social and economic policy reforms in New Zealand between 1984 and 1994, related demographic and labour market trends and ways in which these have impacted on the development of health and rehabilitation services and the work of the organisation’s case managers in particular. Normalisation as a policy and practice ideology of international significance will be explored.....Students will evaluate justifications for changes to the legal mandate for services, increased accountability for service outcomes, and changing expectations about the nature of professional practice...

Module 2 Principles and Practices of Rehabilitation (36-hour teaching module)

This personal and professional development module used directed study, information technology, audio and video recording equipment and specialist library holdings to review, evaluate and extend professional knowledge and skills as a practitioner working in their own specialist sphere of the rehabilitation field..... Personal and professional development plans are used to identify specific learning objectives that students will contract to achieve through directed study... At least one day per week is spent in small group learning exercises working in a skills laboratory where students explore their uses of professional power in helping relationships through the use of video and computer assisted media.

Module 3 Principles and Practices of Rehabilitation (27-hour teaching module)

A review of professional practice knowledge and skills associated with study, assessment and intervention planning as required of professional practice with people receiving rehabilitation services. Principles of crisis intervention, task-centred casework, family / whanau decision-making and partnerships in professional helping are examined with particular reference to case management practices in New Zealand....

Module 4 Applied Social Research: Culture, Gender, Class, Age and Ability: A (five days/four nights)

This module used a noho marae format during which trainees were invited to spend five days and four nights living at marae in Rotorua participating in the daily rituals of encounter from a cultural perspective that is likely to be different from that to which they are normally accustomed..... students are introduced to the notion of social enquiry and evaluation from a Maori perspective, observing how the whareniui can be seen as a research storehouse and how whakapapa and traditions of oral history have a well-established place in the traditions of Applied Social Research. Cultural expectations associated with gender, class, age and ability were also explored.....

Module 5 Applied Social Research: Culture, Gender, Class, Age and Ability: B (30-hour teaching module)

Further examination of social research knowledge and skills that can be applied to the tasks of service evaluation by an ACC Case Manager. Formal instruction on research design and methodology is given to assist each student plan a small survey of service providers or consumers of ACC services, develop a resource kit on information available about a particular service or services for a particular clientele or some other related project....

Module 6 Rehabilitation Policy in Practice (27-hour teaching module)

A review of key rehabilitation policy and practice issues focusing on vocational assessment, job placement, public relations, head injury, spinal cord injury and lower back injury. In each of those areas, students will review the impact of legislation,

regulation and ACC's policy and implications that arise for the case management function and role.

Module 7 Rehabilitation Practicum: Developing a Practicum Learning Contract (27-hour teaching module)

Each student is invited to review and evaluate the learning objectives identified in the personal and professional development plan. Working with their practice tutor and the practicum supervisor, students develop a learning contract that gains the endorsement of their branch manager as an agreed programme of work-based study during the rehabilitation practicum.....

Module 8 Rehabilitation Project: Review of Learning and Oral Presentation of Project Findings (27-hour teaching module)

A review and evaluation of learning from the Rehabilitation Studies Practicum and presentation of findings from the project carried out during the practicum. Students are invited to compare and contrast learning experiences from different parts of the country, highlighting challenges facing those working in the rehabilitation field in the late 1990s....." (Source: Diploma in Rehabilitation Studies for ACC Case Managers: A programme of professional education and training....." Second Cohort Revision of the Contract Document).

2.3.2 Criteria for selection onto the training programme

Trainees were selected as follows: Cohort 1 was selected on different criteria to subsequent cohorts. The main aim in this case was to select a sample of case managers in terms of many variables e.g., academic ability, age, experience, gender, ethnicity etc. According to the training provider Cohort 1 was selected to obtain a cross-section of the organisation (L. Fulcher, personal communication, 19 April, 1996). There was a pool of 300 applicants and an attempt was made to best reflect that criteria. According to ACC's staff development adviser, there was no academic criterion.

Initially, Cohorts 2, 3 and 4 were selected by their branch management and then, finally, their selection was examined by head office personnel and the staff of the

training provider (L. Fulcher, personal communication, 19 April, 1996). According to top management criteria were: "ability to contribute to the strategic directions of the organisation, combined with a desire to learn and a commitment to gaining benefits for the case manager, branch and ACC; ...a good level of interpersonal communication skills. Good word processing skills would be an advantage in assignment preparation; case managers only.; ability to commit to a 12 week intensive programme of study; Maori and Pacific Islandrepresentation on each course; normal university criteria for adult enrolment applies" (G. Potts, personal communication, 4 July, 1995).

In an interview (19/4/96) with a principal case manager, an ACC middle manager, the researcher was told that the training criteria was branch specific and was based on a multiplicity of factors. For example, factors taken into consideration included the case managers' service in ACC, their case management experience (more than six months), those who did not have a relevant qualification, loyalty to the ACC and level of motivation. These criteria were not quantified in any systematic way.

The university's requirements for the post-graduate diploma were a first degree and at least three years relevant experience (L. Fulcher, personal communication, 19 April, 1996). However, this selection criterion contrasts with the ACC project manager's statement that trainees should not have a prior (relevant) degree. Rather, the training programme was intended for case managers who did not hold other relevant qualifications or those whose degree was in a different (non-relevant) area. Also, from the organisation's perspective, normally at least six months' tenure in the position of case manager was required (A. Brown, personal communication, 4 July, 1995).

According to a letter from a then recently retired case manager (15/4/96) to the author, the academic selection criterion was contentious. The writer commented that the selection process was seen as "unfair and discriminatory by many staff". She stated that there had been no clear policy spelt out to inform staff. As an example the writer explained: "1st Cohort: seemed to take people with degrees etc. but branch staff were told not to expect to get selected if you had a degree as the course is all about up-skilling and up-qualifying non-degree staff. All staff (all - most - some??) with qualifications felt discriminated against - particularly those who spent three years and

megabucks getting a degree & here are people who had spent years actually earning being paid handsomely (sic) and having their course paid for to get a qualification that would make them more able to get a career advantage yet again. So - deep resentment is felt by many staff in branches toward those who participate in the programme.”

A further problem with the selection process concerned the level of branch involvement. In an interview (1/4/96) a team leader stated that the case managers self-selected themselves for training and the branches “really had no say”. The regional manager then told the team leaders who had been chosen. This sometimes resulted in two people being selected from one team to the detriment of that team’s workload levels and functioning. Obviously, this strategy tended to cause a certain amount of resentment amongst trainees’ colleagues.

Thus, there were problems within ACC surrounding the selection criteria and there were ambiguities and uncertainties about the training programme. For example, before training the case managers, the branch supervisors, the training provider and top management of ACC appear to have held vastly different perceptions of the resultant outcomes of training. The different perspectives of the various groups will be described in the following paragraphs.

Top management stated its expectations (see 2.1 above). ACC wanted the training programme to develop case managers as competent professionals yet case manager competencies were unidentified at that time, albeit in the process of being developed. In other words, at top management level ACC knew that they wanted professional case managers developed through training but they were unclear of the impact and implications of the training in terms of changed roles; they were unclear of the implementation of the training as prescribed by the training provider; and they were unclear of the changed function of case managers and the impact at branch level.

The course content, outlined above, introduced new knowledge, skills and attitudes to, at least theoretically, enable the case managers to practice case management; it suggests the trainees adopt new professional methods and practices which would be accommodated in the existing culture and workplace environment of the organisation.

The course content, with its focus on intensive, holistic rehabilitation, implied a different organisational structure and operational climate to the one actually existing at ACC to support the implementation of the training. This in effect required case managers to work intensively with fewer clients and their support people such as whanau, medical specialists and employers, over shorter periods of time and with more resources to accommodate the change in work practices.

The training provider faced constraints meeting the curriculum requirements of a university post-graduate diploma, time constraints for course delivery and, furthermore, needed to accommodate trainees without academic experience at this level. Whilst the training provider was not bound by the constraints of the organisation it was serving, (i.e., legislation, regulations, policies and procedures) the branch supervisors were. The branch supervisors wanted an enhancement of current practice as opposed to changing practice. There was, in some instances, tacit conflict between the training environment and the work environment. A case manager, in a telephone call to the author, said: "Ivory towers don't work here..." and, in an interview (1/4/96) discussing the new model of practice, a middle manager said "with high caseloads and the fact that most of it is low level activity, form filling, routine processing of claims they're not really 'case managers' at all."

The case managers wanted the training programme to meet their individual, personal and professional needs which did not necessarily align themselves with the long-term employment expectations that ACC held of its newly trained case managers. The middle manager, referred to above, reported that she had learned from talking to other middle managers and case managers that some of the trainees did not intend to stay in the job but, nevertheless, opted for training to improve their own marketability.

The training programme, therefore, was required to meet the diverse needs and expectations of the training provider, ACC, the case managers and their branch supervisors. Because of the multiple perspectives the various parties involved, it was likely that there would be conflicting interests and resultant tension. Such tension could be manifest in the trainees' split loyalty between the training provider's model of case management and receptivity to the model at branch level. The case manager, in

that sense, could be caught between the *ideal* and the *actual* application of the training content and this may account for any dissatisfaction with their workplace.

Thus, an unintended consequence of the training was that the training sometimes resulted in a degree of status differentiation, distrust, and frustration within ACC branches. It did not provide an environment for operational co-operation or support; case management change as a result of the training was not strongly supported.

Hence, as a result of the training there was tension between newly qualified and other case managers. Tension also existed between the untrained case managers and the branch supervisors over job security, career path, and promotion issues. Further, tension existed between the trained case managers and their supervisors over the new versus old ways of working. The tensions will be revealed in the results section.

2.4 The Training Provider and the Evaluation Research

Of paramount importance to the evaluation research was a co-operative working relationship between the stakeholders (ACC, training provider and researcher). Within this triangle, there was a problematic relationship between the training provider and the researcher. The fact the two were commissioned by ACC was no guarantee that there would be co-operation. On the contrary, competition between tertiary institutions is common in New Zealand and currently an issue of concern for the present Minister of Education and under review.

One of the first issues encountered concerned a possible conflict of interest between the training provider and the researcher. The findings of this research could have implications for the training institution in terms of contracts for future training. Because the researchers' institution could also offer a similar training programme, there was concern expressed by the training provider about the appropriateness of awarding the evaluation contract to Massey University. However, ACC expressly wanted independent research. Whilst ACC sanctioned the evaluation research, the training provider did not automatically sanction it. The tension resulted in a meeting between the three stakeholders at which ACC's commitment to the evaluation research

was reiterated and issues pertaining to accessibility to the trainees and Massey's role were settled.

Confusion rested in the status of the trainees. The trainees were full-time employees of ACC, which had fully funded the training programme, and they were simultaneously enrolled at the tertiary institution. Not only had ACC paid for the staffing and the facilities for the training programme, it furnished all the trainees' requirements. During the on-campus training, the trainees were on full salary, studying in work time with all materials provided, and their weekly accommodation and weekend transportation were paid by ACC. The trainees, unlike regular tertiary students who come under the jurisdiction of the institution, were beholden to their employer as well as the tertiary institution.

As a gesture of co-operation, the controller of the training programme suggested that his staff become part of the contractual agreement between the Massey University and ACC. Although the contract had not been finalised at that stage, the development of the evaluation research was proceeding and the contractual negotiations were advancing. The offer of a joint contract was declined, however, on the grounds of maintaining the confidentiality of participants and the integrity of the research as independent.

Co-operation between the tertiary institution and the researcher was essential for access to the trainees and for understanding the training programme's goals and activities. It was important that the researcher be acquainted with the political and historical circumstances that created the programme, its location, structure, staff and the documents produced by the programme.

In order to resolve the problems and to finalise the evaluation research plans, access to participants was agreed to on two conditions: firstly, that ethical approval was obtained from both institutions' Human Ethics Committees and secondly, the training institution have access to the evaluation research proposal. As well as co-operation being essential for the evaluation to begin, there was a matter of urgency. Access to participants, especially to the first cohort of trainees who were prospective participants

in the pilot study, was imperative, as they had begun their on-campus training. A delay in ethical approval from either institution could have jeopardised administration of the survey at mid-training (it was already too late for the pre-training survey). In spite of timely ethical approvals, it was not possible to administer their first questionnaire face-to-face, as planned, however it was sent out by post to the participants at their workplace. The response rate was well below expectations (67.5%) which contrasted with the 97.5% response rate achieved when the first questionnaire was administered face-to-face to Cohort 2.

The very low response rate for the pilot study (Appendix B) may have been attributable to the difficulties between the training provider and the researcher. There appeared to be deep resistance to the study by Cohort 1. In the first questionnaire the return rate was 67.5%, which dropped to 37.5% with the second questionnaire. The return rate for the three-month and six-month questionnaires was 22.5%. The attrition rate was alarming, especially in light of the study being longitudinal and involving three further cohorts of trainees. To counter possible withdrawals from the research by subsequent trainees, ACC's project manager further endorsed the study by both written and oral communication to the trainees.

As the research progressed, organising a suitable time to meet the trainees always seemed to be problematic. In the early stages, the training provider scheduled late afternoons for administrations but late afternoons are not an ideal time to administer questionnaires and elicit quality information from participants, so other times had to be negotiated. As well as the participants' unwillingness to co-operate (discussed above), on one other occasion, the trainees were dismissed from classes two hours before a scheduled survey time. A four hour round trip resulted in meeting face-to-face with four trainees. ACC's reaction was to send a memorandum from the General Manager Operations to all the trainees endorsing the research and a mail-out was made available via ACC's internal mail system.

It appeared that the training provider wanted direct involvement in the evaluation research. Certainly, the relationship between the training provider and the researcher

was sometimes strained and contributed to the problems encountered in the evaluation research process.

2.5 Chapter Summary

In this chapter the issues in rehabilitation practitioner were discussed, the background to the training programme was presented and the course design and content highlighted. The training criteria and the inherent contradictions were exposed. The chapter defines the roles and expectations of the training programme from the stakeholders, viz., the training provider, ACC, the branch supervisors, and the case managers. Finally, the chapter gives insight into the relationship between the training provider and the researcher by discussing the problems that arose and the organisational reasons for them.

Chapter 3

Organisational Learning

Chapter Content

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Whilst training has become a strategic investment for organisations (Bassi, Benson & Cheney, 1996), it also represents an opportunity for change in both individuals and the organisation. The case management training was designed ostensibly to bring about change in knowledge, skills, attitudes and abilities in ACC case managers; it was part of ACC's organisational strategy and a key component of its growth and development. However, training does not necessarily equate with individuals' learning nor does it necessarily equate with organisational learning. Individuals are not always good learners and as Leeuw and Sonnichsen (1994) note neither are organisations. The paradox for organisational learning is that organisations can learn only through their members but the organisational members themselves create barriers and constraints that inhibit learning.

Chapter 3 examines how organisations learn and how they inhibit learning. This section discusses the theoretical underpinnings of organisational learning by describing and critiquing the work of leading and current theorists, Argyris and Schön (1978, 1996), Argyris (1990, 1992, 1996, 1999) and Dixon (1994, 1999) and then illustrates the concepts with examples from the present research.

For over twenty-five years Chris Argyris has been a lead writer and practitioner in an American school of thought relating to organisational learning and defensive behaviour. The chapter begins with the theory of Chris Argyris.

The influential writings of Argyris give insight into the ways that organisations learn and insight into the difficulties that organisations and researchers face in producing valid, reliable and useful information that contributes to organisational learning. It becomes clear that Argyris draws heavily on psychoanalytic thought when he talks of organisational defences as his definition includes the notion of repression - a mechanism that people use to ward off or lesson anxiety by unconscious means (Gleitman, 1995). Though Argyris' theoretical association with psycho-analysis is evident in his ideas relating to the playing out of defensive behaviours, it is possible that Argyris was influenced by the work of the Tavistock Institute in the 1950s and 60s into social defences.

The notion of social defence against anxiety was first introduced by Jacques in 1955 who theorised that defence against psychotic anxiety was an essential common element of individuals in organisations (Bain, 1998, [http](#)). The classic and influential study of social defences against anxiety was carried out by Menzies (1970) in which she explored the nursing system of a London teaching hospital. She showed how the nursing system in the late 1950s was structured and served as a way of avoiding the anxiety of caring for the sick, distressed and terminally ill patients. By exposing the defences she showed that they were played out, for the most part, unconsciously and they were deeply entrenched and difficult to change. Even though they were maladaptive the nursing hierarchy was resistant to the findings, resistant to change and the defences Menzies outlined continued to flourish to the detriment of nurses and patients.

3.1 Argyris: A Theory of Action Perspective

Over the past years, Argyris has focused on designing a methodology, action science, for implementing action theory and the role of learning at the organisational level (e.g., Argyris & Schön, 1974, 1996; Argyris, 1976, 1993, 1996, 1999) that has had far-reaching appeal to academics and management practitioners. Action science, which is rooted in action research (cf. Carr & Kemmis, 1983), is concerned with causality, meaning and practical reasoning, i.e., when individuals act they mean to do something to either bring about or prevent something from occurring (Putnam, 1999). It is a form of self-reflective inquiry into how action is designed and how better organisations can be created by the people involved in the organisation. It is carried out by having people reflect together on issues or dilemmas concerning them so that understanding is achieved and actions are decided upon based on informed choices. Argyris' theory of action perspective has been the framework for action science (Putnam, 1999) and focuses on aspects of interpersonal reasoning and action which, if left undisturbed, would jeopardise the discovery and implementation of strategies for the improvement of practice (Robinson, 1993).

It is through interpersonal reasoning and action that organisations learn. It is the individuals "acting as agents of organisations who produce the behavior that leads to

learning” (Argyris, 1999, p.67). Thus, through the knowledge and activities of individuals acting on their behalf, organisations learn. There can be no organisational learning without individual learning but individual learning does not guarantee organisational learning.

In his work with Donald Schön, (Argyris & Schön, 1978, 1996), Argyris defines organisational learning as a process in which members of an organisation detect error or anomaly and correct it by restructuring their organisational theory in action. In other words and within this definition, members of an organisation not only sense when something is not right they change the procedure or policy and re-define the new way of doing things.

Argyris and Schön (1978, 1996) separated theories of action, common to all individuals, into espoused theories and theories-in-use to research human learning in interactive, interpersonal situations. Espoused theories are those that an individual claims to follow and encompass the individual’s beliefs, attitudes, and values (Model II, explained below). It is the theory of action that is articulated when an individual is asked to spell out the action they would adopt in a given circumstance. However, what the individual actually does in the particular situation would be their theory-in-use: the theory that they actually employed (Model I, explained below). Theories-in-use are those that can be inferred from action.

Argyris states that although espoused theories varied widely, there was almost no variance in theories-in-use. The behaviour of individuals varied widely, but the theory they used to design and implement the behaviour did not vary. Argyris (1992) claims that people hold mental maps about how to plan, implement and review their actions. He further claims that few people are aware that the mental maps they use to take action are not consistent with their espoused theories. Thus, espoused theories and theories-in-use may be consistent, identical or similar or, conversely, they may be inconsistent, different or contradictory. In the case of inconsistency, it may be deliberate or it may be unconscious.

3.1.1 Model I theory-in-use

Argyris argues that there is one theory consistent with what people say (Model II) and another theory consistent with what they do (Model I). Espoused theory is the world view and the values people believe their behaviour is based on (Model II) whereas the theory-in-use (Model I) is the world view and the values implied by their behaviour, or the maps they use to take action (Argyris & Schön, 1978, 1996).

According to Argyris and Schön there are four governing values characteristic of Model I: (1) define goals and try to achieve them; (2) maximise winning and minimise losing; (3) suppress negative feelings; and (4) be rational. From these governing values certain behaviours occur. The most prevalent action strategies that arise from Model I are: design and manage the environment unilaterally; own and control the task; unilaterally protect yourself; and unilaterally protect others from being hurt. These actions must be performed in such a way that governing values are appeased so that a minimum, acceptable level of being in control, winning, or bringing about any other result is achieved. In other words, Model I tells individuals to craft their positions, evaluations, and attributions in ways that inhibit inquiries into them and deters tests of them with others' logic. The consequences of these Model I strategies are likely to be defensiveness, misunderstanding, self-fulfilling and self-sealing processes (Argyris, 1982). Model I inhibits cooperative, collaborative learning processes because it leads to competitive and defensive relationships (Argyris, Putnam & McLain Smith, 1985).

Argyris suggests that most organisations employ Model I behaviours. Argyris et al., (1985) state that in organisational life, just as in private life, when people deal with threatening issues they frequently behave in ways that prevent valid information from forthcoming and exhibit the behaviour that creates self-sealing patterns of escalating error. They suggest, for example, people withhold thoughts and feelings or state them in ways that it makes it difficult for others to question or disagree. People assume that what they say is obvious. They attribute defensiveness to others and they behave in ways that elicit behaviour that they interpret as confirming their attributions or biases. They attribute the responsibility for mistakes to others or to situational or organisational factors rather than accept responsibility themselves. According to Argyris (1999) these

behaviours maintain the situation and are treated as “undiscussable”. Many are protected by a genuine unawareness and by defences to maintain the unawareness.

3.1.2 Organisational defences

Argyris (1999) defines organisational defence as “a policy, practice or action which prevents the participants (at any level of the organization) from experiencing embarrassment or threat, and at the same time, prevents them from discovering the causes of the embarrassment or threat” (pp. xiii-xiv). Although sometimes deliberate, sometimes not, organisational defences are counterproductive, anti-learning, over-protective and therefore obstructive in organisational learning (Argyris, 1990).

At the organisational level, defence routines are based on a powerful logic that has a significant impact on individuals and organisations. Argyris (1990) suggests the logic is to: “(1) craft messages that contain inconsistencies; (2) act as if the messages are not inconsistent; (3) make the ambiguity and inconsistency in the message undiscussable, (4) make the undiscussability of the undiscussable also undiscussable” (p.27). Organisational defensive routines prevent the detection and correction of errors that are embarrassing and threatening. It is difficult to challenge, interrupt, and reduce these maladaptive routines and any attempt to do so results in further defence that strengthens, reinforces and sets off further defensive patterns of behaviour. Thus, when the defensive routines are not discussed, then they continue to proliferate. Defensive routines nevertheless can appear to be a reasonable way to behave because they leave difficult issues or dilemmas intact – they are by-passed or covered up and become norms for rational, polite interpersonal behaviour.

Associated with Model I theory-in-use because they are the result of a combination of governing values and action strategies, organisational defensive routines create an environment non-conducive to learning and, in effect, are anti-learning. They result from long-lasting, unsolved problems (Argyris, 1990). The inability to find the cause of the problems is what Argyris refers to as “skilled incompetence”. He states: “the existence of skilled incompetence means the unawareness of the inability, and

unawareness is also connected to Model I theory of use – hence it is skilled incompetence” (Argyris, 1996, p.217)

However, when defensive routines are challenged and when members of an organisation recognise a problem, they may choose to resolve and use the problem as a stimulus for change. Argyris and Schön (1974, 1996) argue that often problems cannot be resolved unless the question of why the members of an organisation have so far been unable to resolve the problem is also addressed. One needs to probe beneath the presenting problem to find out the root cause of the problem. True organisational learning requires more than identification and problem solution (Argyris, 1999), it requires collective, conscious action stemming from open, frank and frequently, disquieting dialogue between organisational members. It is both a cognitive and behavioural process.

For collaborative learning Argyris and Schön (1974, 1996) created an alternative theory-in-use, Model II, which is outlined below.

3.1.3 Model II theory-in-use

Though he claims evidence to suggest that peoples’ theories-in-use are consistent with Model I, Argyris (1992) argues that most people hold espoused theories that are consistent with Model II and they are shocked to discover how their behaviour falls into Model I. Model II variables are more socially desirable human values which reflect freedom of choice, open exchange of information (honesty) and collaboration. In Model II the governing variables for action are: (1) valid information; (2) free and informed choice; and (3) internal commitment and constant monitoring of its implementation. The most prevalent action strategies that arise from Model II are: jointly controlling of tasks; bilateral protection of others and active participation. Argyris and Schön (1974, 1996) argue that the consequences of these strategies are minimally defensive relationships, revelation of conflicting views, high freedom of choice and increased likelihood of “double-loop learning” (discussed below). Model II action helps an organisation to learn and increase its problem solving effectiveness.

In this context, organisational learning can be seen as a problem solving strategy and to that end Argyris and Schön (1978, 1996) differentiate learning into single-, and double-loop learning, which are explained in the following section.

3.1.4 Types of organisational learning

Single-loop learning occurs when individuals detect a match or mismatch of outcomes (theories-in-use) as they relate to organisational expectations (espoused theories). In the case of a match, policies and procedures are likely to be upheld; in the case of a mismatch, the organisation tries to adjust the outcomes within existing organisational expectations without investigating the root cause of the problem (Leeuw & Sonnichsen, 1994). The organisation continues to function with their existing policies making incremental changes. Single-loop learning is also called adaptive learning (Senge, 1990) which is about coping and lower-level learning (Fiol & Lyles, 1985). Whereas single-loop learning may be seen as a superficial process to problem solution, double-loop learning may be seen as a deeper, more comprehensive procedure.

Double-loop learning occurs when the organisation is involved in questioning and modifying its policies, goals and norms. A double-loop learning environment promotes a critical awareness of the organisation's underlying assumptions, norms and objectives. It encourages an organisational climate in which organisational members are able to challenge policies and practices in an open manner thereby changing the organisation's knowledge base (Balasubramanian, 1996, [http](http://)). Double-loop learning depends on the generation and challenging of conflicting ideas (Leeuw & Sonnichsen, 1994) as underlying assumptions of policies and practices, norms and objectives relevant to the problem are challenged in a pro-active manner. Double-loop learning, higher-level learning (Fiol & Lyles, 1985) or generative learning (Senge, 1990) is about creating knowledge and requires systemic thinking, shared vision, personal mastery and team learning.

Leeuw and Sonnichsen (1994) suggest that double-loop learning requires an opposition of ideas and, if this is so, cognitive dissonance amongst organisational members may propel individuals to resolve that tension by creating new and innovative solutions to

problems. Double-loop learning may be linked also to dissonance theory (Festinger, 1957) which assumes that inconsistency among peoples' attitudes drives people to attitude change. Double-loop learning gives rise to divergent thinking, a cognitive process in which an issue is examined from diverse perspectives. When basic assumptions behind organisational policies and procedures are challenged, when related understandings are inconsistent and contradictory, double-loop learning creates a milieu in which incompatible, contentious and conflicting views can be openly examined. This, theoretically, leads to an environment conducive to the re-formations of policy and practice.

Thus, single- and double-loop learning are both aimed at reducing organisational problems through deliberate learning. Single-loop learning can provide a termination point for problem solving or it can initiate further investigation within that single-loop paradigm. Further single-loop learning can give rise to double-loop learning. While both approaches are appropriate and required for higher programme or service delivery, double-loop learning has a greater impact on strategic development.

3. 2 Criticisms of Argyris' Theory

Over the past years, Argyris has focused on designing a methodology, action science, for implementing action theory and the role of learning at the organisational level (e.g., Argyris & Schön, 1974, 1996; Argyris, 1976, 1993, 1999) that has had far-reaching appeal to academics and management practitioners. The following section presents a critique of Argyris' theory by discussing its uses and limitations.

The focus of organisational learning theory is change in practice and performance whether it is brought about by single- or double-loop learning and, in Argyris' view it pertains to solving complex, deep-seated, problems. The theory has been applied in the context of management development, particularly for leadership development in organisational settings including business and education (e.g., Argyris, 1976, 1993, 1999).

When Argyris talks about organisational learning, he seems to concentrate his attention on the correction of organisational problems and that learning is motivated by error. This focus and description of organisational learning, therefore, may be problematic in that it limits the concept to the identification and solution of error. Motivators, other than error, may stimulate organisational learning, for example, organisations that wish to stay ahead of the competition in the market place may engage in organisational learning with creativity or innovation as prime motivators.

A second criticism is that Argyris differentiates single- and double-loop learning and this differentiation presupposes different levels of learning. There can, however, be difficulty in determining the level of learning. What may appear, for example, to be double-loop learning from one perspective, may be viewed from another perspective as single-loop learning. This may be illustrated in the public's response to mental health patients when de-institutionalisation was established. In the 1980s, care for the mentally ill was shifted from the hospitals to the community in what was purported to be a sound structural change, a change of policy and practice, aimed at the greater inclusion of the mentally ill in society. In terms of location and financing of the mental health patients there were changes, yet at another level, nothing much altered. The mentally ill and mentally handicapped remain neglected by society and their care and control remain confused. The problem of care for the mentally ill has simply been transported to another setting. From one perspective, the change in policy and practice in the care of mental health patients can appear to be a major change (double-loop learning) but from another perspective it may seem to be superficial and single-loop. Thus, the single- and double-loop boundaries may not be as distinct as Argyris portrays, they may be permeable.

Argyris (1982) notes that many organisational problems are characteristically double-loop but they are usually approached within the single-loop perspective. One reason for this may be that double-loop learning is a difficult approach to problem solving; it is laborious, time consuming, reflective and possibly, expensive. It requires organisational members to confront issues, continually question organisational policy and can create difficult, complex group dynamics that many individuals would rather avoid (Leeuw &

Sonnichsen, 1994). It requires organisational members to question, challenge and contest organisational practices (Leeuw & Sonnichsen, 1994).

Interestingly, Leeuw and Sonnichsen (1994) note that organisations have often been thought to be ineffective in the identification of the root causes of problems. When organisations are faced with a problem or a crisis they “tinker.. at the margins” (p.2). The authors suggest that such an approach inevitably leads to a repetition of similar problems because the basic cause of the problem occurring in the first place was never identified and therefore not addressed.

It may be, however, that double-loop learning distracts members from their day to day core business, that their personal responsibility is to their job and larger organisational issues are regarded as too time and energy consuming, too costly, too high risk and not satisfying enough. It may be that management practices of performance appraisals, reviews, performance based remuneration and personal employment contracts based on job descriptions engender individualism rather than the collectivism required by double-loop organisational learning. Single-loop learning may be more expedient, more easily accommodated within the existing organisational structures and culture.

Perhaps the most outstanding feature of Argyris' theory is in its advocacy for people to be open and explicit in their dialogue and to question assumptions that are customarily held to be functional but, in effect, are dysfunctional. These unchallenged assumptions may prevent the organisation from accurately examining its norms and protocols and impede performance. The concealment supports barriers to change whilst maintaining a less than optimal status quo. Nevertheless, overcoming defensive routines and enacting Model II may be difficult to achieve when members are required to challenge and confront issues and to tolerate conflict.

Perhaps, in identifying and attempting to overcome obstacles of organisational learning, Argyris offers a degree of realism in that he exposes the shortcomings of communication between members in organisations. What people say is often not what they mean: to protect themselves or others from embarrassment or threat they, generally unconsciously, censor or sanitise their thoughts. He challenges defences played out by

members and offers two strategies to overcome defensive routines. The first strategy, Argyris (1990) is to build organisational structures based on empowerment and internal commitment of members to lessen management's control and make the most of the individual capabilities of all members. Secondly, Argyris' strategy is to teach people ways to solve embarrassing or threatening situations to prevent defensiveness.

However, underpinning Argyris' observations are an acceptance of an egalitarian model of organisational practices that may be more evident in the modern American organisational context. Even in an egalitarian organisational structure that recognises the need for the empowerment of all members for the good of the organisation, knowledge constitutes power. In hierarchical organisations, power is vested in fewer people, usually top management, who govern the dissemination of knowledge. For Argyris, problems arise when those in power are unable or unwilling to source opinion from their members and consequently become isolated in their decision-making and alienate themselves from other stakeholders. Argyris' theory demonstrates that this need not occur though it does rely on an open-minded management approach which values stakeholder opinion and values knowledge. He proposes that while hierarchical structures are more vulnerable to organisational defensiveness than the more egalitarian organisational structures, neither is immune.

Another theorist who seems to advocate an egalitarian model of organisational practices is Dixon (1994, 1999), discussed below.

3.3 Organisational Learning Cycle: Dixon (1994, 1999)

In acknowledging Argyris' influence on her conceptualisation of organisational learning, Dixon's learning cycle (Dixon, 1994, 1999) has parallels with Argyris' notion of single-loop learning and shows other similarities. Both Argyris and Dixon adopt a managerial approach to organisational learning and are advocates of a democratic, egalitarian structure that allows for transparent and open dialogue between all members of an organisation. Both theories embody a reflective practitioner model of learning (cf. Schön, 1983), one in which members of the organisation collaboratively consider issues at hand, decide upon action and take action.

Essentially, Argyris and Dixon have areas of commonality in their assumptions about what an organisation is and how it should be learning. Both work from a consensus rather than a political or conflict model of organisations and in their writings there seems to be an implicit understanding that readers and practitioners share these assumptions. Underpinning these assumptions are understandings that any barriers and failures to learn are systemic in origin, and that the system needs to be fine-tuned to overcome the barriers, rather than evidence of deep rooted conflicts of interest between different organisational groups or different stakeholders in a system.

While Argyris and Schön's (1978) organisational learning theory seems to suggest that error detection is necessary for error correction (Leeuw & Sonnichsen, 1994) Dixon's writing (Dixon 1994, 1999) offer a wider meaning. Dixon proffers that organisational learning is the processes that the organisation conducts to gain new understanding, new meaning or to correct current understanding. It could be stimulated by entrepreneurial or innovative ideas. Gaining new understanding, new meaning is not inevitably problem centred.

Dixon (1994, 1999) suggests that any model of organisational learning needs to be rooted in, and compatible with, individual learning theory and to that end her theory of organisational learning is extrapolated from a theory of individual learning. In doing so Dixon draws a similarity between organisational learning and the experiential learning cycle of Kolb (1984). Briefly, Kolb's theory proposes firstly, that an individual is involved in a concrete experience; secondly, the individual reflects on the total experience (reflective observation); thirdly, the individual draws conclusions about the experience; and fourthly, the individual is able to test out the conclusions through active experimentation. That action both tests the conclusions and sets the scene for further learning.

An example of the consensus model underlying Dixon's writing is provided in her definition of organisational learning. She defines organisational learning as "the intentional use of learning processes at the individual, group and system level to continuously transform the organization in a direction that is increasingly satisfying to its stakeholders" (Dixon, 1994, p.5). It is, therefore, according to Dixon, the continuous

transformation of the organisation through the deliberate application of learning. As with Argyris' definition, organisational learning comprises cognitive processes that lead to deliberate action. By contrast Leeuw and Sonnichsen (1994) note that organisational learning is not usually deliberate but "an ad hoc endeavour" (p.2).

In her theoretical framework for organisational learning, Dixon (1994, 1999) elucidates three types of meaning structures: private meaning structures, accessible meaning structures and collective meaning structures which are integral to the processes. Private meaning structures are those cognitions that organisational members may choose not to share with others. Conversely, accessible meaning structures are those cognitions which organisational members are willing to make available to others and, according to Dixon (1994, 1999), it is through these accessible meaning structures that the organisation is able to learn. Collective meaning structures are jointly held cognitions and they are mainly tacitly understood. Such tacit collective meaning structures facilitate the accomplishment of many organisational tasks, a notion similar to Argyris' theories in use.

Table 1 shows the distinctions between private, accessible and collective meaning structures of organisational members. Individuals hold private and accessible meaning structures that may be explicit and available for discussion. Collective meaning structures are jointly held cognitions, mainly implicit and unavailable for discussion. The reasons for private meaning structures are varied: personal fears, professional advantage or issues of confidentiality. Although accessible meaning structures are available to others for discussion, the availability may be limited by situational factors such as time, space and political expediency. Collective meaning structures are agreed upon, mainly tacitly and mutually understood, and they often dictate the operational protocols in an organisation.

In delineating the meaning structure of organisational members, Dixon's notion of private and accessible meaning structures has parallels with Argyris' notion of "undiscussables". While these otherwise repressed cognitions have relevancy for the way that organisational members relate to each other and behave in the workplace, they

Table 1.

Private, accessible and collective meaning structures.

Private meaning structures	Accessible meaning structures	Collective meaning structures
<p>individually held personal, confidential cognitions unwilling to share explicit and tacit can be available for dialogue</p> <p>Reasons for privacy: respect confidential information strategic or political advantage over others fear of punishment if mistakes or incompetence revealed fear of embarrassment perception of others' indifference</p> <p>boundary between private and accessible gradual and flexible meaning structures sometimes private sometimes accessible</p>	<p>individually held cognitions that may be made public willing to share explicit available for dialogue accessibility to others not automatic accessibility to others determined by circumstances, situations, organisational status</p> <p>Accessibility may be limited by factors e.g., time space political intellectual cultural</p>	<p>collectively held mutually held cognitions need to be shared mainly tacitly understood unavailable for dialogue</p> <p>Include but not limited to: organisational norms, strategies and assumptions</p> <p>Codified in: policies and procedures</p> <p>change gradually and continually over time</p>

sometimes need to be uncovered and communicated to others for organisational problems to be identified and resolved.

According to Dixon (1994, 1999) organisations vary considerably in the ratio of private, accessible and collective meaning but those that have the greatest capacity for learning are those in which the accessible meaning is the most evident. It is because the openness and willingness of members to share their ideas augurs well for organisational learning and transformation. By contrast, she notes that little organisation learning occurs in tradition-bound organisations. These organisations have little capacity for transforming themselves because the collective meaning structures are predominant. These mutually held understandings are unavailable for dialogue and largely unchallenged. This may be because subordinates are reluctant to challenge their seniors, they may fear reprisals if they challenge traditional norms or they may be uninterested in organisational decision-making. Dixon contends that such tradition-bound organisations can function successfully especially in a stable environment. Nevertheless, for the same reasons, tradition-bound organisations might possibly suffer atrophy through lack of stimulation and misunderstanding through lack of open communication.

In organisations in which private meaning structures are the most prominent, little organisational learning occurs. These organisations have little capacity for learning because members act independently or in isolation. It may be that in such organisations individual members are engaged in private study but their learning does not necessarily affect the way the organisation functions. The meaning that the members gain from their learning endeavours is not accessible to others.

To strengthen organisational learning, private meaning structures need to be accessible to influence others. Additionally, by making collective meaning structures accessible they can be tested and altered. Accessibility allows meanings to be interchanged and carefully thought about (Dixon, 1994, 1999).

However, organisational learning does not happen because organisational members exchange their accessible meaning structures. There needs to be someone, or a group in

the organisation, prepared to take a pro-active role and facilitate collective learning. As noted above, Argyris and Schön (1978, 1996) explain that there is no organisational learning without individual learning and that individual learning is a necessary but insufficient condition for organisational learning. Organisational learning is more than the sum of the individual learning (Argyris & Schön, 1978, 1996; Fiol & Lyles, 1985). Fiol and Lyles (1985) explain:

“Although organizational learning occurs through individuals, it would be a mistake to conclude that organizational learning is nothing but the cumulative result of their members learning. Organizations do not have brains, but they have cognitive systems and memories. As individuals develop their personalities, personal habits, and beliefs over time, organizations develop worldviews and ideologies. Members come and go, and leadership changes, but organizations memories preserve certain behaviors, mental maps, norms and values over time” (p. 804).

The relationship between the individuals and the organisation is one of interdependency. Members of the organisation need to capitalise on individual and collective learning and translate that learning into organisational learning. Dixon (1994) argues the reward of collective learning is organisational learning, the ability of the organisation to transform itself. In other words, the reward is that the organisation can change in response to agreed insight and understanding, develop and grow.

To achieve organisational learning, information needs to be (1) generated, (2) integrated, (3) interpreted and (4) acted upon in a connective and cyclic manner according to Dixon (1994, 1999). Accordingly, the organisation learning cycle involves four steps:

1. Widespread generation of information
2. Integration of new information into the organisational context
3. Collective interpretation of information
4. Having the authority to take responsible action based on the interpreted meaning.

These steps are explained briefly below.

The first step, widespread generation of information, includes the process through which the organisation obtains information including who collects it, from whom it is collected and how it is collected. Inherent in this step is the development of a learning culture so that any organisational activity is a learning experience with the educational implications of reflection, self-evaluation and self-correction. Step two, integration of new information into the organisational context, involves the dissemination of all new information throughout the entire organisation with due regard to timeliness, comprehensiveness and accuracy.

Once information is received the next step, collective interpretation of information, involves organisational members making sense of the information. Clearly, organisational members have differing opinions and perspectives and therefore information is interpreted in different ways. It is these differences that underpin organisational learning: without an open discussion about these differences learning does not occur (Dixon, 1994, 1999). This third step has implications for the organisational structures that are in place to facilitate the interpretation of the information. For example, the use of electronic communication may ensure frequent and open dialogue and allow for the expression of multiple viewpoints. Receiving information, nevertheless, is one aspect; learning depends upon organisational members making sense of the information. According to Dixon, there are four pre-requisite conditions for collective interpretation: that information and expertise are distributed not held by one or two members; that three core values, freedom, equality and respect are held; that the size of the organisation is small and the physical environment allows for frequent interaction and that people have strong communication skills to facilitate dialogue.

In contrast to Senge (1990) who emphasised that generating information is the key to organisational learning, Starkey (1998) suggests that step 3 in Dixon's cycle may be the key feature. Starkey elaborates the point that organisational dialogue is crucial because, within Dixon's perspective, "reality and truth are....socially constructed not empirically knowable. Learning is about the collective creation of meaning not dependent upon the insights of experts" (Starkey, 1998, p.544).

Once the shared information is interpreted within the collective, organisational members need the authority to take responsible action based on the interpreted meaning. This fourth step implies that the organisational members themselves have the power to carry out modifications, alterations or cessations of the policies or procedures under inquiry. According to Dixon, organisations benefit from learning as learning can promote greater self-governance and individual responsibility.

3.4 Criticisms of Dixon's (1994, 1999) Theory of Organisational Learning

The following critique discusses the uses and limitations of Dixon's theory by firstly acknowledging the contribution it makes to the area; secondly, by critically examining Dixon's definition of organisational learning.

In her books, Dixon's (1994, 1999) stated purpose is to give clarification to organisational learning and to assist organisations in their management development and employee development. To this end she provides a framework for organisational learning that advocates an inclusive, participatory, collaborative, and emancipatory model of organisational practice. The ideal is that by all members engage in learning, participate in decision making through their shared understanding and that they have the right and the responsibility to shape the organisations in which they work. Accordingly, by sharing in the organisational learning processes, members can liberate their organisations from their hierarchical structures and convert them to more democratic entities.

Dixon (1994, 1999) provides a heuristic for understanding organisational learning and how it might be achieved, and, in the traditional pattern of action research, gives case studies to illustrate her theoretical arguments. She describes practical ways to implement organisational learning that she has observed in organisations. Professedly, the author received various communications from many people who appreciated the ideas in the first edition of her book *The organizational learning cycle* (Dixon, 1999). In a review of four books including Dixon (1994), Starkey (1998) states that they help people better understand that businesses focussed on developing an enhanced

organisational learning capability are more likely to avoid the mistakes of the past and are better equipped to approach the future.

Dixon cautions that organisational learning is not a recipe for organisational success, it cannot guarantee against failure, and determining the relationship between organisational learning and organisational success is problematic. Even when the four steps of organisational learning are undertaken factors such as under-capitalisation, product obsolescence, the influence of international financial markets, and strike action may predominate and render organisational failure.

However, by adopting a consensus model of organisational functioning that is implicitly managerial in its orientation, Dixon's theory assumes homogeneity among organisational members. The theory seems to disregard sectional interest group loyalties and issues of power and control that frequently pervade workplaces.

However, in elaborating her theoretical framework Dixon (1999) makes a number of arguable and unsubstantiated claims e.g.,

- “....societal examples of disparate ideas leading to new learning: the difficulties between the sexes have caused a new and more equitable way of being.....the differences between handicapped and non-handicapped has (sic) led to a more humane society” (p.95).
- “.....one of the reasons so little organizational learning occurs is that the conditions of freedom, equality and respect so rarely exist in organizations. Organizations will not be able to learn effectively until these are manifest” (p.108)
- “Organizational dialogue is interaction in a collective setting that results in mutual learning upon which the organization can act” (p.110)
- “The essence of organizational learning is the organization's ability to use the amazing mental capacity of all of its members to create the kind of processes that will improve its own learning capacity” (p.122).

These quotations reflect a simplistic and idealistic view of human behaviour and organisational life. For example, Dixon seems to assume that we live in an egalitarian society with fewer barriers between men and women. This may be true of certain

sections of American society but arguably does not apply to women in Islamic countries, China, Africa or indeed the indigenous women of Australiasia. Further, the second quotation perhaps indicates Dixon's failure to recognise that even in organisations that lack freedom, equality and respect, learning will still occur though not necessarily the most appropriate topics/issues for an egalitarian organisation. The third quotation suggests that organisations can act as a result of mutual learning. This is not true of organisations that are stymied by external factors such as legislation, budgetary and political controls. Finally, the phrase "amazing mental capacity of all its members" in the fourth quotation, is highly subjective and somewhat emotive and extravagant. Dixon's simplistic and idealistic view fails to recognise the harsh realities of mainstream organisational practice which shows no signs of movement towards egalitarianism. Rather, mainstream organisational practice remains steadfastly based in very real differences of power and interest.

Managerial ideology can be evidenced in Dixon's definition of organisational learning which states it is "the intentional use of learning processes at the individual, group and system level to continuously transform the organization in a direction that is increasingly satisfying to its stakeholders" (Dixon, 1999, p.5). It also reveals that Dixon operates from a consensus model of organisational functioning rather than a pluralistic model that recognises the differences and inequitable relationships in organisational functioning. As such the definition appears to contain shortcomings discussed below.

The main limitation resides in the phrase "*increasingly satisfying to stakeholders*" as it fails to recognise that the different stakeholder groups have different interests, different agendas, different biases. It cannot be assumed that any learning outcome will be satisfying to all. For example, the introduction of new industrial technology may result in opportunities for middle management to increase productivity and, simultaneously, result in downsizing of blue-collar workers. It is doubtful whether the redundant employees would find the learning satisfying.

There appears to be another flaw in the basic premise of the definition since underpinning it is the assumption that the intentional use of learning processes will result in positive outcomes, in accordance with the views, and to the satisfaction of all

the stakeholder groups in an organisation. It does not take into account that planned learning processes can produce intended and unintended outcomes and that these outcomes can be positive or negative. The *intentional use of learning processes* may result in consequences that might not necessarily equate with changing people or the organisation in a positive way, let alone be satisfying to all the different stakeholder groups. Thus, the repercussions of the learning may outweigh the value of any perceived gains.

A further shortcoming resides in the phrase “*continuously transform the organization*”. It may be seen that a state of continuous transformation is not necessarily in the best interest of various stakeholder groups. Dixon explains that for continuous change, the emphasis is on the processes that inform and facilitate the ongoing change. The process, rather than the result, is the critical aspect; the result, or destination, is just one part of the process. However, irrespective of process or destination, continuous transformation can lead to overload for employees, exhaustion, dissatisfaction and turnover. This, for example, has been the experience of New Zealand secondary school teachers in recent years with the introduction of the new qualification framework, new special education initiatives and new curriculum documents. As one stakeholder group involved in the processes that inform and facilitate the changes, many teachers are dissatisfied with the continuous transformation of secondary education. As a response, large numbers of experienced teachers are leaving the profession (PPTA, 1999).

Whilst the definition is embedded in managerial ideology, the theory calls for all organisational members to be involved in the entire four steps of the learning cycle. Dixon (1994, 1999) contends that it is not enough for individuals to focus on one or two of the steps; for the learning to be efficacious there must be an engagement of the four steps. Indeed, an important feature of the theory is that the organisation members must engage in all steps of the process for organisational learning to occur.

However, it may be that for some members their contribution at one or two steps may be more desirable and advantageous for the individual and organisations as a whole. Although organisational learning, within Dixon’s paradigm, profits by individual differences, in terms of sharing individual meaning structures, it may overlook an

important difference: learning styles. Learning styles, or cognitive styles, are the preferred ways that individuals have for processing and organising information and they indicate the way that individuals perceive, interact and respond to learning situations (Shuell, 1981). Characterising learning style as field-dependent or field-independent (cf. Witkin & Goodenough, 1977) is an approach with applications in education and business and may have application in organisation learning. Accordingly, learning style effects decision-making (Gil, 1990; Mills, 1995;) and individuals perform better in situations that accommodate their preferences (Kahtz & Kling, 1999; Whyte, Karolick, Neilsen & Elder, 1995). Those who are field-independent, for example, provide their own structure to learning, prefer working independently and work that demands a high level of analytical reasoning. Group discussions, co-operative learning and participation in shared socially constructed endeavours are inconsistent with their learning style. Therefore, for some organisational members, adapting to organisational learning within Dixon's paradigm may be inconsistent with their learning styles and result in consequences detrimental at both individual and organisational levels. It may be that, rather than being engaged in all four steps, organisations need to have flexibility in accommodating individuals' learning styles.

Managerial ideology is further evidenced when Dixon talks of organisations in which the greatest capacities for learning are those in which accessible meaning is the most evident. She suggests it is because the openness and willingness of members to share their ideas augurs well for organisational learning and transformation. The assumption is that people want to become involved and contribute to the change process. This may well be, but, it may also be that such openness and willingness can result in friction, factionalism, stagnation or regression. What might appear to be democratic and open dialogue may ultimately manifest as in-house lobbying and the creation of short-term strategic alliances.

As with Argyris' theory of organisational learning, Dixon's (1994, 1999) action research model provides a useful heuristic for discussion. Dixon provides a schema for achieving organisational learning with her organisational learning cycle and in her text gives case studies that illustrate her theory. According to Starkey (1998), the value of the Dixon's 1994 book is enhanced by her grounding of theory in the case studies.

From existing literature she extrapolated learning initiatives in the US based organisations Chaparral Steel and World Health Organisation (WHO) and placed them within the four steps of the organisational learning cycle. For example, to show the widespread generation of information, Dixon noted that Chaparral Steel's supervisors are given sabbatical leave and multi-functional teams visit suppliers and competitors. In their quest to eradicate smallpox, the headquarters' staff of WHO spent one-third of their time in the field which illustrated step two of the cycle, integrating new and local knowledge into the organisational context.

In the case of Johnsonville Foods, Dixon (1999) places their "learning processes... in the organizational learning cycle" (p.89). As an example for step three, Dixon lists "egalitarian conditions, small organizations and reduction in hierarchy from six to three layers". Clearly, the listed items are not processes but structural features of the organisation, which may have facilitated learning processes that contribute to collective interpretation of information. Further, for step four, Dixon lists "member discretion to meet performance standard within guidelines, reward based on individual, team performance and personal development, profit sharing...". Again, these are not learning processes but organisational policies that may have facilitated learning processes. However, it is difficult to see how these changes in policies exemplify "the authority to take responsible action on the interpreted meaning".

Not only can Dixon's paradigm of organisational learning be seen to be inflexible in its membership, it can be seen to be a closed system in that it is the organisational members themselves who engage in all the steps. The role of a researcher or consultant, therefore, may be facilitative of organisational learning but, because, generally, researchers or consultants do not have the power to carry out modifications, alterations or termination of the policies or procedures under inquiry, they are not participants in the complete cycle. Further, it is a moot point as to how realistic and how likely it is that lower level members of an organisation would have the power to carry out changes to internal policy or procedures as a result of their inquiry, the fourth step.

Despite these criticisms, Dixon's theory is a contribution to the area of organisational learning, it provides the basis for discussion, and it signals the importance of engaging

organisational members in the organisation and not just the job itself. Importantly, in providing case studies Dixon gives insight into the ways in which organisational learning might be facilitated. Her main contribution may lie in the notion that for organisations to change, learning needs to be undertaken by a collective, and that organisations might become communities of learning and practice.

The following section examines the organisational learning features and practices of ACC in relation to the theories of Argyris and Dixon.

3.5 Organisational Learning and ACC

In the early 1990s subsequent to the global share market crash, organisational restructuring occurred on a national scale in the realisation that, if New Zealand were to exist in a global free market economy, private and public sector change would be required. At that time a new conservative government had been installed and immediately embarked on major economic and social policy changes to address what was perceived as an economic crisis. Policy changes were seen by government as the most appropriate tool to correct the financial deficit whilst maintaining political credibility.

The impact of a broad, systemic mandate for change was driven from Ministerial level to the corporate level and resulted in major policy changes for ACC. The ACC Board's response, therefore, was externally driven by Ministerial imperatives to satisfy the needs of the government but at the same time, the organisation was required to maintain its core values in upholding the Woodhouse principles.

ACC's top management responded to government directions and redefined its goals in a new vision statement (see Chapter 1). One of the ways in which management tried to achieve components of its vision statement was to move towards case management, an action strategy. As discussed in Chapter 1, ACC had changed its model of work practice from, essentially, a paper-based system in which claims were processed and payments made to claimants, to a model of case management. However, several months after the introduction of case management and brief platform training, there was a gap

between ACC's espoused theory of case management ("a strategic approach to processing, communicating and decision making on each claim..." Source: ACC) and its theory-in-use in which case management continued to be a mechanistic processing of claims and an authorisation of payments to claimants. The inconsistency between its espoused theory and its theory-in-use required that action be taken.

To correct the anomaly and move the case managers from fiscal compensation by way of reactive processing to holistic compensation and rehabilitation, the training programme (Chapter 2) was designed and implemented. Within Argyris' theory, learning occurred when the training programme was implemented. ACC's top management response to the inconsistency with its espoused theory of case management and theory-in-use may be seen as single-loop learning. Though ACC's top management approached the case management anomaly within the single-loop perspective, it may have been appropriate to engage in double-loop learning. The double-loop approach would have required the organisation's Board to question "the underlying causal mechanisms that precipitated the problem" (Leeuw & Sonnichsen, 1994, p.3).

For ACC, the causal mechanisms might lie in the structure of the organisation, and the legislation and regulations, which govern it. For example, a case manager cannot always respond to an injured person's needs because of the bureaucracy's inflexibility and deliberate regulatory approach. As Duncan (1995) observes "The ACC case manager's task becomes restricted by a bureaucratic system which leaves little room for discretion, cannot always respond to actual and reasonable needs, and which does not necessarily compensate the victim at the level required for successful rehabilitation" (p.244). Thus, the case manager is guided by regulations, which may prevent successful client rehabilitation. The basic cause of the failure to case manage effectively may rest in the rules, policies and regulations which affect the case managers at every decision point. Ironically, the case manager may be seen to be a victim of the system, just as the claimant, for whilst the case managers' actions might be consistent with the demands of the bureaucracy, they are prevented from flexible and needs-based decisions and successful rehabilitation of their claimants can be compromised.

Whilst Leeuw and Sonnichsen (1994) concede there is a perception that organisations are not effective at recognising the underlying antecedents to their problems, it may be that the blindness was part of the skilled incompetence Argyris mentions. On one level, ACC top management recognised a gap in their theory in action but, on another level, unconsciously or consciously chose to perpetuate the structural and existing culture. There were few changes to the existing bureaucratic structures or culture that governed the organisation.

Top management can appear to have acted in a competent and responsive manner by instigating a training programme to correct the anomaly in case management and to do so, went to considerable effort and cost. Certainly, the training programme was intended to change the way in which the case managers worked but, without an examination and change of the policies and procedures that informed their work practices, the effectiveness of the training programme may have been jeopardised.

Learning is a key component of organisational development yet barriers can stymie learning in organisations, particularly organisational defence routines. Most organisations exhibit powerful organisational defensive routines (Argyris, 1999) and ACC was no exception. The evaluation research, intended to contribute to ACC's organisational learning, encountered organisational defensive routines that impacted on the design, method and subsequent results of the evaluation research. These defences were exhibited in the communication difficulties and barriers and the constraints inherent in the hierarchical and bureaucratic structure of ACC; their impact is elaborated below.

Communication difficulties and barriers

In the study, important sources of information were placed off limits. It was not possible, for example, to gain access to other data bases such as performance indicators and satisfaction surveys, observe case managers at work, or randomly select a sample of supervisors for interviews despite requests. Placing these important sources of information off limits may have been a covert attempt to protect the organisation from undesirable exposure but the outward and overt attempt to protect the case managers revealed organisational defensive behaviour. By disallowing access to personal work

data members of ACC top management controlled their environment and can be seen to exert a powerful organisational defence.

Further potential sources of information were the client group and trainees who had left the organisation after completion of the training. In the study of transfer it would have been helpful to obtain information from trainees who had terminated employment in ACC but who had transferred their recently acquired skills into new work environments. Accordingly, requests were made to include clients and ex-employees/trainees in the study. However ACC management would not authorise contact with such groups.

Interestingly, when asked about obtaining feedback from clients, a senior member of ACC commented that because a client's expectations may be uninformed and unrealistic in terms of their entitlements and ACC's responsibilities, there could be client dissatisfaction with service delivery. From the manager's position that represents the organisation's perspective, the case manager may have done an outstanding job, within the constraints of legislation, policy and practice, in case managing that client. In such situations, client feedback is likely to be negative and at odds with ACC's assessment of the service. Notwithstanding, litigation involving clients' dissatisfaction with ACC decisions indicates that client expectations are not always unrealistic and client dissatisfaction not always misplaced. High Court and Court of Appeal judgements have often ruled against ACC in favour of their clients. Examples of these cases are: ACC v. Broadbelt, 1990 (Robertson, 1990); Mitchell v. ACC, 1991 (Robertson, 1991); ACC v. Curtis, 1993 (Robertson, 1993); ACC v. McKee, 1993 (Robertson, 1993); Mollgaard v. ACC, 1999 (Robertson, 1999); Watton v. ACC, 2000 (Walsh & NZPA, 2000; NZPA, 2000).

Nevertheless, the example above highlights a defensive organisation's propensity to protect itself by curtailing the opportunity for claimants to express negative opinions about the service delivery. In presenting a defence in this instance, the ACC member intellectualised the rationale for denying access to clients and blamed client dissatisfaction on the clients' ignorance rather than the actual performance of ACC.

Organisational defences can also be seen to be played out in ACC's published rhetoric such as the vision statement and the list of potential benefits, discussed earlier, the latter possibly crafted to rationalise the training programme. The rhetoric displays inconsistencies, ambiguities and confusions which when not challenged and hence, accepted at face value, become "undiscussable". What appear to be clear and straightforward but on closer look are ambiguous statements or not possible to put into effect are examples of defensive reasoning processes - a consequence of Model I.

Hierarchical structure

The hierarchical structure of ACC (see Figure 1) reflects the existing and prevailing culture within the organisation at the time and serves as a protective mechanism, which moderates the degree of authority that individual members have over the dissemination of information. Notwithstanding, a hierarchy is the only realistic design for a large organisation and the most functional way of organising a large bureaucracy. The hierarchical structure nonetheless gives decision makers time to craft messages, and the opportunity to further entrench or escalate the defences.

The following example highlights the hierarchical and bureaucratic structure encountered in the present study. The present evaluation research was commissioned by the General Manager Operations (GMOps) who held responsibility for the regions, branches and their staff which include branch managers, principal case managers, case managers and support staff (see Figure 1). The GMOps delegated the supervision of the present research to a project manager through whom all communications to ACC staff were relayed. To conduct the job analysis (Appendix A) the project manager's permission was sought; the project manager conferred with a regional manager; that regional manager selected a branch in which the job analysis could be carried out; the branch manager was contacted by the regional manager; the branch manager's permission was obtained; the branch manager then requested co-operation from the principal case manager. Finally, the principal case manager gave consent for nominated case managers to be approached by the present researcher. Such a chain of events was repeated in other requests of the organisation during the study, for example, gaining access to ACC's library and requesting the payroll information from which the control

group could be randomly chosen. In these instances, the communication “chain of command” proved cumbersome and time-consuming.

The origins of ACC’s organisational defensiveness may lie in an uncertainty about possible impending, radical restructuring towards privatisation and an enfranchisement of the services provided by the current bureaucratic monopoly. In New Zealand the health and education sectors had already undergone massive restructuring in the early 1990s. Many government departments had become state-owned enterprises (SOEs) and according to Duncan (1995) the ARCI Act 1992 clearly indicated the long-term policy goal was deregulation of the injury insurance market.

Also, it may have been that the present research presented a threat and the organisation, sensitive to its reputation in the community, was protective of staff, work-place systems and practices. Because it is a public sector organisation, the present evaluation research had potential for public scrutiny at a specific level, viz., the case management training programme.

Public confidence in ACC was low. Cliffe et al., (1994) noted that the reputation and standing of ACC within parts of the community is poor and capitalised on by interest groups. A report by Parliament’s labour select committee into the performance of ACC for 1995 noted that several key issues had to be addressed to restore public confidence. The key issues concerned “the dramatic increase in the number of claims, the alarming number of long-term claimants and the high staff turnover which was attributed largely to high caseloads and staff dissatisfaction with the inflexible regime” (NZPA, 17 April, 1996). In the light of the global dissatisfaction ACC withstands at a political level and at a societal level, the evaluation research may have presented a high risk factor for the credibility of ACC’s internal policy.

With a low level of public confidence and its poor reputation, ACC, albeit ostensibly focused on improvement, may be seen to be defensive and its hierarchical and bureaucratic structure key mechanisms through which organisational defensiveness was played out.

With regards to Dixon's theory of organisational learning, the evaluation research was an attempt to capture the trainees' and their supervisors' private and accessible meaning structures in order to make them available in a wider organisational context. By enabling some private meaning structures to become accessible meaning structures, the evaluation research was intended to contribute to the organisational learning of ACC in a small yet important way. It was intended to contribute to the first step of the learning cycle in that it provided external data for a group of ACC managers to consider. Along with other data on the training programme (e.g., training providers' feedback, cost/benefit analysis), the evaluation research presented another way of viewing the programme.

Because the evaluation research was independent and external to ACC, it provided one set of data that was integrated into the organisational context by senior members of ACC who had the authority to take action based on all the relevant information.

On one level the evaluation was to examine the transfer of training but on another level the evaluation was another mechanism through which ACC played out its defence and may be seen as a risk management strategy to provide early detection of success or failure of the training programme. By employing an independent evaluator, ACC top management put a buffer between itself and other stakeholders. If the training proved to be successful, ACC could take credit for the initiative, and if weaknesses were identified during the training, ACC could take credit for identifying the failure, blame the training provider and still save face and allow for another action to be taken (single-loop learning).

In the light of Dixon's definition of organisational learning, the implementation of the training programme may be seen to be the intentional use of a learning process to improve organisational functioning. However, the training programme was a top-down initiative, driven by management in partial response to the government's requirement of changes to social policy. Aside from the government, members of ACC top management who perceived the need for change and those who designed the training programme, there was not close involvement of all stakeholder groups which include

government, top management, case managers (trainees and non-trainees) support staff, trainers, clients and the training provider or, indeed, the evaluation researcher.

As the potential benefits of the training programme indicate (see Chapter 2), the perception of some members of top management was that the front line employees would transform the organisation so that it would become increasingly satisfying to its stakeholders. However, as seen in the critique of Dixon's definition of organisational learning, the satisfaction could be limited. It is unlikely, if not impossible, that all stakeholder groups would be satisfied with the training programme or its implementation. Further as discussed above, the potential benefits of the training programme can be seen to be lacking in clarity, to be ambiguous and unrealistic. In spite of that, senior members of ACC were attempting to respond to the government's mandate to change and the move to case management was regarded as a key factor.

Finally, underlying the organisational learning theories of Argyris and Dixon there seems to be a consensus model of organisational functioning and the theories are primarily concerned with incremental adjustment, rather than bringing about radical change. The literature is weak on structural analyses of hierarchy, knowledge sharing and power issues and does not focus on the deep-seated internal contradictions. This weakness fails to identify which groups have knowledge and power, how they acquired it, how they resource it, the methods by which they retain it, how they exercise it, and who challenges it and why. The literature generally overlooks the basic interrelationships within the context of the total social system, ignoring the diversity of stakeholder groups within the organisation and tends to homogenise the organisation. Thus, the organisational learning literature of Argyris and Dixon assumes a managerial perspective and consensus model of organisational functioning and does not fully address the fragmented and contradictory situation encountered in the present evaluation.

3.6 Organisational Learning and Evaluation

As mentioned above, organisations exert powerful barriers to organisational learning yet there are mechanisms that can assist organisations in monitoring their performance.

Writers (e.g., Caulley, 1993; Leeuw and Sonnichsen, 1994; Ramage, 1996; Sharp, 1994) contend that evaluation research can be an aid to organisation learning, and as a “tool” (Sharp, 1994) it can assist members of an organisation. Evaluation, per se, does not guarantee organisational learning, and cannot be portrayed as a “panacea to organisational learning” (Leeuw & Sonnichsen, 1994, p.3) but it is an approach used in collecting and providing information to decision makers. Other feedback mechanisms include public inquiries, staff meetings, performance reviews, and investigative journalism. The authors suggest, however, that evaluations are particularly important feedback mechanisms to aid organisation learning for two reasons: (1) evaluation research typically follows methodological standards of robustness, validity and reliability and (2) it “can be linked to the necessity of discharging public responsibility of intervening in society” (p.5).

Evaluation research can give rise to single or double-loop learning according to Leeuw and Sonnichsen (1994), but to play a role in organisational decision-making at either level, something more than the design and execution of the evaluation needs to occur. They suggest that organisational learning calls for information sharing between the organisation and its internal and external environments. However, according to Leeuw and Sonnichsen (1994) four conditions need to be met for information sharing to occur. First, the organisation must be able “to sense, monitor, and scan significant aspects of its internal and external environments”; second, it must be relevant to the organisation’s guiding norms and values; third, it must be able to notice irregular or behaviour diverges from the policies, procedures etc., and, fourth, it must have the ability to remediate the irregularities. According to Leeuw and Sonnichsen (1994) evaluations stimulate discussion about core organisational issues when they ask two questions: (1) “How well are we doing?” and (2) “Does it make sense to do it, even if it is being done well?” These questions allude to evaluation criteria of effectiveness, efficiency and appropriateness (Sharp, 1994) discussed in the following chapter.

An inclusive approach to information sharing is fifth generation evaluation (see 4.1.8), a method in which managers and programme staff self-evaluate and reflect on their own work, analyse problems, offer solutions and take action to remediate them. When this “self-evaluating and reflecting” (Caulley, 1993, p.132) is part of everyday work

practices, a possible outcome is organisational learning. It is, however, more suited to a “relatively non-hierarchical organisation, associated with a democratic, collaborative management style” (Caulley, 1993, p.132), not the traditional management style of public sector organisations in which power is vested in few decision makers.

Notwithstanding, Leeuw and Sonnichsen (1994) argue that to be effective in the management of public sector organisations, evaluations need to become institutionalised, they need to be part of the organisation’s procedural practice.

3.7 Chapter Summary

The paradox for organisational learning is that organisations can learn through their members but the organisational members themselves create barriers and constraints that inhibit learning. These inhibitors to organisational learning, organisational defences, can be conscious or unconscious but regardless of the intention, they exist in most organisations. Chapter 3 examined how organisations learn and how they inhibit learning by discussing the theoretical underpinnings of organisational learning. The theories of Argyris and Dixon were described, critiqued and illustrated within the context of the present evaluation. Although, and possibly unavoidably, the organisational defences impacted on the present evaluation, it was intended as an aid to assist senior management of ACC in its learning. The following chapter, Chapter 4, outlines the theoretical basis and development of the concepts of evaluation, evaluation of training and transfer of training.

Chapter 4

Theoretical Basis and Development of Evaluation, Evaluation of Training and Transfer of Training

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Chapter 4 outlines the theoretical basis of evaluation which has contributed to the development of the study by describing the concepts of evaluation, evaluation of training and transfer of training. Firstly, the chapter outlines the role and purpose of evaluation and the evolution of the 'generations' of evaluation that show the four different approaches to evaluation. The chapter then describes the evaluation of training and presents two models of evaluation of training, viz., Kirkpatrick (1959, 1967, 1994) and Armstrong (1996) that have guided the present evaluation. Finally, the chapter reviews transfer of training and introduces three models of the transfer process: the Baldwin and Ford (1988) model, Yelon's (1992) MASS model and Analoui's (1993) socio-technical model.

4.1 Evaluation

4.1.1 The role and purpose of evaluation

Rossi and Freeman (1993) define evaluation or evaluation research as "the systematic application of social research procedures for assessing the conceptualization, design, implementation, and utility of social intervention programmes" (p.5). It is concerned with achievements made through interventions (Munck, 1997) and is an enterprise directed towards decision-making about the worth, or worthlessness, of various activities. Therefore, the aim of an evaluation is to provide stakeholders (people who have a stake or an interest in the programme or its evaluation) with the basis for decisions. The aim of evaluation research contrasts with the aim of basic research which, more generally, aims to create or increase scientific knowledge.

Evaluations are undertaken for a variety of reasons: to determine the worth of ongoing programmes and to assess the utility of efforts to improve them; to judge the usefulness of new programmes and initiatives; to increase the effectiveness of programme management and administration; and to satisfy the accountability requirements of programme sponsors (Rossi & Freeman, 1993). Evaluators external to a programme sponsor may undertake them or internal evaluators may undertake them.

Thus, evaluations serve different purposes and are performed by either external or internal evaluators. Policy makers and managers use evaluations for management

decisions based on results and they use evaluations to assist organisational learning (Forss & Carlsson, 1997). An evaluation should provide the people who commission it with information that is technically sound, useful and believable (Fink & Kosecoff, 1978). For decision-making, decision-makers already have various other types of information about a programme and, therefore, evaluation findings have to be distinctive (Finne, Levin & Nilssen, 1995). Importantly, to promote the utility of evaluation findings, the research must be valid, objective and have “good connections to the political context of use” (Finne et al., 1995, p.13). According to Morell (1981) validity, utility and theory are the three basic elements of good evaluation.

There are many kinds of evaluation and the purpose of the evaluation usually determines what type of evaluation is utilised. Possibly the most important distinctions in evaluation is that between improvement generally labelled ‘formative’ after Scriven (1972) and effectiveness often labelled ‘summative’. Formative evaluation (Scriven, 1972) has been used to describe the process by which an intervention is tested, analysed, evaluated, modified and re-tested. Its aim is to provide ongoing, detailed feedback to the programme’s founders. Formative evaluations improve programme achievement by influencing immediate decisions about the programme, especially how its integral parts and procedures can be refined (Shadish, Cook & Leviton, 1991). Thus formative evaluations help *form* what is being evaluated by examining its delivery, the quality of its implementation and by assessing aspects of the organisational, procedures and people involved.

There is a subset of different types of evaluation within formative evaluation, e.g., (1) needs assessment (2) evaluability assessment (3) structured conceptualisation (4) implementation evaluation and (5) process evaluation. Briefly, “needs assessment determines who needs the program, how great the need...evaluability assessment determines whether an evaluation is feasible....structured conceptualization...helps stakeholders define the program of technology, target population...implementation evaluation monitors the fidelity of the program...process evaluation investigates the process of delivering the program...” (Trochim, 1999, <http>)

Scriven (1972) uses the term 'summative evaluation' to describe research that emphasises whether the programme in question achieves its objectives. Summative evaluations judge a programme's worth by assessing the effects of the programme. In the same way as formative evaluations can be subdivided so too can summative evaluations: (1) outcome evaluations (2) impact evaluation (3) cost-effectiveness and cost-benefit analysis (4) secondary analysis and (5) meta-analysis. In Trochim's words, "outcome evaluations investigate whether the program or technology caused demonstrable effect.... impact evaluation...assesses the overall or net effects – intended or unintended...cost-effectiveness and cost-benefit analysis address questions of efficiency...secondary analysis re-examines existing data to address new questions or use methods not previously employed, meta-analysis integrates the outcome estimates from multiple studies to arrive at an overall or summary judgement on an evaluation question" (Trochim, 1999, [http](#)).

A further and crucial kind of evaluation is 'meta-evaluation'. Meta-evaluation is "the systematic process of examining an evaluation and judging its quality and utility" McLean (1991, cited in Sharp, 1994, p.39). It is an approach used to determine an adequate, acceptable evaluation. "Meta-evaluation can improve the potential for evaluations achieving acceptable standards and allow decision-makers to have confidence in the performance information" (McLean, 1991, cited in Sharp, 1994, p.39). In agreeing with McLean, Sharp (1994) elaborates further by stating that allowing others to evaluate an evaluation requires the co-operation of those who commission the evaluation.

Scriven (1972) promoted meta-evaluation as a means of controlling bias ensuring that "the evaluators get evaluated". After information has been gathered and analysed the evaluator can unintentionally (or intentionally, albeit unethical) bias the evaluation when writing a final report. By making drafts available to others prior to final printing the intention is that biases can be made explicit. However, the issue can be more complex than Scriven suggests because the evaluators of the evaluation are themselves not necessarily unbiased and can sanitise the report or 'weight' the report to suit their own agendas.

Stufflebeam (1978) differentiates the meta-evaluation process with the terms formative meta-evaluation and summative meta-evaluation. Formative meta-evaluation takes place from the beginning of the evaluation and summative meta-evaluation examines the merits of the completed evaluation. The evaluative process becomes a continuous and iterative procedure. Meta-evaluation, therefore, is evaluation of evaluation; it is an ongoing process of judging the characteristics and usefulness of an evaluation.

4.1.2 Criteria for evaluating a programme

Whilst formative and summative are regarded as types of evaluation, there are several criteria for judging the worth of a social programme / intervention: efficiency, effectiveness and appropriateness. In a paper on appropriate evaluation Sharp (1994) quotes the Baume Report, an evaluation in Australian health and welfare services, which defines social programme evaluation as: “the process of thoroughly and critically reviewing the efficiency, effectiveness and appropriateness of any program or group of programs” (Senate Standing Committee on Social Welfare 1979a, cited in Sharp, 1994, p.36). Accordingly, within that interpretation, efficiency, effectiveness and appropriateness are criteria for evaluating the programme under inquiry. Underlying these criteria are quality and utility, which as Morell (1981) alleges, are fundamental to good evaluation.

The distinction between efficacy and effectiveness is an interesting one (Wortman, 1983). Efficacy determines if an intervention can have an impact and effectiveness determines if the intervention does have an impact. For example, efficacy and effectiveness beg two different questions in the evaluation of a literacy intervention programme to members of long-term unemployed: (1) Can a literacy intervention programme have an impact on long-term unemployed? (2) Does a literacy intervention programme have an impact on long-term unemployed? Efficacy implies possibility, feasibility; effectiveness implies reality.

“Appropriateness” is the neglected or undefined criterion in the evaluation literature (Sharp, 1994). One of the criteria for the evaluation of appropriateness is “the extent to which the program is in accordance with the moral, ethical and social norms of the

time” (Gross, 1979, cited in Sharp, 1994, p.36). Therefore, efficiency, effectiveness and appropriateness are criteria to judge a programme and, in other words, the criteria pertain to questions of a programme’s usefulness, adequacy, and moral, ethical and social acceptability. This can be problematic, however, because underpinning appropriateness is the assumption that there is a consensus view of society in which all parties agree on the moral, ethical and societal norms and that these norms remain constant; that is often not the case.

Recent history provides a concrete example of the temporal nature of appropriateness in term of its functional application. A case in point might be the removal of Aboriginal children from their homes in Australia post World War II (W.W. II) which stemmed from the late 18th and 19th century practices of assimilation, particularly evident in New South Wales and Tasmania (Austlii, 2000, [http](#); Human Rights and Equal Opportunities Commission, 2000, [http](#)). Underpinning the 1950s programme, now known as the “Stolen Generation”, were the continuance of ideas of racial supremacy, moral superiority and feelings of religious and political righteousness (the “White Australia” policy). The programme did, indeed, show effectiveness and efficiency but only in terms of the commonly held moral, ethical and social norms of that time. Times have changed and along with them came challenges to moral ethical and social viewpoints regarding the rights of indigenous minorities. The inappropriateness of the program has resulted in the emergences of grievances and a call for retribution and compensation for the ‘stolen generation’. This transition in moral, ethical and societal norms was never envisaged by the advocates of assimilationist policies of the Australia of the 1950s.

Any social programme can be evaluated and, perhaps, the most critical of all evaluation criteria is “appropriateness”. The problem is the transient and contextual understandings of notions associated with the term “appropriate”. In a constantly changing world, the notions of appropriateness are also subject to change and would lack integrity if they did not take this factor into consideration.

Meta-evaluation ought to be practised at all stages and become an integral part of evaluation. At the heart of an evaluation is a programme. In all decision-making related to the design and implementation of the evaluation, the evaluation criteria of

effectiveness, efficiency and appropriateness are foremost. As a reflective practitioner (cf. Schön, 1983), an evaluator engages in meta-evaluation by continually examining decision-making and judging the quality and usefulness of the evaluation against the criteria. Meta-evaluation “oils the wheels” of formative and summative evaluation by keeping the evaluator on the track of accountability and simultaneously maintaining the integrity of the evaluation.

Formative evaluation is informed by meta-evaluation and summative evaluation is informed by formative evaluation. Consequently, when the formative evaluation meets the criteria of effectiveness, efficiency and appropriateness, it is likely that the summative evaluation will have validity and utility. Summative evaluation is, therefore, fed by the formative evaluations that have been informed throughout by the reflective practitioner model of meta-evaluation.

Further, a summative meta-evaluation (Stufflebeam, 1978) may be carried out by others, such as those commissioning the evaluation and other stakeholders, to determine the quality and utility of the evaluation.

Despite the rhetoric on evaluation, there is extensive literature on the under-utilisation of evaluation results (e.g., Chemlinski, 1985; Cousins & Leithwood, 1986; Scriven, 1993; Weiss, 1972). Pollitt (1997) proffers that the evidence of evaluation impacting on high-level decision making occurs only to a very small extent, usually when conditions are favourable for this to occur. His sobering tenet is that “the status of evaluation remains both marginal and largely symbolic” (p.3) and that the main use of evaluation is for appearance “it is seen to be part of the armoury of ‘modern management’” (p.3) and that being seen to evaluate programmes is more important than their effectiveness.

4.1.3 Tracing the development of evaluation

The historical roots of evaluation can be traced to the seventeenth century when the identification of populations, the causes of mortality, morbidity and social disorganisation were of practical interest to philosopher Thomas Hobbes and his colleagues (Cronbach et al., 1980). An associate of Hobbes, William Petty, devised

numerical measures he called “political arithmetic” to assess social conditions instead of relying on words, the method considered adequate at that time (Cronbach et al., 1980). Nevertheless, empirical social research did not gain momentum for another hundred years (Cronbach et al., 1980) when central and local governments began to take responsibility for social problems and requested evaluative information.

The adoption of the systematic databased evaluations of today, however, is a comparatively modern development. This modern form of evaluation has been evolving over the past hundred years, from first generation evaluation to the latest construction, fourth generation evaluation (Guba & Lincoln, 1989). A fifth generation (Caulley, 1993, 1996) has been proffered, an example of which is Fetterman’s (1994) empowerment evaluation. It has received a mixed reaction in the literature and its status as an evaluation approach has been questioned (see Scriven, 1996). Scriven (1996) argues that empowerment evaluation is an approach to teaching evaluation; it is not an approach to evaluation just as teaching mathematics is not doing mathematics.

With each succeeding generation the level of sophistication of evaluation has increased and this has coincided with the growth and refinement of social science research methods as well as the demographic, political, and ideological shifts of this century (Rossi & Freeman, 1993). A brief description of the five generations is given below.

4.1.4 The first generation: measurement

In its earliest form, evaluation was primarily concerned with measurement. The measurement of attributes of schoolchildren heralded the beginnings of this first generation of evaluation. In 1904, the French minister of education asked psychologist, Alfred Binet, to devise a test to identify children with mental disabilities (Guba & Lincoln, 1989). Thus, the first useful test of mental ability (Binet-Simon scale) was published in 1905 and ushered in the evolution of intelligence testing. Binet’s standardised sample of 50 children provided norms against which other children’s scores could be compared and evaluated.

The application of first generation evaluation was a notable contribution to the recruitment of military personnel in World War I (W.W.I). During the early part of that war (1915-1919), the American Psychological Association was asked to devise an instrument to screen prospective recruits for the United States army (Guba & Lincoln, 1989). The resultant Army Alpha was the first group intelligence test and was administered to more than two million men (Guba & Lincoln, 1989).

As well as in educational and military settings, first generation evaluation was applied in industry. In industrial settings, Frederick Taylor (1856-1915) used the scientific method in the form of scientific management to define 'the one best way' for a job to be done. Taylor believed that objective analysis of data collected in the workplace could provide 'the one best way' to organise work. Through time and motion studies, Taylor advanced four principles for selecting, training and developing a worker to overcome the problem of inefficient workers (Robbins & Mukerji, 1994). First generation evaluation of work and workers therefore, was used to increase productivity.

Prior to W.W.I, the early efforts in the systematic evaluation of programmes had been directed at assessment in education and public health. By the 1930s, social scientists were supporting the use of rigorous social research methods in the assessment of community action programmes and evaluations were frequently carried out.

Scriven (1996) noted the technical procedures of this rudimentary form of evaluation were "routine applications of investigatory procedures from the social sciences, and these were all that was (sic) brought to bear in the early evaluations of large educational programs. The evaluator at that point was merely an applied social scientist" (p.6). Educational research was, and continues to be this day, a user of first generation evaluation. The practice of requiring students at primary and intermediate schools in New Zealand to sit Progress and Achievement Tests (PAT) each year, and the passing of the State examination of University Bursary as part of admission to university, exemplify the enduring practice of first generation evaluation.

Firmly established in educational research, the first generation of evaluation, therefore, can be seen to be synonymous with measurement. The role of the evaluator was technical and the terms measurement and evaluation were used interchangeably.

4.1.5 The second generation: description

After W.W.I, and again led by educational research, a new phase in the history of evaluation could be distinguished. The focus on students in first generation evaluation became the impetus for the development of the second generation of evaluation. The pre-occupation with students as the objects in first generation evaluation was inadequate. In the United States of America, the school curricula were in urgent need of revision and information other than student data was necessary. The existing evaluation approach was deemed inadequate as it could not provide the information that was now required (Guba & Lincoln, 1989).

A longitudinal evaluation, the Eight Year Study, began in 1933 to determine if the removal of the Carnegie unit system and the introduction of a revised curriculum would result in students ill prepared for college. Ralph Tyler, a researcher at Ohio State University, was contracted to evaluate the secondary schools co-operating in the Eight Year Study. The designers of the study needed to know if the developing new curricula were working as intended. The purpose of the evaluation was to “refine the developing curricula” and “make sure they were working” (Guba & Lincoln, 1989, p.28). Thus, there was an important shift from the conventional measurement model of assessing what the students learned to assessing what the professors “had intended them to learn” (Guba & Lincoln, 1989), the assessment of learning *objectives*.

The Eight Year Study report, published in 1942, described the evaluation activities undertaken in the project. Tyler’s assessment of the extent to which the students achieved the curricula objectives and his analysis of the strengths and weaknesses were used to reshape the curricula. The process was one of formative evaluation although the results of the study, unlike formative evaluations of today, were not made available during the trial but upon its completion (Guba & Lincoln, 1989).

The second generation of evaluation, therefore, is marked by its description of patterns of strengths and weaknesses concerning stated objectives (Guba & Lincoln, 1989). The earlier technical aspects of first generation evaluation were preserved and the evaluator's role came to include that of describer. Measurement was relegated to a tool; it was no longer commensurate with evaluation. Modern evaluation grew from such pioneering efforts of the 1930s and accelerated during W.W.II. In Britain and the United States of America, for example, social scientists were called on to assess the efficacy of price controls, civilian morale, soldier morale, personnel policies and propaganda techniques (Rossi & Freeman, 1993).

Post W.W.II, large scale programmes were designed to meet needs for housing and urban development, education in technology and culture, occupational training and health care. The high cost of large-scale programmes was accompanied by accountability requirements, so "knowledge of results" became a prerequisite for programme sponsors (Rossi & Freeman, 1993).

4.1.6 The third generation: judgement

For almost two decades the dominant paradigm in the field was second generation evaluation, however, the Russians' supremacy in space exploration during the latter part of the 1950s incited reflection and revision of school and scientific projects in the United States. Dissatisfaction with the "objectives-oriented descriptive approach" (Guba & Lincoln, 1989, p.29) to evaluation spawned a new wave of thought. Lee Cronbach questioned the dominant focus of evaluation on the stated objectives and argued that by focusing on programme planning and implementation, the utility of evaluation could be improved (Cronbach, 1963). Michael Scriven (1967) also challenged the orientation of evaluation and argued that programmes ought to be evaluated according to the merit and worth of their unintended as well as their intended effects (Greene, 1994). Clearly, the Tylerian model was seen to be deficient.

In response to the perceived deficit, Robert Stake, in a 1967 paper, regarded judgement as a neglected and essential area of evaluation (Guba & Lincoln, 1989) and called to include judgement in an evaluation. The emergence of third generation evaluation was

a direct response to Stake's call for the inclusion of judgements: judgements of a programme's intrinsic and extrinsic worth (Guba & Lincoln, 1989). Consequently, in addition to retaining the technical and descriptive duties, the evaluator assumed the role of judge.

Caulley (1993) notes several approaches to evaluation fall under the rubric of third generation and their commonality is that they are aimed at the decision-makers who make judgements based on the information provided by the evaluator. These approaches include: (1) the system-management approach which is an accountancy model, concerned with the effective and efficient use of resources and performance indicators; (2) the decision-making approach "a process of delineating, obtaining, and providing useful information for judging decision alternatives" (Caulley, 1993, p.129); (3) the experimental approach, adopted in the present study, modelled on experimental and quasi-experimental designs (cf. Campbell & Stanley, 1963) and seen to be the scientific way of doing evaluations; (4) the needs approach with its criterion of satisfying clients' needs and undertaken to assess potential clients' needs to plan a programme; and (5) the expert approach in which an acknowledged expert in the field is brought in to make judgements and criticisms of the programme – an unbiased, independent evaluator with expertise and credibility (Caulley, 1993).

Social programme evaluation emerged and grew dramatically in the 1960s largely in response to the social programmes initiated in America by President Kennedy and continued under successive administrations (Shadish et al., 1991). Programmes in education, housing, health, criminal justice and income protection were introduced in the hope of protecting Americans from poverty (Shadish et al., 1991). Thus, programme evaluation began to move into health services, social services and crime prevention and control. These were new areas of evaluation that up until this time had been dominated by education evaluation (Scriven, 1996).

During the 1960s, the numbers of papers and books on the practice of evaluation research also grew dramatically, for example, Suchman's (1967) review of evaluation research methods and Campbell's (1969) call for social experimentation (Rossi & Freeman, 1993). These were boom times for evaluation.

4.1.7 The fourth generation: negotiation and reconstruction

The fourth generation approach led by Guba and Lincoln was according to Scriven (1996) a response to the dominance of quantitative methods in evaluation studies. Guba and Lincoln (1989) strongly recommend mixing qualitative and quantitative methods. Fourth generation evaluation involves an interpretative and constructivist process (Schwandt, 1994) in which research participants are empowered to hear and understand the views of other participants and to move towards a negotiated consensus (Guba & Lincoln, 1989).

Advocates of fourth generation regard the previous generations as authoritarian or bureaucratic in nature and with the assumption that there is value consensus among the interested parties (Caulley, 1993). He regards the fourth generation as the “democratic approach” with the key ideas of “power sharing and value pluralism among the stakeholders” (Caulley, 1993, p.130).

The role of the evaluator in fourth generation evaluation is to include all groups with a vested interest in the programme and thoroughly investigate their perceptions and opinions of the programme (issues, problems, questions, worries etc). The approach recognises that there will be differing perceptions and opinions and theoretically, such an approach will make the evaluation more meaningful and useful to those involved and provide a basis for future action. Throughout the process, the evaluator interacts with the various groups, becomes more informed about a programme diagnosing its strengths and weaknesses (Caulley, 1993).

Thus, the role of the evaluator subsumes the roles that characterise the previous generations, technician, describer and judge, but with some transformations. For example, the evaluators’ technical skills in measurement and quantitative analysis ought to complement their skills in qualitative methods and analyses. As well as describing the patterns of strengths and weaknesses in achieving identified objectives, a requirement of second generation evaluation, the fourth generation evaluator is responsible for providing “thick description” (Geertz, 1973). The third generation role of judge is modified in fourth generation evaluation to that of a mediator or facilitator for stakeholders and participants to shape judgements, conclusions and

recommendations. Additionally, fourth generation evaluation includes a new role for the evaluator. The evaluator is the key figure in “the process of reconstructing existing reality construction” (Guba & Lincoln, 1989, p.262). In other words, the evaluator helps reshapes reality for the those directly involved in the programme.

4.1.8 The fifth generation: empowerment

Empowerment evaluation was developed by David Fetterman in the early 1990s and regarded by him to be an innovative approach to evaluation (Fetterman, 1994). Rooted in ethnography, empowerment evaluation is the application of evaluation techniques to encourage self-determination. Fetterman’s explanation of empowerment evaluation is analogous to the “give someone a fish and you feed her for a day; teach her to fish, and she will feed herself for the rest of her life” (Fetterman, 1994, p.10) concept. Through collaborative, participative and democratic processes, evaluators and the participants of the evaluation are mutually informed and the evaluator’s role is that of a facilitator (Fetterman, 1994).

However, as discussed above, Scriven (1996) argues strongly that empowerment evaluation is not an approach to evaluation but rather an approach to teaching evaluation. Furthermore, he argues, the process of empowerment evaluation invalidates the assistance that an external evaluation contributes to a programme. “Insiders” carry out empowerment evaluation: the responsibility for the programme, the evaluation and decision-making rests with those who are involved in the programme. Typically, external evaluators are not. Scriven (1996) claims that Fetterman’s approach “shifts the focus so far from evaluation that we find both Patton and Fetterman saying that they rarely produce an evaluative conclusion these days” (p.9).

As section 4.1.3 shows, evaluation emerged from the acceptance of the scientific method as a means of examining social problems. Historically, there has been much debate about the distinction between “evaluation” and “research”, particularly in the United States of America, and the debates have been closely related to the use of experimental designs and qualitative methods in evaluation (J. Winston, govteval@nasionet.net, 21 July, 1998). Though not without critics (e.g., M. Patton; R. Endias, govteval@nasionet.net, 18 July, 1998), Scriven (1998) distinguishes the

concepts and defines evaluation and research as two different types of investigation. Thus, he defines evaluation as “systematic and skilled investigation, done in the cognitive domain, of the merit, worth, or significance of things. (Or, the results of such investigations)” and research as “systematic and skilled investigation, done in the cognitive domain, of the existence and nature of things. (Or, the results of such investigations)” (M. Scriven, govteval@nasionet.net, 7 July, 1998). In that light, the purpose of evaluation is to assess and make judgements about the merits or worth of something and research is to discover the causes and consequences by describing the relationships between things. Whilst evaluation often requires research, research does not require evaluation. In adopting a third generation approach, using a quasi-experimental design, the present study incorporates features of both fields of investigation.

Evaluation research, however, is more than the acceptance and application of methods and despite the abundance of texts on evaluation few give details on theoretical bases, and considerations. Shadish et al., (1991) point out most current books on evaluation fail to detail theoretical rationales for their prescriptions of practice and give theory “a short shrift” (p.20). In their authoritative text *Foundations of program evaluation: Theories of practice* the authors provide an in-depth analysis of prominent contributions to the field of evaluation and suggest that there is no one best theory of evaluation and never will be. They state:

“The ideal (never achievable) evaluation theory would describe and justify why certain evaluation practices lead to particular kinds of results across situations that evaluators confront. It would (a) clarify the activities, processes, and goals of evaluation; (b) explicate relationships among evaluative activities and the processes and goals they facilitate; and (c) empirically test propositions to identify and address those that conflict with research or other critically appraised knowledge about evaluation.” (Shadish et al., 1991, pp. 30-31).

Although there is no one best theory of evaluation (Shadish et al., 1991), Campbell’s methodological writings have been considered and have contributed to the evaluation

practice of the present study (e.g., Campbell, 1969; Cook & Campbell, 1976; Cook, Campbell & Perrachio, 1990).

4 2 Evaluation of training

4.2.1 Training

Organisations today rely extensively on training and there is reason to believe that the significance of training will continue to increase (Facteau, Dobbins, Russell, Ladd & Kudisch, 1995). As labour force and workplace demands change, employee skills have to be altered and updated.

Labour force and workplace changes, including rapid technological changes, shifts in national and global economies from a manufacturing base to a service orientation, equal employment opportunity issues and changes in demographics are expected to account for the increased significance of staff training and highlight the role and challenge of training (Goldstein, 1991). For organisations, these changes will result in greater competition for qualified entry-level employees and a need to make optimal use of available labour (Facteau et al., 1995). In effect, organisations will need to improve their recruitment strategies to attract the most suitable entry-level employees and continually train and re-train current employees (Facteau et al., 1995). For individuals first entering the workplace and for those changing their work environment, training represents opportunity to increase their knowledge, skills, attitudes and abilities through instruction in job-related tasks and to practice those skills and abilities intended to improve their performance. Training has become a strategic investment (Bassi, Benson & Cheney, 1996).

Goldstein (1991) states that training programmes are big business, both in terms of the amount of effort expended and in money spent. For example, it has been estimated that organisations in the United States spend as much as \$40 billion annually on formal education and training (Lee, 1988). More recently, it has been estimated that organisations spend as much as U.S.\$200 billion annually on workforce training (McKenna, 1990). Whereas twenty years ago the average training expenditure for each employee was approximately U.S. \$75 to U.S. \$100, Wexley and Latham (1991) note

that some large corporations (e.g., IBM) budget as much as U.S. \$2,000 annually per employee on formal education and training.

Training can be defined as a planned learning experience designed to bring about permanent change in an individual's knowledge, attitudes or skills (Campbell, Dunnette, Lawler & Weick, 1970). Recognising that training is a set of planned activities to increase knowledge and skills, Landy (1989) extends the definition to include the modification of attitudes and social behaviour of an organisation's members in ways that are consistent with the organisation's goals and the requirements of the job. Thus, the training process is defined as the systematic acquisition of attitudes, concepts, knowledge, rules, or skills that result in improved performance at work (Goldstein, 1991).

Goldstein (1994) notes that learning may be a necessary but it is not a sufficient condition for transfer. Although training is a planned experience with an expectation that learning will follow, the training may or may not lead to learning and when learning does occur it does not necessarily lead to improved job performance. However, training is thought to increase the probability of learning and appropriate learning increases the probability of improved performance (Landy, 1989).

If training does increase the probability of learning and performance and if training contributes to organisational effectiveness and organisational learning, the design, implementation and evaluation of training programmes become important. However, according to Goldstein (1986) research on training has generally been atheoretical and faddish. Without a theoretical basis from which to examine training techniques and training environments, explanations as to the effectiveness of training, predictions as to the transfer of the training into other settings and the effectiveness for other trainees have been elusive (Baldwin & Ford, 1988; Noe, 1986).

4.2.2 Training evaluation

There is no limitation to what can be evaluated including evaluation itself. Accordingly, training, possibly another "part of the armoury of modern management" (Pollitt, 1997,

p.3) is often a focus of evaluation. Both training researchers and training practitioners agree on the importance of evaluating training yet despite its importance, there seems to be general agreement that evaluation is the least well conducted aspect of all training activities (Lewis & Thornhill, 1994). Evaluation of training is a difficult area (Carnevale & Schultz, 1990; Lewis & Thornhill, 1994) especially evaluation in large-scale programmes where problems are many (Wortman, 1983). Problems of control are the most difficult ones. For example, the researcher may not choose who participates in the programmes, cannot form control groups and does not have any control over what happens at organisational or branch level.

Despite the difficulties of evaluation of training, the economic climate and the climate of accountability are resulting in a greater emphasis on organisational effectiveness. It is important, therefore, to ascertain whether training initiatives make a positive contribution to organisational goals.

To assess the extent to which training has achieved its objectives, there are comprehensive models of evaluation of training, the dominant model being Kirkpatrick's four-step model. Kirkpatrick's (1976) typology, with its widespread and enduring popularity (Alliger & Janak, 1989) continues to be the most prevalent framework for categorising training evaluation (Alliger, Tannenbaum, Bennett, Jr., Traver & Shotland, 1997). The following section discusses Kirkpatrick's (1959) classic model and a recent extension by Armstrong (1996).

4.2.3 Models of evaluation of training

Kirkpatrick's four-step model of evaluation was introduced in 1959 in a series of articles in which four categories of measures of the effectiveness of training were outlined (Kirkpatrick, 1996). Each category was called a 'step'. Step 1 was termed *reactions* and defined as how well trainees liked a particular training programme. Step 2, *learning*, was defined as "principles, facts, and techniques.....understood and absorbed by trainees." Step 3, *behaviour*, was defined as "using principles and techniques on the job". Step 4, *results*, was stated in terms of "desired results, such as

reduced costs, higher quality, increased production, and lower rates of employee turnover and absenteeism.”

Almost forty years later, in revisiting the model, Kirkpatrick (1996) describes the steps as levels:

“Level 1: Reaction. This is a measure of how participants feel about the various aspects of a training program, including the topic, speaker.... Reaction is basically a measure of customer satisfaction..... **Level 2: Learning.** This is a measure of the knowledge acquired, skills improved, or attitudes changed due to training..... **Level 3: Behaviour.** This is a measure of the extent to which participants change their on-the-job behaviour because of training. It’s commonly referred to as transfer of training..... **Level 4: Results.** This is a measure of the final results that occur due to training, including increased sales, higher productivity, bigger profits, reduced costs, less employee turnover and improved quality.” (Kirkpatrick, 1996, p.56).

Although seemingly unintended by Kirkpatrick when he proposed his model, researchers and trainers have implicitly held three assumptions, which can be distinguished in the literature (Alliger & Janak, 1989). The first assumption is that the steps are arranged in ascending value so that each succeeding step is more informative than the previous one. Noe and Schmitt (1986) note that a number of training evaluation studies have provided support for the hierarchical model (e.g., Clement, 1978; Fromkin, Brandt, King, Sherwood & Fisher, 1975; Latham, Wexley & Purcell, 1975, all as cited in Noe & Schmitt, 1986). In such a hierarchy, the inference is that because it is the highest in the classification, level 4 is the best measure of training effectiveness. The second assumption is that the levels of evaluation are causally linked. In that light, training results in reactions; reactions results in learning; learning results in changes in job behaviour; and changes in job behaviour results in changes in the organisation. The third assumption is that the levels are positively intercorrelated so that each succeeding level is correlated with the previous level.

These assumptions about the levels of training are problematic (Alliger & Janak, 1989). With regard to the first assumption, for example, that each succeeding step is more informative than the previous one, it may be that trainees' reactions to the training provides the strongest measure of a programme's relevancy. Trainees may learn the irrelevant material and may even change their work behaviour with deleterious results for the organisation. In such an instance, the data provided at level one could have been the most informative. Furthermore, it may be that not all training is intended to bring about change in organisational performance, e.g., training that aims to change attitudes may not show observable organisational results.

The second assumption, concerning causality, is problematic: at the first level, reactions are measured, and reaction measures are measures of attitudes, not behaviour. Attitudes are often poorly predictors of behaviour (Myers, 1993). Alliger and Janak (1989) question the assumption on the grounds of temporality. Levels 1 and 2, oftentimes, are administered simultaneously, immediately post-training whereas levels 3 and 4 measures are taken at some time later. Therefore, there would be "no temporal distinction between reactions and learning" (p.333) which begs the question of causality.

The third assumption that the levels are positively intercorrelated is linked to the second assumption. However, some evaluation studies that have evaluated training on two or more of Kirkpatrick's levels have reported varying effects for the different levels (Alliger & Janak, 1989).

The practical, easily understood and "simple taxonomy of training criteria" (Alliger et al., 1997 p.342), though not without criticism (e.g., Alliger & Janak, 1989) has become popular both in research and practice because it addresses a need to understand training evaluation simply yet systematically (Shelton & Alliger, 1993). Interestingly, there has been debate whether Kirkpatrick's model is a model, per se, or a taxonomy, a classification. As regards the debate, Kirkpatrick is indifferent: "I don't care whether it's a model or taxonomy as long as training professionals find it useful in evaluating training programs" (Kirkpatrick, 1996, p.55).

A recent criticism of Kirkpatrick's four level model is made by Holton (1996) who argues that it is flawed as an evaluation model and is, in effect, a taxonomy of outcomes. His alternative model, based on existing research, accounts for the impact of intervening variables such as motivation to learn, trainability, job attitudes, personal characteristics and transfer conditions.

Alliger et al., (1997) present an augmented framework for training criteria based on Kirkpatrick's model to provide a schema for their meta-analysis of relations among training criteria. Though not intended as a comprehensive substitute for Kirkpatrick's original model, the augmented framework separates training reactions, Level 1, into affective and utility reactions (re-numbered as Level 1a and 1b, respectively); and learning, Level 2, into immediate post-training measures of learning, retention, and behaviour / skill demonstration (Levels 2a, 2b, 2c).

Warr and Bunce (1995) suggested a further division of reaction and proposed a three way split of reaction measures: enjoyment of training; usefulness of training; and, difficulty of training. The first two aspects, enjoyment and usefulness parallel the affect and utility reactions of Alliger et al., (1997).

The original four levels of Kirkpatrick (1959) have been expanded to seven levels by Armstrong (1996). Levels 1 and 2 are similar to those of Kirkpatrick (1959, 1967, 1994). Level 3, behavioural intention, relates to the likelihood that a trainee will implement their training once back in their work environment. The rationale for the inclusion of intention is that if new knowledge and skills are acquired (level 2), a measure of intention to apply the new work behaviours can establish a gap between intention and implementation. Level 4, work behaviour, refers to changes in on-the-job work behaviour brought about by the training. Level 5, changes in others, refers to the impact of the training on individuals or groups and the type of change. Armstrong (1996) notes the difficulty of collecting data which reflect changes in others that can be attributed to the training programme because changes may not be effected until long after the completion of the training or the changes may have been brought about by factors dissociated with the training. Many training programmes in organisations bring about changes in the roles, structures, climate, values and work practices within an

organisation Accordingly, level 6, organisational changes, refers to the impact of the training on the organisation and whether there were unintended changes.

Organisations invest in training staff to bring about changes in the individuals that ultimately impact on the performance of the organisation. Models of training evaluation recognise that the ultimate objective of training is its benefit to the performance of the organisation (Lewis & Thornhill, 1994). Level 7 of Armstrong's (1996) model, performance, refers to the impact of the training on the performance of the organisation. Performance can be measured in two ways: performance of the training function and performance of the organisation. Performance of the training function can be shown by "measures of its efficiency (such as cost per student), or return on investment (such as the value of increases in sales attributed to training)" (Armstrong, 1996, p.61). Longer-term results such as increases in productivity, increases in profitability, reduced turnover and so forth, are signalled by performance of the organisation.

Within this model, it is the purpose of the evaluation that dictates what is to be assessed. For example, if the purpose of the evaluation was to provide feedback to trainers on how to improve delivery of the training programme, level 1 evaluation may be sufficient. Then, if the evaluation were to measure the effectiveness of a training programme, the evaluation focus would be at levels 2 - 6 (Armstrong, 1996).

4.2.4 Evaluation of training in practice

As mentioned above, when training is evaluated, it is likely that only reaction to the training is evaluated. In referring to Kirkpatrick's model, Shelton and Alliger (1993) suggest that one reason organisations avoid level 4 evaluations is because collecting and interpreting the data is more difficult and time-consuming than surveying trainees. The authors recommend using level 4 evaluation in combination with level 2 (learning) and level 3 (job application) evaluations. If the learning is not applied on-the-job, that is, transfer of training does not occur, level 4 evaluation becomes irrelevant.

4.3 Evaluation of Transfer of Training

4.3.1 Transfer of training

The concept, transfer of training, has been used differently in two different literatures (Hesketh, 1997). In the industrial and organisational literature, it has been used to refer to the transference of skills and knowledge acquired in “off-the-job” training to performance in the workplace. In laboratory studies, the term generally refers to the transference of training on one task to performance on another (Hesketh, 1997). Viewed in that light, transfer occurs whenever the effects of prior learning influence the performance of a later activity (Holding, 1991). Knowledge, skills and behaviours acquired in one setting may be generalised to another. However, one of the key criteria for assessing the effectiveness of any formal training programme, whether it is on or off the job, is the transfer of training to the job (Kirkpatrick, 1967).

In the present study, the definition adopted for training transfer is the extent to which trainees effectively apply the knowledge, skills, attitudes and behaviour gained in a training context back to the job (Wexley & Latham, 1991). The transfer of training is, by definition, a two-phase investigation that comprises a training phase and a post-training phase. The training phase consisted of a predominantly “off-the-job” training programme with an “on-the-job” practicum component, and the post-training phase was carried out solely back on-the-job.

4.3.2 Transfer of training evaluation

The primary purpose of training is to help individuals develop knowledge, skills and abilities which, when applied in their workplace, will improve their job performance and ultimately organisational performance. Thus, the ultimate purpose of training evaluation must be the assessment of the level of transfer of training back to the work place (Tziner, Haccoun & Kadish, 1991). Wexley and Latham’s (1991) definition of transfer of training (see 4.3.1) suggests that transfer of training includes the formal training programme and the environment for which the training is destined, the workplace. For transfer to have occurred, newly acquired knowledge, skills and abilities must be retained, be generalised to the job context and, furthermore, maintained over a period of time (Baldwin & Ford, 1988).

Traditionally, research and the practical application of the concept of transfer of training have emphasised the importance of ensuring congruence between the tasks in the training environment and the work setting (Goldstein, 1993; Wexley & Latham, 1991). Research on training effectiveness has generally focused on factors within the formal training context such as the design and content of training (Noe, 1986). Furthermore, as Alliger and Janak (1989) note, most evaluation efforts concern reaction and learning measures; two criteria that are collected within the training context. Therefore, training effectiveness has been assessed predominantly in the training environment or immediately after training. Nevertheless, the transfer of training is more than a function of the quality of the training programme (Latham, 1988). It implies interdependence between the training programme, the trainees and the workplace. To understand transfer of training, it is important to understand not only what transfer is but also the process of transfer. Below is the Baldwin and Ford (1988) model of the transfer process that has been adopted as an organising framework in this evaluation research.

4.3.3 Models of the transfer process

Baldwin and Ford (1988) presented a model of the transfer process in which the transfer process is described in terms of three discrete stages, training inputs, training outputs (training outcomes) and conditions of transfer. Training input factors include: trainee characteristics, training design and work environment. Training outputs refer to the amount of original learning that occurs as a result of the training programme and the retention of the learning once the training programme is completed. The conditions of transfer incorporate the generalisation of the training content to the workplace and the maintenance of the newly acquired material over a period of time (Baldwin & Ford, 1988). The authors proposed that training inputs and training outputs have both direct and indirect effects on conditions of transfer and identified the direct effects by six linkages represented by arrowhead lines in Figure 2. Figure 2 is an adaptation of the original model and differs in that it depicts the indirect linkages as well as the direct linkages. These indirect effects are identified by three linkages and represented by dashed arrowhead lines. The effects are described in Table 2.

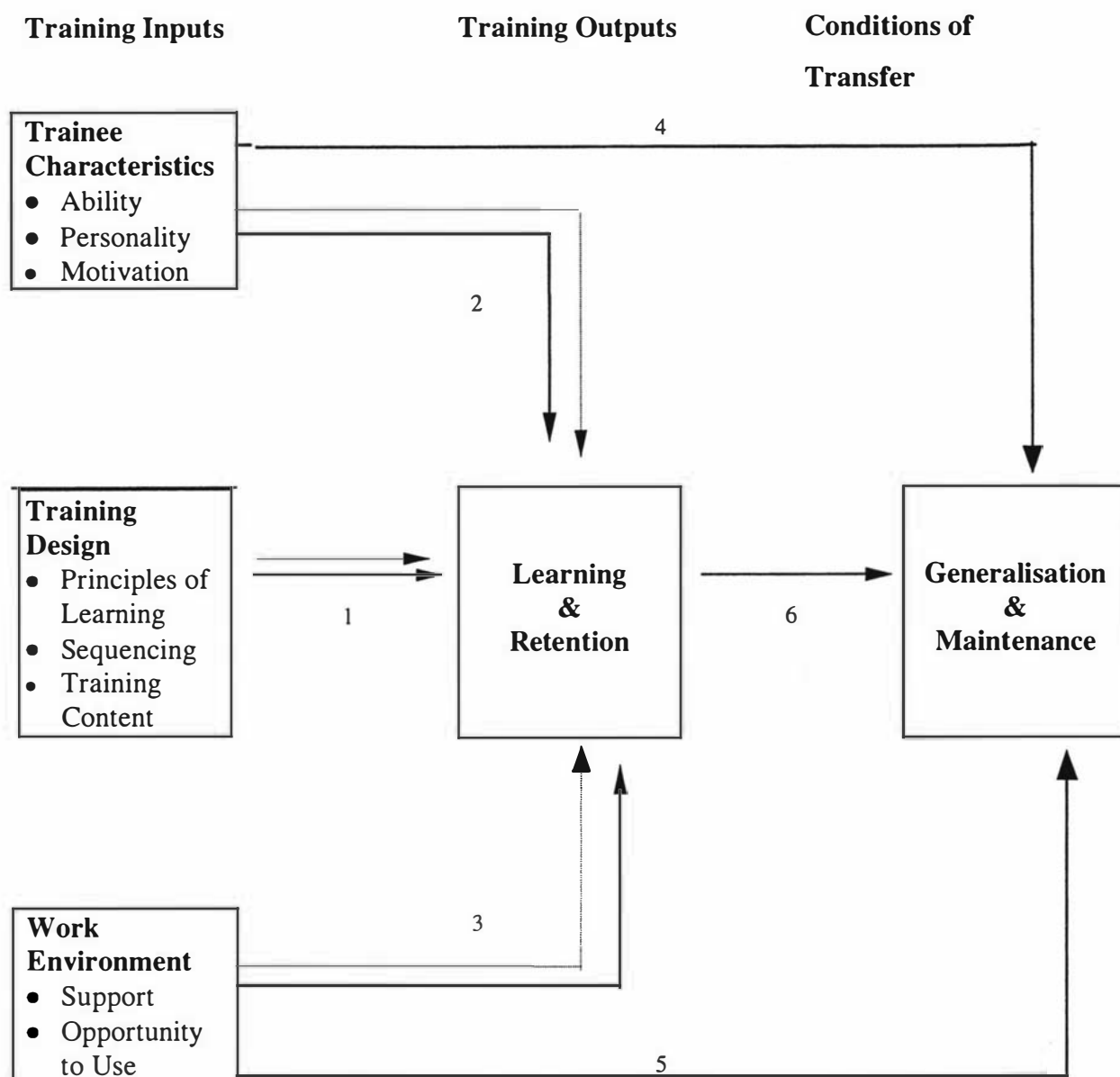


Figure 2. A model of the transfer process
(Adapted from Baldwin & Ford, 1988, p.65)

Table 2

The linkages between training inputs, outcomes and conditions of transfer

Linkage	Effect	Description
1	Direct	Training design factors directly affect learning and retention
	Indirect	Training design factors indirectly affect generalisation and maintenance through their impact on learning and retention
2	Direct	Trainee characteristics directly affect learning and retention
	Indirect	Trainee characteristics indirectly affect generalisation and maintenance through their impact on learning and retention
3	Direct	Work environment directly affects learning and retention
	Indirect	Work environment indirectly affects generalisation and maintenance through their impact on learning and retention
4	Direct	Trainee characteristics directly affect generalisation and maintenance regardless of initial learning during training or retention of learned behaviour
5	Direct	Work environment directly affects generalisation and maintenance regardless of initial learning during training or retention of learned behaviour
6	Direct	Learning retention directly affects generalisation and maintenance Skills must be learned to transfer

(Source: Garavaglia, 1996, p.4)

As Figure 2 shows, training outcomes of *learning and retention* can be seen to have direct effects on conditions of transfer (Linkage 6). Clearly, for new skills to transfer, the training material must be learned and retained (Kirkpatrick, 1967). Training inputs, *trainee characteristics* and factors in the *work environment* are also hypothesised to have direct effects on transfer regardless of learning or retention of the training material. (Linkages 4 and 5, respectively). For example, lack of motivation, lack of ability or lack of opportunity to use newly acquired knowledge may inhibit maintenance on the job. Further, training outcomes of *learning and retention* can be seen to be directly affected by the three training inputs *training design*, *trainee characteristics* and *work environment* (Linkages 1, 2 and 3, respectively). Consequently, through their impact on training outcomes, the three training inputs have an indirect effect on transfer (Baldwin & Ford, 1988).

The Baldwin and Ford model provides a useful, simplistic heuristic for the transfer process, however, it may be limited in that the training inputs (characteristics, training design and work environment) are discrete entities. As the model stands, the three inputs are independent of each other, yet they directly affect learning and retention. It may be that these inputs are, in fact, dependent on each other and can be linked.

Firstly, the trainee characteristics may influence the training design in that the training content needs to take into account who the training is being targeted towards, their current skill level or knowledge base, and the reason for the training. Conversely, the training design may impact on the trainee characteristics. The way in which a training programme is delivered and what is being taught may impact on trainee characteristics. People, generally, are affected by training to some degree. Therefore, there may be linkages to show that trainee characteristics directly affect training design and the training design directly affects trainee characteristics.

Secondly, the training content needs to be relevant to and concordant with practices and ethics in the workplace. Training content that does not take cognisance of the workplace is unlikely to be useful. Conversely, unless the trainees are given opportunities to apply their training and are supported in their endeavours, either by colleagues and / or technology, learning can be affected. Therefore, there may be

linkages to show that the training design may directly affect the work environment and the work environment directly effect training design.

Thirdly, trainees' attitudes and abilities may affect their workplace through their task performance and social interactions. Conversely, job tasks and interactions with others may affect the trainees' attitudes to training, their motivation and their workplace satisfaction. Therefore, there may be linkages to show that the trainee characteristics directly affect work environment and the work environment directly affects trainee characteristics.

Two more recent models of the transfer process are those of Yelon (1992) and Analoui (1993). Both Yelon and Analoui recognise the problem of transfer and address it in different ways. For Yelon, transfer is seen as the responsibility of the trainer and for Analoui it is the socio-technical environment of the trainees that is responsible for maximising positive transfer. These two models contrast with that of Baldwin and Ford (1988) yet offer utility to the area.

Yelon (1992) presents the MASS (motivation, awareness, skills, support) model which is designed to turn trainers into "performance technologists" to promote transfer into the workplace. The role of a performance technologist is to improve people, process and organisational performance through feedback and integrating strategies in the workplace (Hutchison & Stein, 1998). According to Yelon (1992), trainers who (1) motivate trainees to learn and use the training material; (2) increase trainees' awareness of when to use new skills and ideas; (3) enable trainees to master and apply skills; and, (4) give trainees psychological and physical support on the job, become performance technologists. In general, the responsibility for transfer rests with the performance technologists who are required to motivate, teach the relevant skills and create a support environment for the trainees once they are back in the workplace.

With the responsibility for transfer resting on the trainer, Yelon (1992) appears to overlook the role and responsibility of the trainee. It may be that even with the best training, transfer will not occur if the trainee does not action the learning. Although the

trainers might motivate the trainee, teach well, and set up support systems, they cannot transfer the training into the workplace. That is the responsibility of the trainee.

Another theoretical perspective on the transfer of training from training to the workplace is that presented by Analoui (1993). Analoui, in recognising that transfer is a problematic issue, argues that attempts to increase transfer should focus on social as well as technical issues in the workplace. The socio-technical model of the transfer process (Analoui, 1993) is based on the tenet that there are two identifiable and extreme learning situations: off-the-job and on-the-job (close to or within the workplace) and that the site of the training has influence in the transfer process. Analoui (1993) states that there is a combination of social and technical learning processes inherent in any form of training and his model proposes that as the training location comes closer to the actual workplace, the social learning processes begin to accelerate and also the likelihood for positive transfer.

As well as the bipolar comparisons of the site of the training, the technical complexity of the task to be learned and the social complexity of the organisation are polarised and according to Analoui have influence on transfer. Analoui (1993) argues that for maximum learning and transfer of that learning to occur, training for socially complex jobs should occur on-the-job and training for technically complex jobs should occur off-the-job.

With the advances in technology, however, the distinction between on- and off-the-job training is becoming less clear (Tannenbaum & Yukl, 1992). Computer assisted learning, interactive computer programmes, simulators, and other on-line expert systems can provide instruction, guidance, feedback, monitoring and troubleshooting exercises. So while Analoui provides an interesting, simplistic perspective on transfer it may be that, regardless, of whether the training is on- or off-the-job, the training site is irrelevant. What may be relevant for technically complex tasks or socially complex job training is whether or not the site provides opportunities for learning e.g., appropriate resources, clear instruction and minimum distraction.

4. 4 Chapter Summary

In this chapter, the theoretical basis and development of evaluation, the concepts of evaluation of training and transfer of training have been outlined. Evaluation is shown to be a dynamic, trans-disciplinary field with its roots firmly set in social science methodologies tracing back to the seventeenth century. As the theory and practice of evaluation have evolved, the role of the evaluator has become more complex and evaluation research calls for a practitioner with conceptual and analytical skills of quantitative and qualitative methods. The concepts of training and the transfer of training have been introduced. Training is an essential and expensive part of a learning organisation yet the validity of its effectiveness, the transfer of training, is a neglected area of research. Two models of training, Kirkpatrick (1959, 1967, 1996) and Armstrong (1996) have been outlined. The Baldwin and Ford (1988) model of the transfer process, Yelon's (1992) MASS model and Analoui's (1993) socio-technical model were introduced. Chapter 5 will provide a review of the literature examining trainee characteristics and facets of the work environment.

Chapter 5

Transfer of Training

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Chapter 4 outlined the concepts of evaluation, the evaluation of training and the transfer of training. Transfer of training results from an interaction between factors within the formal training context as well as characteristics in the transfer environment (Tracey, Tannenbaum & Kavanagh, 1995). The formal training context can include the training itself whether on the job training or off the job training. Characteristics in the transfer environment include the trainee characteristics and workplace characteristics. Chapter 5 provides an integrative review of the literature on transfer of training by firstly, acknowledging the deficits in training transfer and the paucity of literature and, secondly, reviewing the available literature on trainee and workplace characteristics perceived as relevant in the transfer of training.

5.1 The Deficits in Training Transfer

There is concern over the inadequate transfer of training in the workplace despite the assumed link between training and improved worker performance. In many situations, learning that occurs during a training programme does not transfer satisfactorily to the workplace (Arnold, Robertson & Cooper, 1991). This is problematic in human and economic terms. McKenna (1990) estimated that organisations spend as much as US.\$200 billion annually on workforce training. Quoting a more modest sum, Latham and Crandall (1991) point out that in the United States of America only 10% of the estimated US. \$100 billion dollars spent annually on training and development programmes produces lasting behavioural changes. Effectively, there is a 90% relapse rate after training as trainees regress back to previous work behaviours (Newstrom, 1986). There is difficulty, however, with such 'estimations' because it is unclear as to how they are arrived at.

Furthermore, the assessment of many training programmes involves levels 1 and 2 of Kirkpatrick's model. They do not include changes in on-the-job work behaviour brought about by the training or the impact of the training on individuals or groups and the types of change influenced by the training (Alliger & Janak, 1989).

Most of the research on training effectiveness has focused on the formal training context such as the design and content of training (Noe, 1986). Training effectiveness, or the success of a training programme, is defined as the development of attitudes, knowledge

and skills required by individuals to perform a given task or job (Latham, 1988). It is usually determined by assessing a combination of the criteria presented in Kirkpatrick's (1967) hierarchical model of training outcomes (Noe & Schmitt, 1986).

In their review of Kirkpatrick's levels of training criteria, Alliger and Janak (1989) found that despite Kirkpatrick's (1967) suggestion of using multi-level training criteria, the practice was followed in only three of 203 studies published between 1969 and 1988. Most evaluation research has concentrated on two criteria, the reactions of the trainees in the training programmes and the learning measures, both of which are assessed in the training context (Alliger & Janak, 1989). The present study included assessment in the training context and moved beyond by assessing the trainees' perceptions of the training and its impact at three and six months following training when the trainees were back in the workplace.

The difficulties in evaluation of training may be responsible for the paucity of evaluation both in practice and documented in the literature. Accordingly, the small amount of training evaluation carried out in organisations is evidenced by Tannenbaum and Yukl (1992) who cite the American Society of Training and Development (1990) which examined the evaluation practices of several large organisations. Almost all the organisations reported that they evaluated trainee reactions, level 1 evaluation, based on Kirkpatrick's four-level taxonomy (see 4.2.3), but only 10% reported evaluating behaviour change on the job. Collecting reaction data yields the minimal level of evaluation (Arnold et al., 1991). Shelton and Alliger (1993), in noting the deficit of level 4 evaluation, quote a 1990 IBM study of six large corporations and several training consultants which found that even among organisations that report examining the economic impact of training, most do not do so directly. More recently, Bassi, Benson and Cheney (1996) report that among the Benchmarking Forum companies, only level 1 evaluations are common and conducted for 94% of all training courses. In terms of on-the-job performance, only 13% are evaluated for transfer of training with 3% evaluated for financial impact. The examination of behaviour on the job to see if the training is being used and a determination of the results of the training are seldom used as training criteria (Hearn, 1988). The present study attempted to extend the restricted focus by asking the trainees for their perceptions of the extent to which they could apply their training once they were back at work and what impact, if any, the

training had had themselves, their colleagues, clients and the branch (Levels 4 and 5 of Armstrong's model).

Whilst research suggests that the most commonly collected training criteria are trainee reactions (which are presumably the easiest training criteria to collect) Alliger et al., (1997) propose that trainee reactions may or may not relate to more meaningful indicators for training evaluation criteria. Favourable trainee reactions do not necessarily lead to learning, behaviour change and positive job related outcomes. Nevertheless, favourable trainee reactions, learning, behaviour change and positive job-related outcomes are expected from well-designed and well-administered training programmes (Noe & Schmitt, 1986).

Not only is the deficit of transfer of training reflected in the literature, a search of literature also reveals a paucity of transfer of training literature. Important to note, is that the available literature has been derived mainly from studies involving simple motor or verbal training skills (Baldwin & Ford, 1988). Literature concerning the transfer of training involving more complex tasks is scarce. While organisations invest in training programmes designed to teach complex interpersonal skills, research into such training has been minimal (Gist, Stevens & Bavetta, 1991).

In light of the lack of literature, nevertheless, the following section reviews the available literature on trainee characteristics, including trainees' motivation, attitudes and expectations.

5.2 Trainee Characteristics

Research on trainee characteristics has, historically, focused more on selecting trainees who would pass training and less on placing individuals into appropriate training programmes. It has focused more on adapting training to match trainees' attributes and less on understanding how trainee characteristics influence the effectiveness of a training programme (Tannenbaum & Yukl, 1992).

The first major review on transfer of training was carried out by Baldwin and Ford (1988). Table 3, in presenting an account of the 1948-1987 studies, is an adaptation of

Baldwin and Ford's (1988) tabulated review of the literature examining the relation of trainee characteristics to transfer of training. Whereas, Baldwin and Ford present the literature by alphabetical order of author(s), Table 3 presents a chronological account showing the historical development of the area. The table shows the diversity of samples, training course content and aspects of the research design. The samples include managers, college (university), military, police and line personnel. As cited in Baldwin and Ford, the training course content ranges from a one-hour safety training programme (Komacki, Heinzemann, & Lawson, 1980) to a 10-week supervisory skills training (Neel & Dunne, 1960). Other courses covered topics such as basic military training (Tubiana & Shakhar, 1982), mechanic skills (Taylor, 1952), fundamentals of police work (Gordon & Kleiman, 1976) and management development (Baumgartel & Jeanpierre, 1972).

The principal criterion measure in these studies was recall of the training content, measured immediately after completion of the training programme (e.g., Eden & Shani, 1982; Gordon, 1955; Miles, 1965; Wexley & Baldwin, 1986).

In the majority of studies, data were collected from the trainees themselves. For example, immediately after the human relations programme, Baumgartel, Reynolds and Pathan (1984) asked the 260 American managers in their study about the effort they were prepared to apply once back on the job. Baldwin and Ford (1988) assert that self-report measures of transfer are insufficient for forming a database concerning the relationship of trainee characteristics and transfer and for deciding which interventions have the greatest impact on transfer.

Baldwin and Ford (1988) conclude that the limited research on trainee characteristics has two critical problems that reduce its usefulness for understanding the factors affecting the transfer process. Firstly, there is a lack of theoretical frameworks to guide research and secondly, is the paucity of criterion measures of transfer in the studies examining the effects of trainee characteristics (Baldwin & Ford, 1988).

Further Baldwin and Ford conclude that the limited amount of research has examined ability, motivational and personality characteristics and that the research on ability and

Table 3

Empirical studies of transfer of training (1948 - 1987) - trainee characteristics

Year	Author(s)	Sample	Training content	Variables	Source (timing)	Criteria Measures	Results
1948	McGehee	21 Rug-mill trainees	Preparation of rug-spools	Ability (on job training effect)	Instructor (immediate)	Time required to attain acceptable average production	Significantly related to time required to complete early training periods.
1948	Taylor & Tajen	313 Clerical trainees	Clerical, record keeping skills	Ability (numeric score on test battery)	Instructor (immediate)	Performance test	Individuals' performance test scores on IBM punch card equipment were predicted with a one-hour pre-training test battery such that 70% of the selected trainees did better than the average unselected trainee
1952	Taylor	120 Auto mechanic trainees	Mechanic skills	Ability	Instructor (immediate)	Performance test	Aptitude test battery was effective in identifying trainees who had the necessary knowledge and skills to skip the first weeks to training and still do approximately as well as those who took the whole course
1953	Fleishman	122 Manufacturing foremen	Leadership training	Demographic(age, educ., tenure, no. of subordinates)	Self (pre-training & varied 2-24 weeks post-training)	Leader behaviours (LBDQ)	All relationships with trainee characteristics were n.s.
1955	Gordon	400 military recruits	Radio code training	Ability (early training time required)	Instructor (immediate)	Radio code test score	Significantly related to early training time required for three separate groups varying in previous radio code exposure.
1960	Neel & Dunn	32 Supervisory trainees	10 week supervisory skills training	Ability (IQ Wonderlic); personality (How supervise, authoritarianism)	Instructor (immediate)	Course examinations	Significantly related to Wonderlic ($r = .25$). How supervise scale ($r = .69$) authoritarianism ($r = .39$).
1965	Miles	34 Elementary school principals	2 week human relations	Demographic (tenure, no. of subs); personality (ego strength, flexibility, need affiliation)	Self (immediate)	Perceived change from training	Significantly related to feedback received. Relationship with all other personality and motivation variables was n.s.
1970	Downs	82 Sewing machinists	Sewing machine training	Ability (training sample)	Instructor (immediate)	Final instructor rating	Significantly related ($r = .50$) to score on training sample.
1972	Baumgartel & Jeanpierre	240 Indian managers	Management development programme	Demographic (educ., age, job income); motivation (value & relevance of training); personality (composite scale)	Self (immediate)	Effort to apply	41 % of trainees indicated effort to apply. Significantly related to job income but no other significant relationship with trainee characteristics
1973	Gordon & Cohen	58 Welding programme trainees	Plate welding	Ability (early training performance)	Instructor (immediate)	Time required to complete training	Significantly related to early training performance on each of the first four tasks in training

Table 3 Empirical studies of transfer of training (1948 - 1987)- trainee characteristics (continued)

Year	Author(s)	Sample	Training content	Variables	Source (timing)	Criteria Measures	Results
1975	Ryman & Biersner	548 military personnel	Technical (diving & underwater skills)	Motivation (course expectations, confidence, leadership efficacy, concern); personality (conformity)	File data (immediate)	Programme graduation	Across 3 programmes, successful graduation had a significant positive relationship with training motivation, leadership and conformity and was negatively related to training concerns.
1975	Smith & Downs	236 Ship building apprentices	Variety of ship building skills	Ability (trainability assessment)	Instructor (3 -12 months post-training assessment)	Performance test	Trainability assessments were successful in predicting performance after a 3-month period in the skill for which they were designed. They were less successful after a 12 month period and no single assessment predicted performance for all skills.
1975	Wexley & Nemeroff	27 Health care managers	Two day supervisory skills programme	Motivation (goal setting)	Self (60 days post-training) Subordinate (60 days post-training)	Behaviour	Goal setting treatments were significantly more effective than a control group in improving the leader behaviour of managers
1976	Gordon & Kleiman	101 Police trainees	Fundamentals of police work	Ability (training sample, IQ)	Instructor (immediate)	Sum of graded exercises	Assigned goal setting group was most effective in increasing subordinate work satisfaction
1980	Komacki, Heinzemann, & Lawson	55 Vehicle maintenance personnel	One hour safety training	Motivation (reinforcing feedback)	Trained observers (weekly up to 40 weeks)	Safety behaviours exhibited	Significantly related to both work sample tests and IQ tests but the work sample tests yielded significantly higher r's in most cases
1982	Eden & Raven	60 Military personnel	Clerical skills	Motivation (self & instructor expectancy)	Instructor (immediate)	Learning exams	Significant increases in safety performance occurred when training was combined with feedback (15% over training only and 26% over baseline)
1982	Eden & Shani	105 Military personnel	Military combat command course	Motivation (instructor expectancy)	Instructor (immediate)	Learning exams	Significant main effect for self-expectancy. High expectancy conditions had greater exam score average than controls. 27 - 30% of variance explained by self-expectancy
1982	Tubiana & Shakhhar	459 Israeli military	Basic military training	Demographic (educ); ability (language test, 2 IQ tests); motivation (motive to serve in combat); personality (activeness, sociability, responsibility, independence, & promptness)	Superior officer (immediate)	Performance potential	Significant main effect for instructor expectancy. Higher expectancy conditions had greater exam score average than controls. Instructor expectancy explained 73% of the variance in learning exam performance.
							Officer rating of potential had a significant positive relationship to education ($r = .21$), language test scores ($r = .24$), intelligence ($r = .32$) and a composite of personality & motivation ($r = .33$)

Table 3 Empirical studies of transfer of training (1948 - 1987)- trainee characteristics (continued)

Year	Author(s)	Sample	Training content	Variables	Source (timing)	Criteria Measures	Results
1984	Baumgartel, Reynolds & Pathan (Study 1)	260 American managers	Human relations	Demographic (rank job level); motivation (value of training); personality (locus of control).	Self (immediate)	Effort to apply	Significantly related to locus of control. Relation with other characteristics measured was n.s.
					Self (unknown)	Perceived success in transferring	Significantly related to belief in the value of training. Relation with other characteristics measured was n.s.
1984	Baumgartel, Reynolds & Pathan (Study 2)	246 Indian managers	Management development programme	Personality (locus of control, need to achieve)	Self (immediate)	Effort to apply	Significantly related to locus of control and need achievement. Others were n.s.
1984	Reber & Wallin	105 Farm machinery workers	Safety procedures	Motivation (reinforcing feedback and goals)	Trained observers (weekly up to 40 weeks)	Safety behaviours exhibited	Main effects for each of three interventions: (1) safety rule training alone (2) goal setting), (3) feedback and goal setting.
1986	Noe & Schmitt	60 School educators	Managerial skills	Motivation (expectancies, motive to learn, exploratory behaviour, job involvement); personality (locus of control)	Trained raters (immediate)	Learning (in-basket exercises)	Relation with all trainee characteristics n.s.
					Self (varied 1-3-4 months post-training)	Motivation to transfer	Relation with all trainee characteristics n.s.
					Supervisor (3 months post-training)	Behaviour	Relation with all trainee characteristics n.s.
					Peers (3 months post-training)	Behaviour (peer)	Relation with all trainee characteristics n.s.
1986	Wexley & Baldwin	256 College students	Time management	Motivation (goal setting, relapse prevention)	Instructor (immediate)	Learning	Main effect for assigned goal setting
					Self (8 weeks post-training)	Behaviour	Main effect for assigned & participative goal setting
					Observer (8 weeks post-training)	Behaviour	No significant effects observed
1987	Hicks & Klimoski	85 Managers	Two-day performance review training	Motivation (degree of choice to select training, realistic preview)	Self (immediate)	Appropriateness of training	Main effects for degree of choice & type of prior info.

(Adapted from Baldwin and Ford, 1988, pp 76-81)

personality has failed to identify factors that are the most critical in a training context. They note the need for research that more clearly identifies the important trainee characteristics.

Since the Baldwin and Ford review of 1998, a review of training and development in organisations was carried out by Tannenbaum and Yukl (1992). They note that although empirical research of trainee characteristics in organisational settings was rare, there had been an increase in research on the implications of trainee characteristics for improving training effectiveness. A search of the literature by the writer resulted in locating a further seven empirical studies examining the influence of trainee characteristics on the transfer of training. Among the trainee characteristics (e.g., motivation, self-efficacy, organisational commitment, locus of control, goal setting, content mastery) self-efficacy appeared to be the most important. The seven studies are summarised below (see Table 4).

The more recent studies show the development and progression of the research into trainee characteristics. As Table 4 shows, several of the authors responded to Baldwin and Ford's (1988) criticism of self-report measures by including supervisors' reports (Tziner et al., 1991) and tutors' reports (Warr & Bunce, 1995). Samples include military and university personnel and managers. The training course content range from a six hour negotiation skills training programme (Gist et al., 1991) to a four month open- learning programme (Warr & Bunce, 1995). The important trainee characteristics appear to be self-efficacy and motivation to transfer.

Having presented a summary of literature examining the influence of trainee characteristics on the transfer of training, this review continues with a closer examination of the literature pertinent to this evaluation.

Tannenbaum and Yukl (1992) note that the personal skills, ability and willpower that trainees have at the end of training are potential determinants of transfer. They called for a 'paradigm shift' to research designed to understand ".....why, when, and for whom a particular type of training is effective" (p.433) from the research designed to show that a particular type of training is effective.

Table 4

Empirical studies of transfer of training (1988 - 1998)- trainee characteristics

Year	Author(s)	Sample	Training content	Variables	Source (timing)	Criteria Measures	Results
1990	Gist, Bavetta & Stevens	68 MBA Students	Negotiation skills (7 hours)	Goal setting & self-management	Confederate	Transfer behaviour	Self-management training resulted in a significantly higher level of skill generalisation to transfer behaviour than goal setting training Goal setting trainees relied more heavily on repetition skills than self-management trainees
1991	Gist, Stevens & Bavetta	79 MBA students	Salary negotiation (4 hours) Followed by either goal setting techniques or self-management techniques workshop (2 hours)	Goal setting, self-management & self-efficacy	Self (post-training)	Learning Negotiation performance Self-efficacy Learning / skill maintenance Self-efficacy	Relation between training groups & cognitive learning n.s. Relation between training groups & negotiation performance measure (salary) n.s. Significant relationship between self-efficacy & performance on salary negotiation task (r = .40) Significant relationship between self-efficacy & performance on salary negotiation task (r = .46)
1991	Tziner, Haccoun & Kadish*	81 Military instructors	Advanced training methods 2 weeks, with a relapse prevention (RP) module for 45 experimental group participants	Personality (locus of control); Motivation to transfer; reactions Ability (content mastery) Use of trained skills & use of transfer strategies)	Self (end of first week end of training 10 weeks post-training) Supervisors 10 weeks post-training)	Locus of control Motivation to transfer Course examination Transfer questionnaire Supervisors' ratings	Main effect on transfer or training for locus of control not found Knowledge acquisition significantly higher for experimental group Extent of strategy utilisation significantly higher for experimental group RP trainees made greater use of trained skills but not greater use of transfer strategies

Table 4 Empirical studies of transfer of training (1988 - 1998)- trainee characteristics (continued)

1992	Ford, Quinones, Sega & Sorra*	180 Air force graduates & their supervisors	AGE technical training course (18 weeks)	ABR	Ability Self-efficacy	Self (4-months post-training)	Supervisors (4-months post-training)	Opportunity to perform tasks Transfer behaviour	Ability and self-efficacy positively related to frequency of performing trained tasks with ability having a significant, positive regression weight (.17). Airmen high in self-efficacy performed more tasks than those low in self-efficacy
1995	Facteau, Dobbins, Russell, Ladd & Kadisch	967 Managers & supervisors	Management training (large-scale state training curriculum)		Demographics (sex, ethnicity, job level, tenure with state govt., job tenure, age & educ. qual.); Pre-training motivation, organisational commitment, environmental support	Self (time between completion of a training course & administration of questionnaire not reported)		Pre-training motivation Organisational commitment (4 items from Porter & Smith (1970)). Task constraints questionnaire	Pre-training motivation significantly related to perceived training transfer. Perceived training transfer & organisational commitment n.s. Perceived training transfer & task constraints n.s.
1995	Warr & Bunce	106 Junior managers	Open learning programme - 4 months		Demographics (age, educ. quals., job tenure, management experience); pre-training motivation, anxiety (learning task & interpersonal), learning self-efficacy, learning strategies (analytic & behavioural), assessments of learning; reactions to training, job performance.	Self (pre-training, immediately post-training.) Tutors (immediately post-training) Line managers (pre-training, immediately post-training, 3 months)		Learning Learning Job performance	Significant associations found between learning score and changes in rated job performance.
1997	Axtell, Maitlis & Yearta *	75 Non-managerial technical staff	Interpersonal skills at work		Self-efficacy; motivation	Self (immediately post-training, 1 month, 1 year) Managers (1 month, 1 year)		Time 1: Learning Times 2 and 3: Transfer of skills Times 2 and 3: Transfer of skills	Significant positive relationships with trainees' perceptions of their skill transfer after 1 month Motivation to transfer correlated with transfer T2, (r=.55) and T3, (r=.39) Motivation to transfer correlated with transfer T2, (r=.30) and T3, (r=-.023) Manager and trainee ratings of transfer: T2, r=.38 and T3, r=.70

* See also Table 6

Trainee characteristics, therefore, are germane in the transfer process. Two important trainee characteristics in learning and transfer are intention and ability: trainees need both the volition “will do” and ability “can do” (Tannenbaum & Yukl, 1992, p.414) to acquire and apply new skills (Wexley & Latham, 1991; Noe, 1986). Baldwin, Magjuka and Loher (1991) point out that “can do”, the ability component of trainability, has been the focus of the literature. However, the “will do”, motivation to learn, has been largely neglected in the training research (Clark, Dobbins & Ladd, 1993) and until a little more than ten years ago, motivation to transfer was an unexplored area of research (Noe, 1986).

In efforts to understand what influences training effectiveness, recent studies have suggested that pre-training motivation influences training outcomes. Baldwin et al., (1991) found that pre-training motivation was related to learning in a training programme designed to improve skills in conducting performance appraisals and in providing feedback. Mathieu, Tannenbaum and Salas (1992) found that pre-training motivation for a proof reading skills programme predicted learning and, following the training, performance on a work sample test. Fecteau, Dobbins, Russell, Ladd and Kudisch (1995), in a study investigating whether trainees’ general beliefs about training influenced pre-training motivation and transfer of training, found that pre-training motivation was significantly related to perceived transfer.

Motivation to transfer can be defined as the trainee’s desire to use the knowledge, skills and abilities acquired in a training programme on the job. As a result of motivation to transfer, behaviour change back in the workplace will likely occur for trainees who learn the course material and desire to apply that training to the work activities (Noe & Schmitt, 1986).

The limited amount of research examining motivational issues of transfer according to Baldwin and Ford (1988) lacks a coherent framework for understanding the factors affecting the transfer process. However, within the framework of valence-instrumentality-expectancy theory (Vroom, 1964), Noe (1986) proposed that trainees are motivated to transfer new skills to the work situation when they are confident in using the skills, are aware of the relevancy of the new skills, discern that job performance improvement may likely occur as an outcome of using new knowledge and

skills and they believe that the content of the training programme is useful in solving work-related issues and frequent job demands. Noe's (1986) model of motivational influences on training effectiveness indicated that motivation to transfer is presumed to moderate the relationship between learning and behaviour change. Changes in work behaviour are more likely to be greatest for trainees who learn the content of the training course and desire to implement their newly acquired training back in the work place (Noe, 1986).

In a test of Noe's (1986) model and as part of a larger project evaluating a training programme designed to improve the administrative and interpersonal skills of high school principals, Noe and Schmitt (1986) examined the influence of trainee attitudes on training effectiveness. The authors hypothesised that motivation to transfer moderated the relationship between learning and behaviour change. However, in a small sample ($n = 44$) of educators, no evidence was found to support the moderating effect on the learning - behaviour change relationship. In a revised model of the influence of trainee attitudes on training effectiveness, they found that trainees who had the strongest commitment to job involvement were more motivated to learn the training programme content and transfer skills to the work setting. Job involvement is the extent to which the trainee identifies with work or its importance for their self-image (Lodahl & Kejner, 1965).

To increase motivation to transfer skills learned in training, goal setting and feedback have been utilised. Wexley and Nemeroff (1975) found that hospital supervisor trainees were significantly better at applying their new skills than were members of a control group when they were assigned goals after a management development training programme. In their study, the trainees, who completed a two-day workshop designed to improve leadership and interpersonal skills, were given a set of behavioural checklists with instructions in self-monitoring and self-recording their utilisation of new skills back on the job. The items on the checklist directly corresponded with components of the training programme. The results showed that the trainees using the assigned goal-setting approach were better in implementing their training than was a control group.

Reber and Wallin (1984) demonstrated the benefits of combining goal setting and feedback as a strategy to improve occupational safety in a farm machinery manufacturing plant. Goal setting and feedback together produced higher levels of transfer to the workplace than did either intervention independently. Behavioural safety rules were more frequently obeyed when the employees received feedback about their performance relative to an accepted standard. Although the trainees were made aware of performance expectations during their training and their performance after training was increased, assigning difficult yet acceptable safety goals, together with information regarding goal performance, resulted in considerably more improvement (Reber & Wallin, 1984).

Complementing research on motivation to transfer, Baldwin et al., (1991) established three organisational “signals” that affect trainees’ intentions to apply their training to their jobs. They found that when trainees (1) receive relevant information before the training programme begins, (2) recognise that they would be accountable for learning, and (3) perceive training as compulsory, trainees reported greater intentions to transfer their training back to their jobs.

Furthermore, Tziner et al., (1991), in commenting on Noe’s (1986) claim for the motivational dimension of transfer, deduce that the motivation to transfer training is driven by two elements, (1) the degree to which trainees feel confidence in their ability to use the training and (2) the trainees’ beliefs about the relevancy and usefulness of the skills on the job.

Just as ‘will do’ is an important trainee characteristic, the ‘can do’ is also consequential. One trainee characteristic that may affect the implementation of training is the ability level of the trainee. The training literature suggests that the amount of knowledge acquired in training is often related to the trainees’ ability (e.g., Robertson & Downs, 1979). Therefore, high ability trainees should be better equipped to execute trained tasks, particularly challenging and complex tasks. Ford, Quinones, Sego and Sorra (1992), in their study investigating factors affecting the opportunity to perform trained tasks on the job, found that the trainee airmen who were perceived by their supervisors to be competent, obtained greater breadth of experience and performed the more difficult and complex technical tasks for which they were trained.

The degree to which trainees feel confidence in their ability to implement the training away from the training environment implies a sense of self-efficacy. Self-efficacy refers to the belief in one's ability to perform a specific task (Bandura, 1977) and according to Gist (1987) and Latham (1988) should be considered both an antecedent and consequence of training.

Individuals with high self-efficacy tend to do better in cognitive tasks than individuals with low self-efficacy (Bouffard-Bouchard, 1990) and, therefore, self-efficacy could be considered an antecedent of training effectiveness. Psychological procedures, such as training, change behaviour by creating and strengthening self-efficacy (Bandura, 1977). During training, changes in trainees' self-efficacy may be a useful indicator of learning or skill acquisition and development (Kraiger, Ford & Salas, 1993).

Trainees who believe they are capable of mastering the training content are likely to learn more during the course of the training programme and perform trained job tasks. Pre-training self-efficacy has been shown to be positively related to improvements in training performance (Gist, 1989; Gist, Schwoerer & Rosen, 1989) and to task performance in a variety of settings (Gist et al., 1989). Self-efficacy is also related to newcomers' openness to experiment (Jones, 1986) and to the likelihood that they will use advanced technology (Hill, Smith & Mann, 1987). Individuals high in self-efficacy were more likely to seek out opportunities to improve computer skills (Hill et al., 1987). In a study investigating the influences of self-efficacy on the acquisition and maintenance of the skill of negotiating, Gist et al., (1991) reported that the trainees who scored highest in self-efficacy were the most successful in maintaining levels of negotiating over a seven-week maintenance period after training. High self-efficacy may encourage trainees to persist in transferring their training when they confront barriers in the workplace after training (Marx, 1982).

Tannenbaum and Yukl (1992) suggest that self-efficacy can be seen as "a predictor of training success, as a process variable during training, or as a desirable outcome of training" (p.415). Self-efficacy can be regarded as an important trainee characteristic.

Another possible important trainee characteristic in transfer of training is organisational commitment. Organisational commitment is "the relative strength of an individual's

identification with and involvement in the particular organization” (Mowday, Porter & Steers, 1982, p.27). A study, part of a large scale training needs assessment to identify the training needs and course content for multi-level management involving 967 managers and supervisors employed by a state government, was reported by Fecteau et al., (1995). The authors proposed that employees who are more committed to the organisation should be more motivated to learn during training and to transfer skills back to the job since such behaviours are consistent with the goals of the organisation. The suggestion of Fecteau et al., (1995) was that employees who are highly committed to the organisation may be more likely to benefit from available training programmes than less committed employees. Contrary to their expectations, organisational commitment was not related to perceived transfer although the authors found that it affected transfer indirectly, through its effect on pre-training motivation.

The finding of Fecteau et al., (1995) that organisational commitment was not directly related to transfer is not surprising. In assessing organisational commitment only four items from Porter and Smith’s (1970) scale were used. Moreover, perceived training transfer was assessed using a nine-item scale to “measure the extent to which managers believed that a variety of desirable outcomes have occurred as a result of their ability to transfer the skills they have learned in supervisory and management training back to the job” (p.10) e.g., “The productivity of my subordinates has improved due to the skills that I learned in training courses.” It appears, therefore, that the participants were asked to report training transfer in a generic way. In other words, the perceived transfer of training was not related to a specific training programme. It may also have been that some managers in the sample had not received management training and those who had received training may not have been a homogeneous group in terms of the quality and quantity of supervisory training that they had received.

Consistent with the view that employees who are more committed to the organisation should be more motivated to learn during training, and more motivated to transfer skills back to the job, since such behaviours are consistent with the goals of the organisation, Tannenbaum, Mathieu, Salas and Cannon-Bowers (1991) found that organisational commitment was moderately correlated ($r = .53$) with motivation to learn during training. There was, however, no measure of transfer of training in their study.

The literature examining the relationship between trainee characteristics and transfer of training, cited above, shows that research in the area is beginning to identify the factors which are important in the training and transfer process. Empirical evidence suggests that ability (e.g., Tubiana & Shakhar, 1982), motivation to transfer (Tziner et al., 1991) and self-efficacy (Gist et al., 1990) can be relevant factors in learning and transferring newly trained skills and knowledge to the job. Self-efficacy appears to be the most important and investigated in the present study.

The following section reviews literature on workplace characteristics, features of the environment that encourage or inhibit transfer of training.

5.3 Workplace Characteristics

As the studies above show, factors relating to the trainees' characteristics have been the focus of research attention in the transfer literature. While the focus has been on trainee characteristics, it has largely ignored the characteristics of the workplace and whether training and post-training environmental factors help to facilitate or inhibit the transfer of training. Peters and O'Connor (1980) noted that in many work situations, individuals who are willing and competent to perform tasks might be either inhibited or prevented from doing so because of situational characteristics beyond their control.

Noe (1986) suggested that situational constraints might limit the extent to which trainees can transfer their training to their workplace. Mathieu et al., (1992) found that perceived situational constraints impacted significantly and negatively on pre-training motivation. They suggest "a potentially debilitating negative cycle stemming from situational constraints" (p.842) because if trainees were not provided with sufficient time to complete their tasks successfully, nor provided with adequate resources in terms of equipment, supplies, and information, they could be expected to become frustrated if they were unable to implement their newly acquired training once back on the job. Frustration would possibly lead to a reduction in training effectiveness and discourage future training opportunities. Therefore, they contend, situational constraints are likely to have two negative consequences: (1) an awareness of constraints is likely to hinder the learning process, and (2) limit the extent to which trainees can transfer their learning.

However, despite the significance of the work environment, very little research has been conducted to assess situational factors that either facilitate or inhibit the application of skills newly acquired through training (Tracey et al., 1995). Some employees leave training with new skills and strong intentions to apply those skills, only to find that limitations in the post-training environment interfere with the actual transfer of training (Brook, Shouksmith & Brook, 1984; Tannenbaum & Yukl, 1992). Thus, the effectiveness of a training programme can be influenced by events that occur after a trainee returns to the job.

The comprehensive review of transfer of training (Baldwin & Ford, 1988) and the major review of training and development in work organisations (Tannenbaum & Yukl, 1992) note the importance of organisational support, yet report very few empirical studies and also note there is little understanding of what makes up a transfer climate in an organisation. Baldwin and Ford (1988) argued that supervisory support and organisational climate are key variables that may influence the transfer process. In the same vein, Tannenbaum and Yukl (1992) state: “elements of the post-training environment can encourage (e.g., rewards, job aids), discourage (e.g., ridicule from peers), or actually prohibit the application of new skills and knowledge on the job (e.g., lack of necessary equipment)” (p.420).

Baldwin and Ford (1988) identified seven empirical studies published between 1953 and 1987 that have examined the relationship between the workplace characteristics and transfer of training. The earliest study was that of Fleishman (1953) who suggested that a supportive leadership climate is a factor in transferring learning to the workplace. The trainees in the study showed more consideration when their supervisors showed high consideration of their subordinates whereas those trainees whose supervisors were lower in consideration did not show any change in behaviour. Leadership was a factor in the transfer process. Following the initial research, Fleishman, Harris and Burt (1955) conducted a training programme that resulted in managers showing more consideration to their employees. But, in a follow-up study, the effects of the training had decayed. To find out the reason for the decay, Fleishman and his colleagues held a series of interviews that suggested that the trained managers’ supervisors were not supportive of the goals of the training programme. The maintenance of the managers’ training was dependent on their supervisors’ support for the training goals.

From the early studies into the perceptions of the leadership climate, research attention then centred on perceptions of the organisational transfer climate (e.g., Miles, 1965; Hand, Richards & Slocum, 1973; Baumgartel, Reynolds & Pathan, 1984, all cited in Baldwin & Ford, 1988). Table 5 presents a chronological account of the 1948-1987 studies rather than Baldwin and Ford's tabulated review which was alphabetically ordered by author's / authors' names. Table 5, in presenting an historical development of the area, therefore, is an adaptation of Baldwin and Ford's (1988) review of the literature examining the relationship of the characteristics of the work environment to transfer of training.

In the main, as Table 5 shows, the studies, cited in Baldwin & Ford (1988) investigating the influence of the workplace used large-scale surveys to examine correlates such as work climate (Baumgartel et al., 1984) leadership (Fleishman, 1953) and supervisory support (Huczynski & Lewis, 1980) to transfer criteria. The training programmes emphasised interpersonal skill development, specifically, human relations and management skills programmes. Transfer criteria were effort to apply (Baumgartel & Jeanpierre, 1972; Baumgartel et al., 1984), perceived changes in attitudes (Hand, Richards & Slocum, 1973) and behaviour (Fleishman, 1953). Data were gathered from the trainees immediately after completion of the training programmes and between two and 24 months after training. With the exception of the study of Hand et al., (1973), data were gathered at one point of time only. The most frequently investigated work environment characteristic was the trainees' perception of the transfer climate. A favourable organisational climate was found to be significantly and positively related to the trainees' effort to apply their training.

Baldwin and Ford (1988) point to two major problems with the studies of the work environment and transfer of training. Firstly, they contend, the nature of the research is "static" compared to the "dynamic nature of the transfer process" (p.85). The support for the relevance of the workplace to the transfer issue is based on correlational studies and therefore, causality cannot be implied. Secondly, an issue of concern for Baldwin and Ford (1988) is the criterion problem. Typically, the studies used self-report measures of behaviour change as the measure of transfer (as did the present study) taken at one point in time. The only study to examine changes of trained

Table 5**Empirical studies of transfer of training (1953 - 1987)- work environment**

Year	Author(s)	Sample	Training content	Variables	Source (timing)	Criteria Measures	Results
1953	Fleishman	122 Manufacturing foremen	Leadership training	Perceptions of leadership climate	Self (varied 2 - 24 months post training)	Leader behaviour (LBDQ)	Leader behaviour was significantly affected by the leadership climate in the trainees' work environment. Trainees who returned to supervisors high in consideration exhibited more consideration. No such change occurred for those returning to supervisors lower in consideration
1965	Miles	34 Elementary school principals	Human relations programme 2 weeks.	Perceptions of transfer climate	Self (8 months post-training)	Perceived on-the-job change	Organisational factors (security, autonomy, power & problem solving adequacy) mediated the perceived change associated with laboratory training
1972	Baumgartel & Jeanpierre	240 Indian managers	Management development programme	Perceptions of transfer climate	Self (immediate)	Effort to apply	Favourable organisation climate perceptions were significantly & positively related to effort to apply
1973	Hand, Richards & Slocum	21 Middle managers	Human relations training	Perceptions of transfer climate	Self (3 & 18 months post-training) Supervisors (3 & 18 months post-training)	3-Month evaluation 18-Month evaluation	No significant changes in attitudes or behaviours of trainees were observed Significant positive changes in attitudes were observed in the experimental group; negative changes existed in the control group. Three climate perceptions (whether the organisation favours participation by subordinates, innovative behaviour & independence of thought), moderated the findings
1980	Huczynski & Lewis	48 Electronic managers	Network analysis training programme - 3 days	Perceptions of transfer climate & supervisor support	Self (4 months post-training)	Attempt to transfer	Transfer attempts were more likely when the trainees had pre-training discussions with boss and where boss sponsored the new idea. Supervisors' attitudes and management style were found to be the most important factors in attempt to transfer
1984	Baumgartel, Reynolds & Pathan (Study 1)	260 American managers	Human relations	Perceptions of transfer climate	Self (immediate)	Effort to apply	Favourable organisation climate perceptions were significantly and positively related to effort to apply
1984	Baumgartel, Reynolds & Pathan (Study 2)	246 Indian managers	Management development programme	Perceptions of transfer climate	Self (immediate)	Effort to apply	Favourable organisation climate perceptions were significantly and positively related to effort to apply

(Adapted from Baldwin and Ford, 1988, pp 83-84)

behaviour across time was that of Hand et al., (1973) who examined trainee and supervisors' reports of behaviour change at three months and 18 months post-training. Interestingly, there were no changes in behaviour at three months but changes did occur and were reported at 18 months post-training.

Despite the problems of these early studies such as the use of self-reports of behavioural change as the major measure of transfer and the timing of the measure (Baldwin & Ford, 1988), the literature clearly shows the importance of workplace support after completion of training. Once back in the workplace after training, trainees and their colleagues either begin or resume an interdependent relationship. Hence, a positive collegial relationship can facilitate the utilisation of skills and conversely, a negative collegial relationship can restrict the trainees utilisation of their skills. Trainees are more likely to use the skills acquired in the training environment back in the work environment when they return to a supportive workplace (Noe & Schmitt, 1986).

The early literature (1953-1984) in the area clearly suggests that a supportive workplace is a critical component in the transfer of training. In 1986, Eisenberger, Huntington, Hutchison and Sowa formally introduced the concept of perceived organisational support that focuses on an employee's perceptions of the supportiveness in the employee - organisation relationship. To this end, employees form global perceptions based on their daily experiences and observations within the organisation. These global perceptions encompass the extent to which an organisation values its employees' contributions, cares for the wellbeing of its employees and is equitable and fair in rewarding effort and loyalty. Such perceptions are important as employees attempt to understand, envision and respond to their workplace (Eisenberger et al., 1986).

A later study of Eisenberger and colleagues (Eisenberger, Faslo & Davis-LaMastro, 1990), noted that perceived organisational support is important to an employee's sense of wellbeing and can lead to positive benefits not only for the employee but also positive benefits for the organisation. Perceived organisational support also influences employee innovation within the organisation and affects behaviours that benefit the organisation (Eisenberger et al., 1990) with employees increasing their work efforts to fulfil the organisation's goals (Eisenberger et al., 1986).

The importance of organisational support was recognised by Goldstein (1986) who examined the early literature on the workplace transfer environment and suggested that because of its significance, a supportive organisational transfer climate should be examined as part of the training needs assessment process. Goldstein's opinion was that trainees would not be likely to implement their newly acquired skills unless they were transferring them back into an environment that supported their use. He argued that a needs assessment that focused solely on the identification of skills required for job performance was too narrow and doomed to failure as it did not take cognisance of the organisational dynamics that influence the transfer process.

Organisational dynamics such as supervisory and peer support are determinants in trainees being able to perform newly trained skills. Ford et al., (1992) studied U.S. Air Force graduate trainees after they had completed four months of a technical training. They found the trainees had different opportunities to apply their training and there were wide variations in the length of time before the trainees were first able to perform their trained tasks. These differences were related to supervisory and peer support as well as the trainees' self-efficacy and cognitive ability. Thus, Ford et al., (1992) extended the literature on the work environment by suggesting that one reason why the workplace has an impact on transfer is by its facilitating and inhibiting effects on trainees' opportunities to perform their trained skills.

Rouiller and Goldstein (1993) further explored the question of organisational transfer climate and investigated its relationship to the transference of the training to the job. The extent of the influence of the organisational climate on the transfer of newly learned behaviours to the job, proposed by Rouiller and Goldstein (1993), is discussed below. The transfer of training climate was defined by Rouiller and Goldstein (1993) as "those situations and consequences that either inhibit or help to facilitate the transfer of what has been learned in training into the job situation" (p.379). The study involved 102 manager trainees employed in a franchised fast-food chain attending a nine-week assistant manager training programme. As well as the trainees, their supervisors and 297 co-workers were also surveyed.

By employing the critical incident technique the authors developed a climate transfer measure that consisted of sixty-three items relevant to the organisation. Forty-one items

were categorised as situational cues and twenty-two items were considered to be consequences. They proposed that a positive transfer climate, conceptualised as situational cues and consequences, consists of eight dimensions: goal cues, social cues, task and structural cues, self-control cues, positive feedback, negative feedback, punishment and no feedback. Situational cues refers to the extent to which aspects of a situation encourage employees to use what has been learned in training and consequences refers to the degree to which employees are rewarded for implementing their training (Facteau et al., 1995). These cues and consequences prompt trainees to use their training once they return to the job.

Rouiller and Goldstein (1993) showed that organisational transfer climate does affect the transfer of training and situational cues and consequences independently contribute to transfer behaviour. They concluded that not only do individuals who learn more in training perform better in transferring newly acquired behaviours but that a positive organisational transfer climate appears to be at least as important for that transfer to occur. Rouiller and Goldstein argue that training organisational members to provide a supportive environment may be as important as job related skill training.

Table 6 presents a summary of recent literature (1988 - 1998) examining the influence of workplace characteristics on the transfer of training. Whilst Baldwin and Ford (1988) found only seven studies (see Table 5 above), that examined the environmental effect on transfer, they noted that none attempted to change the work environment. The authors also called for identification and operationalisation of key workplace variables that influence transfer of training. The more recent empirical studies further demonstrate that transfer is dependent on the post-training environment and provide a response to Baldwin and Ford's (1988) call.

The studies in Table 6 used surveys to examine the perceptions of factors in the work environment such as supervisory support (McSherry & Taylor, 1994), supervisors' attitudes (Ford et al., 1992) and continuous-learning climate (Tracey et al., 1995). The training programmes involved technical training (e.g., Ford et al., 1992; Xiao, 1996), team building training (McSherry & Taylor, 1994) and management skill development (e.g., Facteau et al., 1995; Rouiller & Goldstein, 1993). Data were collected from several sources (e.g., Ford et al., 1992; Rouiller & Goldstein, 1993), several months

Table 6

Empirical studies of transfer of training (1988 - 1998)- work environment

Year	Author(s)	Sample	Training content	Variables	Source (timing)	Criteria Measures	Results
1991	Tziner, Haccoun & Kadish*	81 Military instructors	Advanced training methods, with a relapse prevention (RP) module for 45 experimental group participants	Perceptions of work environment situational constraints & social support for transfer of training	Self (end of first week) Supervisors (10 weeks post training)	Self-report of transferred skills Use of transfer strategies Supervisors assessment of transferred skills and strategies	Trainees with self-reported internal locus of control, who had received a relapse prevention programme and who perceived a more supportive environment were perceived by their supervisors as transferring strategies to a greater degree than others. No support for a main effect on transfer of training for work environment alone.
1992	Ford, Quinones, Sega & Sorra	180 Air force graduates & their supervisors	AGE ABR technical training course (18 weeks)	Perceptions of work environment (supervisors attitudes, support, work flow), opportunity to transfer learning	Self (4-months post-training) Supervisors (4-months post-training)	Opportunity to perform trained tasks Transfer behaviour	Differential opportunities to perform number, breadth and type of trained tasks Work context factors (supervisor attitudes) accounted for 10% of variance in breadth (no. of trained tasks)
1993	Rouiller & Goldstein	102 Managers (new), their supervisors & 297 co-workers	Management development (9 weeks)	Perceptions of organisational transfer climate; behaviour;	Existing managers (2-weeks pre-training, 'first several weeks' post-training, Co-workers (crew) 'first several weeks' post-training, Unit manager (8-12 weeks after arrival of new manager i.e., trainee	Climate Transfer behaviour Transfer behaviour Transfer behaviour	Learning was significantly related to transfer behaviour; learning accounted for 8% of the variance in transfer behaviour. Perceptions of organisational transfer climate significantly related to transfer behaviour Learning and organisational climate accounted for 54% of the variance in transfer behaviour.
1994	McSherry & Taylor	99 Trainees & 32 supervisors	Team-building training (4 days)	Perceptions of transfer training; supervisory support behaviours	Self (1-year post-training) Supervisors (1-year post-training)	Transfer behaviour Supervisory support for transfer	Transfer behaviour reported by 52% of trainees and only a small to moderate amount of skills were transferred. Eighteen per cent of supervisory support behaviours significantly related to transfer of training scale 17% of the variance in transfer of training explained by supervisory support

Table 6. Empirical studies of transfer of training (1988 - 1998)- work environment (continued)

1995	Facteau, Dobbins, Russell, Ladd & Kadisch	976 Managers & supervisors	Management training (large-scale state training curriculum)	Perceptions of social support & organisational transfer climate	Self (time between completion of a training course & administration of questionnaire not reported)	Social support for training Transfer behaviour	Subordinate & peer support positively related to perceived transfer Supervisor support negatively related to perceived transfer Top management support & perceived transfer n.s.
1995	Tracey, Tannenbaum & Kavanagh	505 Supermarket managers	Supervisory skills & behaviour (3 days)	Perceptions of organisational transfer climate & continuous learning culture	Self (pre-training, end of training, 6-8 weeks post-training) Supervisors (pre-training, 6-8 weeks post-training)	Post-training behaviour supervisory	Task constraints & perceived transfer n.s. Transfer of training climate had direct effect on post-training behaviour Continuous -learning culture had direct effect on post-training behaviour
1996	Xiao	106 Electronic production workers	Production requirements & basic KSAs in electronics	Perceptions of organisational transfer climate	Self (9-months post-training)	Transfer behaviour	Training significantly related to transfer of training, training accounted for 14% of the variance in transfer behaviour. Organisational factors (supervision, peer relationship) accounted for 29% of the transfer over and above training. Relation management support & trainee rated transfer significant
1997	Axtell, Maitlis & Yeara *	75 Non-managerial technical staff	Interpersonal skills at work	Perceptions of management support, autonomy	Self (immediately post-training, 1 month, 1 year) Managers (1 month, 1 year)	Transfer behaviour	Relation between perceptions of autonomy in their jobs & transfer significant Autonomy showed the strongest effect on longer term transfer

* See also Table 4

after the training was completed (Ford et al., 1992; Trace, et al., 1995) and one year after training (McSherry & Taylor, 1994). Thus, the empirical research, summarised in Table 8, guided the present evaluation and is discussed more fully below.

An extension of Rouiller and Goldstein's (1993) study was that of Tracey et al., (1995). The main purpose of the study was to examine the influence of two specific dimensions of organisational culture and climate, transfer of training climate and continuous-learning culture, on the transfer of newly trained supervisory behaviours. A continuous-learning work environment is defined by Tracey et al., (1995) as one in which members of the organisation share the understanding and expectations that learning is an important part of everyday work life. Accordingly, the authors suggest that continuous learning may be thought of as a part of organisational culture, since culture has been defined in terms of shared values and beliefs (cf. Schein, 1990, 1992).

In their study examining the influence of transfer of training climate and continuous-learning culture on newly acquired skills, Tracey et al., (1995) surveyed 505 supermarket managers from 52 stores. The managers comprised 104 managerial trainees, 104 supervisors and 297 co-workers. The managerial trainees had been employed by the company, on average, eight years and had been in their current position, on average, three years and attended a voluntary three day training programme on supervisory behaviours and skills. The trainees were surveyed three weeks prior to their training, at the end of training and at six - eight weeks post-training. The supervisors and the co-workers were surveyed at the end of training and the supervisors completed the questionnaire again at six - eight weeks post-training. The results of the study showed that the work environment is important for the implementation of newly acquired behaviours and skills. Both the transfer of training climate and continuous-learning culture had direct effects on the post-training behaviours. Tracey et al., (1995) state that organisational signals and cues appear to influence the transfer of training. Behaviours which signal that learning is valued and important and cues which suggest an innovative and competitive organisation seem to promote the utilisation of new learning.

Signalling that what is learned in training is of value and may have promoted the utilisation of learning was demonstrated in a New Zealand study. Of the approximately

3000 employees of a large service organisation, approximately 500 participated in an outdoor team-building training. In a correlational design study, McSherry and Taylor (1994) examined the relationship between specific supervisory support behaviours and transfer of training.

The 21-item transfer of training measure contained items such as 'applies brainstorming technique' 'is aware of team objectives' 'does not accept mediocrity' 'respects and is tolerant of differing views' and was developed specifically for the study and administered to the trainees (n=324) and their supervisors (n=112) who remained with the organisation one year after the training. The supervisory support behaviours measure was a 27-item revised version of Broad's (1982, cited in McSherry & Taylor, 1994) list of 74 managerial support behaviours e.g., 'informed trainee why he/she was selected for the course' 'allowed preparation time for training' 'created opportunities for trainee to use skills'.

The most transferred skills, according to the trainees, concerned allowing for and listening to others' ideas and the least transferred skill concerned selecting and discussing learning points of training. McSherry and Taylor (1994) note the supervisors showed very similar ratings to the trainees on the transfer of training items.

Five of the 27 supervisory support behaviours were significantly related to the transfer of training scale: creating opportunities for the trainees to make decisions based on new learning; reinforcing the use of newly learned skills; giving feedback on the use of newly learned skills; providing opportunities to practice newly learned skills and using skills / terminology of training. A hierarchical multiple regression, with the reported quality of the trainee-supervisor relationship entered first and then the supervisory support behaviours entered as a block, determined that 17% of the variance in transfer of training could be accounted for by supervisory support.

Thus, the authors found that certain supervisory support behaviours were important in the transfer of outdoor team-building training to the workplace. The most salient supervisory support behaviours for transferring the team-building training were the supervisors' utilisation of the training programme's terminology and skills, creation of

opportunities for the trainees to utilise their training and the provision of reinforcement and feedback when the skills were applied in the workplace.

Another study that examined supervisors' support was that of Fecteau et al., (1995). Supervisors' support was one variable of interest in a study examining whether employees' beliefs about training affect pre-training motivation and transfer of training. Fecteau et al., (1995) examined the effects of 14 variables (training reputation, intrinsic incentives, compliance, extrinsic incentives, career exploration, career planning, organisational commitment, four social support variables, task constraints, training motivation and perceived transfer of training. There were 967 managers and supervisors.

Unlike other studies (e.g., Ford et al., 1992; McSherry & Taylor, 1994; Rouiller & Goldstein, 1993; Tizner et al., 1991) in which perceived transfer was related to a specific training programme, Fecteau et al's (1995) study was concerned with supervisory and management training in the state's management training curriculum in general. The social support variables related to top management, supervisors, peers and subordinates.

Unlike the research of Noe and Schmitt (1986) which employed separate measures of social support and task constraints then collapsed them to make one variable (Fecteau et al., 1995), Fecteau and his colleagues retained the delineation and analysed the variables separately. The four sources of social support variables were predicted to positively affect pre-training motivation and perceived training transfer. A negative relationship was expected between task constraints and pre-training motivation and perceived training transfer.

Of the four social support predictors only supervisor support was positively related to pre-training motivation. Unexpectedly, subordinate and top management support were negatively related to training motivation and peer support was not significantly related. The results showed that task constraints were unrelated to perceived transfer and the authors suggest that the unexpected finding was possibly accountable by the fact that the managers did not perceive severe workplace constraints. As regards the independent effects of subordinate support, peer support, supervisor support and top

management support on training transfer, only subordinate and peer support were positively related to perceived transfer. Managers who perceived their subordinates and peers to be supportive of their training efforts were more likely to perceive greater transfer of the skills learned in training.

Because the data was gathered from the managers only, the authors attempted to control for bias of the self-report data by asking specific questions and using anonymous and confidential surveys. Interestingly, Fecteau et al., note that they were unaware of any research that suggests trainees cannot self-report training transfer accurately. However, a limitation of the study, as with that of Xiao (1996) discussed below, was that the data was gathered from a single source and that was the trainees themselves.

A contribution to the notion that different transfer climates exist in organisations with consequences for the transferability of training was that of Xiao (1996). A study in Shenzhen, China (Xiao, 1996) investigated the relationship between organisational factors and the transfer of training in two state-owned and two joint-venture companies in the electronics industry.

Xiao (1996) defines organisational factors “as those management practices in organizing production that might affect the transfer behavior of trainees” (p.56). This broad definition is confusing as it might include rewards, supervision and peer support but it could also include the piping of muzak, clocking in and out, and work rosters which could also affect the transfer behaviour of trainees. Thus, the definition is not stated in terms that could enable others to study the phenomenon. Dunham (1988) argues that operational definitions need to be publicly reproducible and reliable.

The training took place during one five-and-a half-day week and was developed and provided by the managers and engineers. Although the sex of the managers and engineers is not given, all the trainees in the sample were female. The 106 trainees, aged between 18 and 25 years, produced circuit boards which involved installing and welding circuits onto printed circuit boards, a repetitious task requiring good hand-eye coordination. New models of products had been put into production 4 months before the training was conducted.

Hierarchical regression was used to test the relationship between the organisational factors and the transfer of training. Company type did not influence the trainees' perceptions of transfer. Worker characteristics were entered at the second stage, and accounted for little variance in the transfer of training. Training achievement was then entered into the regression and indicated that training was significantly related to training transfer. Training accounted for 13% of the transfer of training.

Of the organisational factors, (application orientation, matching KSAs with work design, rewards, supervision and peer relations) supervision and matching trainees' KSAs with work design were the most influential. However, the organisational factors together accounted for little variance in training transfer.

While training serves to provide new work behaviours, successful transference of training is not easy to achieve because changing procedures or techniques requires effort and the continuation of previous behaviours are often an easier option. In an attempt to improve transfer of training, participants in a military setting were recipients of a relapse prevention (RP) module to inoculate them against returning to old methods. Tziner et al., (1991) evaluated the effectiveness of a two-week training programme which included an RP segment and investigating the impact of trainee locus of control and their perceptions of support for their training in the workplace. Ninety-four military instructors in the Israeli army participated in an intense training programme aimed at teaching them to plan and develop instruction schedules and training packages for their units. Experimental and control groups received identical training except the control programme did not include the RP component. Ten weeks after training the self-report questionnaires tapping the transfer of training were administered either by face-to-face or postal administrations. Simultaneously, the immediate supervisors of the trainees were surveyed. The results showed that compared to the control group, trainees who benefited from the RP training reported higher levels of immediate post-training mastery of the training content and were more likely to use transfer strategies. According to their supervisors, the trainees were more likely to transfer and apply their skills. No support was found for a main effect on transfer of training for locus of control and work environment factors alone.

Although research into workplace characteristics has not been plentiful (Tannenbaum & Yukl, 1992) it does show that obstacles in the post-training environment hinder the implementation of newly trained skills and knowledge in the workplace.

5.4 Chapter Summary

Trainee characteristics and workplace characteristics are significant factors in the transfer of training. These characteristics, along with the training itself, have an effect on the success or failure of the training once the trainees have returned to the workplace. Yet, notwithstanding the significance of trainee and workplace characteristics in the transfer process, very few studies have been reported in the literature. Although energy and high costs are expended in training annually, the return on the investment in terms of training transfer is unclear.

The literature review acknowledged the deficits of training transfer and the limited amount of literature in the area. Nevertheless, the available literature examining trainee and workplace characteristics was considered and the review emphasised research that guided the present evaluation. There is evidence that trainee characteristics such as ability, motivation and self-efficacy may determine the likelihood of transfer of training occurring. Similarly, aspects of the workplace have been recognised as necessary to maximise successful training outcomes. The following chapter, Chapter 6, will describe the research rationale that guided the present evaluation.

Chapter 6

Research Rationale and Method

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The preceding chapters presented a review of the literature in transfer of training, the concepts of evaluation and the theories of organisational learning proposed by Argyris and Schön (1978, 1996) Argyris (1988, 1990, 1996, 1999) and Dixon (1994, 1999). Chapter 6 describes the main aim of the present study and outlines the research questions their rationales and the method. The research design is outlined and the participants in the main study are introduced. The measures used in the study are described and these are followed by the procedure. The concluding part of the chapter describes the analyses.

6.1 Main Aim of the Present Study

As stated in Chapter 1, the main aim of the present study is to determine the extent to which the knowledge, skills, attitudes and abilities acquired during the training programme, transfer from the training into the workplace. The overarching research question concerns that of transfer validity. In other words, does what has been learned in training, transfer on the job as enhanced performance in the work environment of the organisation? To examine transfer validity, characteristics of the trainees and the impact of training on the organisation and, conversely, the impact of the organisation on the training are examined.

Thus, the present study investigates the trainees' characteristics, learning, behaviour changes and job-related outcomes. Aspects of the training programme and the transfer environment, the workplace, are investigated, because by definition, a study of training transfer is a two-phase investigation that comprises a training phase and a post-training phase. The rationale and the related research questions of the present study are elaborated below.

6.2 Research Questions

The literature on transfer of training (Chapter 5) suggests that trainee characteristics, the training and workplace characteristics have been influential in the success with which training outcomes inform practice in post-training environments. The literature on organisational learning (Chapter 3) suggests that workplaces may exert defensive

routines that impair organisational learning. The research questions, stated below, address these factors and will guide the analysis presented in Chapter 7.

6.2.1 Trainee characteristics

Although empirical research of trainee characteristics in organisational settings is rare, a variety of motivational, attitudinal, personality, and learning characteristics of trainees have been identified as being influential in the success of training transfer (Tannenbaum & Yukl, 1992). Two trainee characteristics that have been identified as important for training effectiveness are self-efficacy and expectations which appear to be central constructs in understanding training effectiveness (Tannenbaum & Yukl, 1992; Tracey & Tews, 1995). Other writers (e.g., Gist, 1987; 1989, Gist et al., 1990) suggest that self-efficacy is an important trainee characteristic as a predictor of training success, a process variable and as a desirable outcome. Gist et al., (1991) reported that those participants who scored the highest on self-efficacy were the most successful in maintaining training levels. A failure to transfer may be due to a lack of confidence amongst trainees in their ability to apply the training outcomes once they are back in the workplace.

Baldwin and Ford (1988) noted that more research was needed to identify trainee characteristics that are influential in the transfer process. No research into the relationship between trainees' wellbeing and life satisfaction and training effectiveness appears to have been published yet wellbeing and trainees' feelings about life in general may be important in the training environment. Feelings of positive affect are likely to promote learning and conversely feelings of negative affect are likely to impair learning.

Therefore, trainee characteristics such as expectations of personal and organisational changes, psychological wellbeing, life satisfaction, and the trainees' level of skills possessed are representative of the characteristics investigated in the present study. To assess the influence of trainee characteristics on the effectiveness of the training and to assess the trainees' self-efficacy the study asks:

Research questions

Q.1. Did the trainee characteristics (e.g., general psychological wellbeing, life satisfaction, self-efficacy and current level of skills and competencies) influence the effectiveness of the training programme?

Q.2. Were there differences in the trainees' reported workplace self-efficacy over time?

6.2.2 Training

Whilst training serves to provide new knowledge and skills to be applied back on the job successful transference is difficult to achieve. Changing job procedures or techniques are usually more complex and difficult than continuing with an established method. For changes in trainees' work behaviour, in their performance and for changes in the workplace to occur, the content of the training course needs to be understood by the trainees and, importantly, relevant to their work. An assessment of learning can rule out the possibility of programme failure due to unawareness of the material taught (Noe & Schmidt, 1986) though learning is not necessarily related to behaviour change (Landy, 1989). It may be inferred nevertheless that if learning does not occur there is likelihood that there will be no change in work behaviour as taught in the training, no transfer.

According to Baldwin and Ford (1988) transfer research has implicitly assumed the relevance of the training content and that researchers should provide evidence of the relevance of the training content to the job performance. The relevance of the course content is an important area of training design (Goldstein, 1991, 1994; Axtell et al., 1997) and deemed an important variable and included in the present study. Goldstein (1994) notes that the training content should not only be relevant but it should not contain components that are deemed irrelevant by the needs analysis. Thus the study examines the trainees' understanding of the training content and their perceptions of the relevancy of the training modules in their work as rehabilitation case managers.

Feldman (1989) noted that research should examine how attitudes change during training and the issue of expectations about training needed to be explored more fully.

Expectations about training may play a role in motivating trainees to use their training and bring about changes in the workplace. Support for the link between expectations and outcomes is provided by Tannenbaum et al., (1991) who found that trainees who had their pre-training expectations met developed higher commitment, self-efficacy and motivation. Trainees may have expectations of personal and organisational changes as a result of the training. The study therefore examines the relationship between expectations and training effectiveness (see research question 4).

Thus, the study asks:

Research questions

- Q.3. Did the training alter the trainees' pre-training perceptions of the skills required for the job of case manager and their perceptions of their personal skill level?
- Q.4. Were organisational and personal changes brought about by the training?
- Q.5. To what extent did behaviour change, as a result of training, impact on the trainees' workplace at the individual and organisational levels?
- Q.6. Over time, to what extent were the training modules understood by the trainees?
- Q.7. Over time, to what extent were the training modules useful?

6.2.3 Workplace characteristics

Not only do new knowledge and skills need to be understood and relevant, they need to be implemented in the workplace. Goldstein (1991) noted that superior training performance does not always result in similar behaviour in the transfer setting. Successful learning pointers, such as a pass in the training programme or a resultant formal qualification, do not guarantee changes in work behaviour. The literature suggests that in many circumstances, learning that occurs during a training programme

does not transfer satisfactorily to the work place. Notwithstanding the good intentions of trainees to apply the newly acquired knowledge and skills back on the job they find constraints in the post-training environment that interfere with the actual transfer of training (Tannenbaum & Yukl, 1992). Thus, the effectiveness of a training programme can be influenced by events that occur after a trainee returns to the job. One way of examining the workplace is by attending to the organisational climate. The literature suggests indicated that organisational climate components such as situational cues and consequences, task and structural cues influence the transfer of training (Ford et al., 1992; Rouiiler & Goldstein, 1993). Organisational support for trainees has been identified as being important in the transfer of training (e.g., Ford et al., 1992; Huczynski & Lewis, 1980; McSherry & Taylor, 1994; Tracey et al., 1995; Xiao, 1995). This support may be derived from a number of sources (e.g., supervisors, colleagues, the provision of resources and the opportunity to use the training).

Argyris (1999) suggests that organisations themselves present barriers, sometimes deliberately and sometimes unconsciously, which stymie the transfer of training. These barriers, organisational defensive routines, can be counterproductive to the organisation's own goals and development. Despite the significance of the work environment, very little research has been conducted to assess situational factors that either facilitate or inhibit the application of newly acquired skills (Tracey et al., 1995) and thus, the study addresses this deficit:

Research questions

Q.8 What, if any, workplace characteristics (e.g., organisational climate, usefulness of the training modules in the workplace, satisfaction with support) facilitated transfer of training in the organisation?

Q.9 What, if any, workplace characteristics (e.g., organisational climate, usefulness of the training modules in the workplace, barriers to change) inhibited transfer of training in the organisation?

For clarity, the 9 research questions are reproduced below.

6.2.4 Research questions

1. Did the trainee characteristics (e.g., general psychological wellbeing, life satisfaction, self-efficacy and current level of skills and competencies) influence the effectiveness of the training programme?
2. Were there differences in the trainees' reported workplace self-efficacy over time?
3. Did the training alter the trainees' pre-training perceptions of the skills required for the job of case manager and their perceptions of their personal skill level?
4. Were organisational and personal changes brought about by the training?
5. To what extent did behaviour change, as a result of training, impact on the trainees' workplace at the individual and organisational levels?
6. Over time, to what extent were the training modules understood by the trainees?
7. Over time, to what extent were the training modules useful?
8. What, if any, workplace characteristics (e.g., organisational climate, usefulness of the training modules in the workplace, satisfaction with support) facilitated transfer of training in the organisation?
9. What, if any, workplace characteristics (e.g., organisational climate, usefulness of the training modules in the workplace, barriers to change) inhibited transfer of training in the organisation?

6.3 Research Design

Data was collected in a longitudinal, multiple cohort quasi-experimental design in which the surveys changed over time. The measurement instruments were a combination of standardised measures and new measures, which incorporated forced-choice responses and open-ended questions. The study design is shown in Figure 3. Cohorts 2, 3 and 4 were surveyed at the same points in their training and post-training schedules (pre-training, mid-training, post-training, at three months and six months post-training). The control group was surveyed at two points: the first survey paralleled the survey administrations to Cohort 2 pre-training and three months post-training. The supervisors were surveyed at three months after each of the cohorts had returned to the workplace.

Data Collection					
	Pre-training	Training		Post-training	
	Time 1	Time 2	Time 3	Time 4	Time 5
	Pre-training	(13 weeks) Mid-training	(27 weeks) Post-training	(3 months)	(6 months)
Cohort 2 Cohort 3 Cohort 4 <i>n</i> = 101	Transfer of Training Survey pre-training	Transfer of Training Survey mid-training	Transfer of Training Survey post-training	Transfer of Training Survey 3 months	Transfer of Training Survey 6 months
No-training Control <i>n</i> = 39	Transfer of Training Case Managers			Transfer of Training Case Managers #2	
Supervisors <i>n</i> = 27				Transfer of Training Survey Supervisors' Version	

Figure 3. Evaluation research design

6.3.1 Participants

There were three groups included in the study: trainees, supervisors and a control group. The trainees were 101 public sector employees of the organisation who had voluntarily enrolled in a post-graduate diploma at a university. The three experimental groups were Cohorts 2, 3, and 4. The trainees in Cohort 1 were members of the pilot study (see Appendix B and 8.3.4). An additional source of data for the experimental groups was the participants' supervisors. A random sample of 39 case managers selected from the payroll of the organisation, and not undertaking the training programme, formed a control group. The random selection procedure is discussed below in 6.3.3.

6.3.2 Procedure

Authorisation to conduct the study was granted by the Human Ethics Committee of Massey University and the Human Ethics Committee of the training institution. All guidelines of the New Zealand Psychological Society were observed and the guidelines for the ethical conduct of evaluations of Australasian Evaluation Society Inc. were upheld. Prior to the present study, a preliminary job analysis (Appendix A) and a pilot study (Appendix B) had been carried out.

The trainees were invited to participate in the study before they left their workplace to begin their training programme. The mail-out contained an introductory letter (Appendix C1), the Information Sheet for Transfer of Training Survey (Appendix C2) and a Consent Form (Appendix C3). The information sheet explained the purpose and the procedure of the study, the types of measures to be taken, the duration of the study, the time involved at data collections and the types of questions that were to be asked in the questionnaires. The participants were advised that their supervisors and others would also be surveyed to report work behaviour changes that may or may not occur following the training programme. Participants were informed that data would be collected from individuals but that the research was concerned with group changes. Issues of confidentiality and anonymity, knowledge of results and use of data were explained. Participants were told that they did not have to participate in the study or answer any questions that they did not wish to, and, they had the right to withdraw at any stage, without penalty. They were also told that their participation or otherwise

would not, in any way, effect their academic or work records. Finally, the information sheet gave the names of the research team, address, telephone and facsimile numbers and e-mail address of the researchers for any contact solicited by the trainees. The participants were asked to sign the consent form and return it to Massey University.

The researcher met each of the cohorts in the first week of their training at the training institution. Before the questionnaires were administered a brief address was given to the participants. The address reiterated the purpose of the study, the expected involvement of the participants, and the assurance of confidentiality. An opportunity for questions was provided. The cohorts were met face-to-face on two further occasions, firstly at thirteen weeks after their on-campus training had begun and again, at twenty-seven weeks, the final week of their training when the participants had returned to the tertiary institution, having completed a practicum back in their workplace. Questionnaires were administered and gathered by the researcher. Participants were thanked for their co-operation.

The fourth and fifth questionnaires to members of the cohorts were postal administrations. The postings contained the survey and a letter (Appendixes C4 and C5), which thanked the participants for their support and requested further support for the project.

After a period of two weeks elapsed following each questionnaire administration, a memorandum was sent to the trainees who had failed to respond requesting the return of the completed questionnaire (Appendix C6).

6.3.3 Random selection process

The members of the no-training control group were selected as follows: from the pool of incumbents with the same job title within the organisation as at 21/02/96. Those who were members of the cohorts were removed from the list of possible participants. From those remaining, 150 were randomly selected proportionally by region. The regional numbers were determined by the percentage of those available in the no-training pool over the total number of eligible case managers throughout the country. For example,

excluding case managers in cohorts 1, 2 and 3, 432 remained in the national pool and of those 139 were based in the Auckland region ($139/432 = .32$). Thirty-two percent of the 150 required for the control group numbered 48. Therefore, 48 Auckland case managers were selected by nominating the 15th and then every 3rd name. The procedure was followed for the three other regions: Waikato, Wellington and Southern. The 150 case managers were sent a letter inviting them to join the study (Appendix C7), the Information Sheet and the questionnaire “Transfer of Training Survey Case Managers”. Of the 150, 53 replied giving a response rate of 35%. Fourteen cases were excluded as these individuals either held temporary contracts within the organisation or were later selected for training. This resulted in a pool of 39 for the control group, 26%.

6.3.4 Recruitment of workplace supervisors

The recruitment of workplace supervisors (principal case managers and branch managers) and the subsequent administration of the “Transfer of Training Survey Supervisors’ Version” were by post. The mail-out contained a letter inviting participation in the study (Appendix C8), the Information Sheet for Transfer of Training Survey and a Consent Form. The letter advised the supervisors of the study and specified their role in the study. They were informed that they would be asked to provide information about a trainee’s knowledge, skills and abilities as they pertain to the job title and possible behavioural changes since training. They were also advised that they would be asked to provide the information *only* when the trainee had agreed to participate in the study. Consequently, their involvement in the study was dependent upon their consent and that of the trainee for whom they were responsible.

6.3.5 Measures

Measures in the questionnaires, described below and displayed in Appendix D, included forced-choice and open-ended questions to obtain quantitative and qualitative data. Table 7 displays the questionnaires’ measures and the times when they were administered to the trainees, the control group and the supervisors. The table shows that, in some instances, repeat measures were administered on two or more occasions. The open-ended questions asked of the supervisors and the trainees are shown separately in Tables 8 and 9.

Table 7

The measures and times of trainees', controls' and supervisors' questionnaires.

	Appendix	Trainees					Control		Supervisors
		Pre-training	Mid-training	Post-training	3 months	6 months	Time 1	Time 2	3 months
Understanding of training modules	D1	x		x		x			
Relevancy of training modules	D1	x		x		x			
Organisational changes	D2	x	x		x		x		x
Personal changes	D2	x	x		x		x		x
Organisational climate – actual	D3	x	x			x		x	x
Organisational climate –ideal	D3		x					x	x
Organisational commitment	D4	x	x		x			x	
Occupational self-efficacy	D5	x	x				x		
Skill requirement	D6	x	x		x		x		x
Self-rated skills	D6	x	x		x		x		x
Psychological well-being	D7	x	x				x	x	
Life satisfaction	D7	x	x				x	x	
Barriers to change	D8				x				
Extent of effect of changes	D9				x				x
Satisfaction with support	D10				x				
Job satisfaction	D11					x		x	
Socio-demographics	D12	x					x		x

Thus, the measures contained in the trainees' questionnaires (see Appendix D) included: **Understanding of the training modules** (Appendix D1): This measure was based on the trainees' present understanding of the course material. The modules listed for rating were derived directly from the course material. They were: rehabilitation policy in practice; personal and professional skills development; principles and practices of rehabilitation; culture, gender, class, age and ability issues; research design and methodology; legislation, regulation, policy and implications for case management; developing a practicum learning contract; and, the review of learning and presentation of project findings. The eight items are sequenced Module 1 to Module 8. For each module, the present understanding is rated on a 1 to 6 scale, which ranges from a low "vague understanding only" to a high "excellent understanding". Cronbach's alpha reliability coefficients for the scale was .78 at pre-training and post-training .81.

Usefulness / relevancy of training modules (Appendix D1): This measure was based on the trainees' perceptions of the relevancy of the course material to their work as rehabilitation practitioners. The modules are the same as those listed above. For each module the relevancy is rated on a 1 to 6 scale ranging from a low "minimally useful in practice" to a high "highly relevant to daily work". Cronbach's alpha reliability coefficients for the scale was .84 at pre-training and post-training .87.

Organisational and personal changes (Appendix D2): To assess the expectations about the training, participants and supervisors were asked about the types of organisational and personal changes, which would be brought about by the training. The six areas of organisational change were internal communication; staff turnover; awareness and acceptance of organisational policies; understanding of the organisation's regulations, legal and ethical requirements; understanding between case managers and claimants; and, understanding between case managers and supervisors. The six areas of personal change were job satisfaction; job commitment; attitude to change; quality of managerial performance; interpersonal skills development and time management. The areas of organisational and personal changes were measured on a simple "yes" or "no" scale.

Organisational climate: The questionnaire selected to measure Organisational Climate (Appendix D3) was the Climate, Leadership and Structure Questionnaire (CLS) (Shouksmith, 1994) which has two forms with two sets of directions, one form is used for rating the actual organisation, the other, the ideal organisation being rated. The Organisational Climate Questionnaire (CLS) (Shouksmith, 1994) is a modified version of the form developed by Litwin and Stringer (1966). Items 1 to 6 on the CLS measure the first six of Litwin and Stringer's seven climate variables (G. Shouksmith, personal communication, 21 June, 1995). The six climate variables are Conformity Requirements; Responsibility - personal responsibility given to members; Standards - emphasis on quality; Rewards - recognition of good work; Organisational Clarity; and, Warmth and Support - felt by members. These variables are measured by items 1 to 6 respectively. Items 7 -9 on the CLS link with Leadership and were derived from the work of Bass and Avolio (1990) (G. Shouksmith, personal communication, 21 June, 1995). Items 10 - 18 measure the variable Organisational Structure. Organisational structure refers to the impact of communication, decision making, and goal setting on human organisation. Participants are asked to indicate where on the scale they would rate their organisation. The following are examples of the items:

No responsibility is given in the organisation	__:__:__:__:__:__ -	There is a great emphasis on personal responsibility in the organisation
Leaders / Managers encourage individuals to reason and make their own decisions	__:__:__:__:__:__ -	Leaders / Managers demand that staff follow orders without thinking

Responses are then assigned scores of 1 through 7 based on the location of the check mark. Items 3, 4, 6, 8, 9, 11, 12, 15, 17, and 18 are reversals. The higher the score on any variable, the more favourable the organisation. For the trainees in the present sample, alpha reliability coefficients for the scale at pre-training and six months post-training (eight months) were .75 and .81.

Organisational commitment (Appendix D4): The Organisational Commitment Scale was developed by Cook and Wall (1980) and views organisational commitment in terms of three interrelated components: Organisational Identification (pride in the

organisation, internalisation of the organisation's goals; Organisational Involvement (a willingness to invest personal effort as a member of the organisation, for the sake of the organisation); and, Organisational Loyalty (affection for and attachment to the organisation, a wish to remain a member of the organisation) (Cook, Hepworth, Wall & Warr, 1981). The scale consists of nine-items with three items each tapping the three components: Organisational Identification items comprise numbers 1, 5, and 8: (I am quite proud to be able to tell people who it is I work for; I feel myself to be part of the organisation; I would not recommend a close friend to join our staff). Organisational Involvement items constitute numbers 3, 6, and 9: (I'm not willing to put myself out just to help the organisation; In my work I like to feel I am making some effort, not just for myself but for the organisation as well; To know that my own work had made a contribution to the good of the organisation would please me). Organisational Loyalty items consist of numbers 2, 4 and 7: (I sometimes feel like leaving this employment for good; Even if the organisation were not doing too well financially; I would be reluctant to change to another employer; The offer of a bit more money with another employer would not seriously make me think of changing my job). An overall Organisational Commitment score is aggregated from the total of the three sub-scales. Cook and Wall (1980) report Cronbach's alphas of .87 and .80 for the overall commitment score, from two separate samples. Biggs, Flett, Voges and Alpass (1995) report Cronbach's alpha of .84 from a sample of New Zealand rehabilitation service providers.

Occupational self-efficacy (Appendix D5): The Self-Efficacy Scale is a method of assessing a person's sense of personal agency (Bandura, 1977). The occupational self-efficacy measure was developed based on Bandura's conceptualisation of the dimensions of self-efficacy: (a) magnitude, the total number of Yes's and (b) strength, the total certainty for performance levels of the competencies expected by the organisation's case managers, expressed as a percentage. The 52-item scale includes: "I can elicit required information from claimants through my questioning technique; I can plan with specific, measurable and time bound objectives and strategies; I can explore critical issues in the social rehabilitation of claimants; I can utilise job exploration and career orientation materials with claimants; I can assist the claimant in developing a self-understanding of their capabilities, aptitudes and interests; I can inform claimants

of all financial entitlements under the 1992 ACC Act". Cronbach's alpha from the present sample at pre-training and mid-training was .94 and .96 respectively.

Skill requirement of the job (Appendix D6): To assess the skill requirements of the job of case managers the eighteen item scale, cited in Arnold (1994), adapted from the Voquest vocational guidance instrument of Page and Hilton (1983) and developed by Arnold (1991) was used. Each item consisted of a title and a brief description of a skill e.g., persuasion: the ability to negotiate, sell and debate effectively; verbal comprehension: the ability to obtain an accurate impression of the meaning of speech and writing. Participants were asked to indicate the extent that the skill was required in the job of a case manager on a 3-point scale (none / very little; some; a lot). Factor analysis of the 18 items resulted in four scales (Arnold, 1989). These were (1) cognitive skills (7 items); (2) dynamism (6 items); (3) communication (3 items) and (4) practical skills (2 items). Scores on each scale were the mean of item scores. A mean score across the 18 items was calculated so that a high score indicated a high skill requirement. Arnold (1994) reports alpha reliability coefficients for a sample of university graduates of .70, .67, .68, and .45 for the four scales, respectively. In the present sample, Cronbach's alpha coefficients for the scale were .76, .72 and .82 on three different occasions.

Self-rated skills (Appendix D6): Self-ratings of skills were obtained using the same skill items and the same four scales as above. In this measure the participants rate themselves, not the job, using a five-point scale (very low; rather low; fair; rather high; very high). A mean score across the 18 items was calculated so that a high score indicated a high self-rated ability. In the present sample, Cronbach's alpha coefficients for the scale were .86, .on each of three occasions.

Psychological wellbeing (Appendix D7): Psychological well-being was assessed using the scale developed by Arnold (1994). It consists of two subscales: self-assurance and adjustment. Self-assurance. consisted of two bipolar semantic differential type items on which participants were asked self-perception items "How do you see yourself in general?" The scale was derived from factor analytic analyses of 15 items. The items were confident - unsure and timid - forceful. Each item had a 5-point response scale

(very, quite, not sure, quite, very). Items were score on a 1 - 5 scale so that a high score indicated high self-assurance. In a sample of 55 business study students, a two-week test-retest reliability co-efficient was .87 and the alpha coefficient was .75 and .74 on each occasion (Arnold, 1989). Arnold (1994) further reports alpha reliability coefficients for a sample of university graduates of .72, .62, .62, and .57.

The five-item subscale 'adjustment' was derived in a similar manner to self-assurance, as discussed above and measured in the same way. The items were tense-relaxed; happy-sad; pessimistic-optimistic; discontented with myself-contented with myself; frustrated-fulfilled. Items were score on a 1 - 5 scale so that a high score indicated good adjustment. The two-week test-retest reliability coefficient for a sample of 55 business study students was .80 and the alpha co-efficient was .79 and .82 on each occasion (Arnold, 1989). Arnold (1994) further reports alpha reliability coefficients for a sample of university graduates of .77, .72, .80, and .81. In the present study, the Overall alpha was .70 and .72 at two different times.

Life satisfaction (Appendix D7): The measure of life satisfaction was the 8-item scale used by Quinn and Staines (1979) and used in other occupational research e.g., Arnold, 1989; Burke, Weir & Du Wors, 1979; Near, Smith, Rise & Hunt, 1984 (all cited in Arnold, 1994). Participants were asked eight self-perception items "How do you feel about your life at present?" The items were: boring-interesting; lonely-friendly; disappointing-rewarding enjoyable-miserable; useless-worthwhile; full-empty; discouraging-hopeful; brings out the best in me-doesn't give me much of a chance. Items were scored on a 7-point satisfaction scale (I'm extremely dissatisfied; I'm very dissatisfied; I'm moderately dissatisfied; I'm not sure; I'm moderately satisfied; I'm very satisfied; I'm extremely satisfied). Arnold (1994) reported alpha reliability coefficients for a sample of university graduates of .94, .92, and .93.

Barriers to change (Appendix D8): To assess the extent to which the anticipated barriers hindered in implementing changes in the workplace, participants were asked to respond to a 12-item measure on a 5-point scale (not at all,, sometimes,, to a considerable extent). The measure was developed based on the analysis of data obtained from participants in an open-ended question and items include staffing levels;

staff attitudes to change; pressure from colleagues; caseloading complexities; job stress and clients' unwillingness to change. An alpha of .78 was obtained.

Extent of workplace changes (Appendix D9): The extent of changes in the workplace measure, administered at 3-months after training, consisted of items deduced from responses to the qualitative question which asked the trainees immediately after the training programme what changes they intended making in the workplace. The scale consists of 15 items with three items tapping five components: branch, clients, colleagues, corporation, and personal /professional. Items include: "visit clients in their own homes; reduce the amount of processing; improve interviewing techniques; carry out more face-to-face contact with treatment providers; provide intensive rehabilitation to selected clients while maintaining others." The items were rated on a five-point scale (1 = never; 2 = seldom; 3 = sometimes; 4 = often; 5 = always). An alpha of .85 was obtained.

Satisfaction with support (Appendix D10): The satisfaction with support measure was based on the analysis of the data obtained from the participants immediately after training when they were asked to state what kind of support they might need in order to implement changes in the workplace. Thus, to assess the satisfaction with support that the participants received during the three months since their training, an eight-item satisfaction measure was developed. The measure, which incorporates such items as support with caseloading; support staff assistance; support from head office; recognition by superiors; and, on-going professional supervision/education, is rated on a 1 to 7 scale ranging from a low "I'm extremely dissatisfied" to a high "I'm extremely satisfied".

Job satisfaction (Appendix D11): The fifteen-item scale from the Work and Life Attitudes Survey (Warr, Cook & Wall, 1979, cited in Cook et al., 1981) was the job satisfaction measure chosen to assess the extent to which the participants were satisfied with both extrinsic and intrinsic aspects of their jobs. Participants indicate on a seven-point rating dimension (1 = I'm extremely dissatisfied,..... 4 = I'm not sure, 7 = I'm extremely satisfied) their satisfaction or dissatisfaction with each of fifteen features of their job. Two separate sub-scale scores representing Extrinsic and Intrinsic Job Satisfaction can be established and a total score (15 to 105) can be taken with a higher

score representing higher Overall Satisfaction. Coefficient alphas of .85 and .88 for two blue-collar samples and a test-retest correlation of .63 were observed across six months (Cook et al., 1981). Cronbach's alpha was .87.

Socio-demographics (Appendix D12): Information was sought on the participants' age, ethnicity, gender, formal education, length of time in the organisation, length of time in the role of case manager and region of origin. A demographic questionnaire was included at the end of the survey to provide common demographic data. Research indicates that placing personal questions at the end of a survey increases the likelihood that such questions will be answered (Mendenhall & Reinmuth, 1982).

Open-ended questions: The open-ended questions were developed from information deduced from data obtained from the job analysis (see Appendix A) and from data obtained from trainees in the pilot study (see Appendix B). Tables 8 and 9 shows the questions asked of the supervisors and the trainees and also shows the timing of the questions.

Table 8

Supervisors' open-ended questions and the time of questioning

Supervisors' open-ended questions

Three months post-training

- Overall, what has been the **most significant work-related behaviour change** since the case manager attended the training course?
 - What has been the consequence of this change for the case manager's clients? for the organisation?
 - How do you think the training has affected other case managers? your branch? the clients? the organisation?
 - What special support, if any, was given to facilitate the trainee's transference of new skills and knowledge into the branch?
 - What may or may not have helped the trainee use the knowledge and skills acquired during training once the trainee was back in the workplace? Please consider both organisational and personal issues which may have significance in facilitating and hindering changes.
-

Table 9

Trainees' open-ended questions and the times of questioning

Trainees' open-ended questions

Three months post-training

- Overall, what has been your **most significant work-related behaviour change** since your training?
- What has been the consequence of this change for your clients? for the organisation?
- As well as managing your caseload, what other work-related activities have you undertaken within the last three months?
- If there have been any other barriers to implementing change, please specify.

Six months post-training

- As a result of your training, did you try to make any changes in your work behaviour?
- When you consider your efforts to transfer the knowledge, skills and abilities you acquired during your training, what would be the **single most important factor in helping** you? You may consider personal attributes and environmental factors. Please explain in detail.
- How do you think your training has affected the corporation? your branch? your colleagues? your clients?

6.4 Data Analysis**6.4.1 Quantitative analyses**

The statistical package SPSS 10.0 was used for descriptive and inferential statistics – e.g., t-tests, chi square, ANOVA, and regression analyses. Prior to the analyses, data were screened for accuracy of data entry and missing values.

6.4.2 Qualitative analyses

Content analysis (Mostyn, 1985) was chosen as the method of analysis to identify the themes relating to the trainee characteristics, the training programme and the transfer of training. It involves examining the data to detect recurring patterns and themes (Mostyn, 1985). Mostyn (1985) states, “The overall purpose of the content analysis approach is to identify specific characteristics of communication systematically and objectively in order to convert the raw material into scientific data” (p. 117).

Data collection and analysis of data are parallel tasks (Miles & Huberman, 1994) and the analysis contains three connected sub processes (Huberman & Miles, 1994): data reduction, data display and conclusion drawing and verification.

For each cohort, therefore, data was gathered over a period of eight months and continually analysed by the researcher. The researcher transcribed the responses to the open-ended questions. Once the information was transcribed, the researcher read and reread the responses, sorted through the transcriptions and cut up the material, organising it into broad categories that were determined by the researcher (Patton, 1980; 1987; Stainback & Stainback, 1988). As an understanding of the information evolved, themes and commonalities began to emerge from the data, which were refined into categories and labelled as dominant themes. The data was examined several times and the categories and themes checked for consistency.

Once common themes had emerged, contrasts and comparisons were made to sharpen understanding (Miles & Huberman, 1994) and negative or disconfirmatory examples were sought to protect the study from bias (Miles & Huberman, 1994).

This analytical process was audited by an independent researcher. The audit trail included evidence of how the data was collected, evidence of transcriptions, how categories were derived (this included coding procedures and verification of deduced themes) and how decisions were made throughout the inquiry (verbal discussions) as Guba and Lincoln (1981) proposed.

The findings are presented in Chapter 7 and quotations have been included in the presentation of the results. The use of direct quotations gives personal voice (Creswell, 1994) and utilises an informal language to assist the organisation in organisational learning. Quotations, therefore, are an integral part of the analysis and discussion.

6.5 Chapter Summary

This chapter has presented the research questions and the rationales, and the method of the main study. The research design, the procedure and measures were outlined and the data analyses described. The following chapter presents the findings of the research.

Chapter 7

Results

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Chapter 6 outlined the method that guided the study and referred to the inclusion of the trainees, a no-training control group and the involvement of the trainees' supervisors in a quasi-experimental design. It will be noted that neither a no-training control nor a supervisors group is reported in the analyses and these omissions will be explained below. Therefore, Chapter 7 examines the results that were obtained from the trainees' quantitative and qualitative data and it is divided into five sections. Firstly, the chapter presents a foreword explaining why, despite the attempts to elicit quality data from the trainees' workplace supervisors about training effectiveness and attempts to obtain a no-training control group, there are no analyses presented. The second section presents the means, standard deviations and internal reliabilities (Cronbach's alpha) for the relevant transfer of training evaluation variables. These are presented below in Tables 10 and 11. The third section describes the results of the analysis of the demographic data for each cohort then describes the between-cohort demographic analysis. The fourth section of the chapter describes a quasi-experimental design, the recurrent institutional cycle design, provides the rationale for its use and presents an approximation of the design. The final section summarises the results of the analyses guided by the research questions.

7.1 Results Foreword

7.1.1 The exclusion of the supervisors' data from consideration

The collection of the supervisors' data was not straightforward. As outlined in 6.3.4 workplace supervisors were contacted and informed that they would be asked to provide information about a trainee's knowledge, skills and abilities as they pertain to the job of case manager and to provide information about possible behavioural changes since training. They were also advised that they would be asked to provide the information only when the trainee had agreed to participate in the study. Consequently, the supervisors' involvement in the study was dependent upon their consent and that of the trainee for whom they were responsible.

In many instances the supervisor was the principal case manager (PCM). However, in branches where there was not a PCM in situ, a PCM from a neighbouring branch was assigned the responsibility of supervising the trainee during the practicum. In such

cases, the PCM did not know the trainee prior to the practicum, was unfamiliar with the trainees' work and, once the practicum was completed had no further contact with the trainee. Therefore, the PCM was unable to provide data at three months post-training when the supervisors' survey was administered. In an attempt to counter this problem, branch managers were contacted and their participation in the evaluation research was also sought to provide information. However, many branch managers were unfamiliar with the details of case managers' work and case management per se and therefore, were neither willing nor able to participate and therefore ineligible for inclusion in the study.

A further problem with the supervisors' data concerned its validity and reliability. The supervisors were sometimes responsible for more than one trainee in a cohort as the larger branches often sent two case managers for training simultaneously. Because there was one PCM per branch that person was responsible for the one or more trainees in each of the cohorts. Thus, by the time the fourth cohort had completed training and had been back in the workplace three months, the supervisors were familiar with the organisational outcomes (or otherwise) of the training because they had observed them over a period of 18 months. Not only were they familiar with the organisational outcomes they were also very familiar with the questionnaires because they were asked to fill out one for each trainee. Further, the supervisors may have been influenced by the three-monthly formative reports of the evaluation research and were not unbiased in their responses.

During the 18 months period of the training programme the supervisors had an additional role of supervising the trainees for the duration of their 70-day work based practicum which was an integral part of the training programme carried out in the branch. Once the trainees had completed their practicum the supervisors' attention was no longer concentrated on the trainees as they were now absorbed back into the branch and it was 'business as usual'. There were members of subsequent cohorts to supervise as well as balancing all the demands of a busy workplace disrupted by the absence of the trainees during the on-campus programme and others on 'study leave' completing the practicum.

With disruption in the branches due to case managers' absence and other associated changes in the branches during the entire training programme, for example, the re-allocation of trainees' clients to remaining case managers, the employment of temporary staff, on-the-job training of relievers, budget issues and the uncertainty of who was going to be on the course, the supervisors (both PCMS and branch managers) were directly affected by the training programme. It is not clear if these factors affected the supervisors' expectations of the programme or their opinions of the trainees. Factors such as experience with the measures and questionnaire fatigue, motivation, the supervisors' workloads and history have unknown effects on the reliability and validity of the data. Thus, while data was gathered from the supervisors, the questionable reliability and validity led to the decision not to include these data in the present analysis.

7.1.2 No-training control group

Despite the vigorous attempt to get a no-training control group (see 6.3.3), there was a very low response rate. Of the 150 case managers invited to participate in the evaluation research, 53 (35%) responded to the first questionnaire. The low response rate was further compromised by participants being absorbed into subsequent cohorts. Of the 53 who replied, 39 (26%) were eligible for membership in the control group. It appeared that for case managers not taking part in the training programme there was very little interest in the evaluation research and it also emerged that despite personally addressed mail, not all of the 150 received the mail-out. This is discussed further in section 8.3.5.

When the 39 participants in the control group were sent the second questionnaire, 23 responded. Five of these participants were ineligible for inclusion in the evaluation research because they were either permanently or temporarily not employed by the organisation: dismissal, maternity leave and long-term sick leave accounted for the exclusion. Therefore there was data for 18 participants.

At this point, it was decided not to further analyse the control group data; the initial response rate was low and with further attrition the response rate was an unacceptably

low 12%. Although the control group had been randomly selected it was, in reality, a rather self-selected group of individuals. Unlike the trainees, a fifth of the control group had completed post-graduate qualifications, generally they were less experienced as case managers, and they were relatively newer employees. These differences coupled with the unacceptable poor response rate to the questionnaire' administrations, it was conjectured that a serious response bias due to self-selection could affect any further comparisons.

Therefore, a possible counterbalance to the design deficits partially caused by the loss of the control group, an approximation of the recurrent institutional cycle design was applied to the available data as an alternative assessment of experimental and control group differences.

7.2 Means, standard deviations and reliabilities for training variables

Tables 10 and 11 display the means, standard deviations and reliabilities obtained for the transfer of training variables. Tables 10 presents the means, standards deviations and reliabilities for the training and post-training variables over time for the combined cohorts. To estimate the internal consistency of all the scales Cronbach's alphas were calculated except for the personal change and organisational change scales. Because the items on those scales were dichotomous (yes / no) the Kuder-Richardson-20 formula was applied. Many of the reliability coefficients for the training and post-training scales, displayed in Table 10, are at .70 and above, an acceptable level according to Nunnally (1978). Thus, Table 11 presents the means, standards deviations and reliabilities for the training and post-training variables over time for each of the three cohorts separately. The number of cases for each analysis is provided in parentheses alongside the cohort mean.

For the pre-training phase, displayed in Table 10, many of the reliabilities were at and above an acceptable level according to the criteria of Nunnally (1978). High internal reliability coefficients were observed for occupational self-efficacy (.94), skills possessed (.86) and usefulness of the training modules (.84). In contrast, a lower alpha for organisational commitment, life satisfaction, and personal and organisational

Table 10
Number of cases, means, standard deviations and reliabilities of training variables

Measures	N	M	SD	r
Pre-training				
Occupational self-efficacy	85	3255.01	734.79	.94
Life satisfaction	96	36.64	5.98	.64
Wellbeing	100	24.46	3.60	.70
Skills needed	100	45.56)	4.08	.76
Skills possessed	97	64.22	8.12	.86
Understanding of training modules	99	39.56	5.76	.78
Usefulness of training modules	99	24.83	6.54	.84
Organisational commitment	98	43.30	7.12	.69
Organisational climate (actual)	97	74.18	12.41	.75
Personal changes	98	5.22	1.21	.60
Organisational changes	97	4.43	1.10	.42
Mid-training				
Occupational self-efficacy	92	3801.89	535.44	.96
Life satisfaction	99	42.13	6.46	.95
Wellbeing	98	26.77	3.53	.72
Skills needed	95	45.82	3.60	.73
Skills possessed	99	68.53	6.80	.86
Organisational commitment	98	43.08	7.23	.73
Organisational climate (actual)	98	62.54	9.66	.78
Organisational climate (ideal)	98	106.08	18.00	.95
Personal changes	98	4.93	1.22	.48
Organisational changes	96	4.33	1.21	.42
Post-training				
Understanding of training modules	85	39.98	5.32	.81
Usefulness of training modules	85	37.47	5.31	.87
Three months post-training				
Organisational commitment	76	41.65	8.10	.74
Skills needed	78	46.63	4.18	.82
Skills possessed	77	69.68	7.6	.86
Barriers to changes	78	42.37	6.95	.78
Extent of effect of changes	73	48.34	9.64	.85
Personal changes	75	4.33	1.49	.58
Organisational changes	76	3.75	1.30	.47
Six months post-training				
Understanding of training modules	73	35.43	6.09	.78
Usefulness of training modules	72	38.19	4.78	.81
Organisational climate (actual)	76	71.94	13.00	.83
Job satisfaction	74	65.58	13.59	.87

changes were noted. This perhaps is not surprising given the heterogeneity of item content and ambiguity associated with the ratings of some of the changes items (i.e., it was difficult to judge whether a 'yes' to some items was a change in a positive or negative direction).

The meaning of the reduced reliability of the life satisfaction variable at pre-training is unclear. The reliability of this measure does increase to levels similar to those reported by Arnold (1994) noted in the method (6.3.5), at mid-training.

As Table 11 shows consistently high internal reliability coefficients were obtained for occupational self-efficacy (.93, .93, .97), skills possessed (.88, .87, .83), and usefulness of the modules (.81, .82, .89) across the three cohorts. The high internal reliability coefficient for self-efficacy and the coefficients obtained for the scale by the three cohorts is possibly a reflection of the fact that this scale comprised a relatively high number of items tapping the dimensions of the trainees' sense of personal effectiveness in the work of rehabilitation practitioners. The acceptably high level indicates that the items comprising the scales form a more integrated measure. Internal reliability coefficients for wellbeing and organisational commitment were lower and as Table 11 shows varied across cohorts.

The level of organisational commitment reported for the sample as a whole, .69, is in contrast to that reported in other studies. For example, Biggs et al., 1995 in a sample of rehabilitation service providers ($N = 82$) report an alpha of .82 ($M = 50.13$, $SD = 7.2$). Cook and Wall (1980) report means of 44.64 ($SD = 11.45$) and 45.37 ($SD = 9.55$) with coefficient alphas of .87 and .80 from two separate samples. In the present study, the alpha coefficient of .69 was marginally low at the pre-training phase ($N = 98$, $M = 43.30$, $SD = 7.12$). The low alpha obtained from the sample of rehabilitation practitioners may reflect the fact that organisational commitment comprises three interrelated factors concerned with loyalty, identification and involvement and that prior to their training the trainees had diverse perceptions of these organisational factors and varied in their self-reports.

Thus, in the pre-training phase the life satisfaction, organisational commitment, personal changes and organisational changes measures appear most questionable in terms of internal reliability compared with the other variables. By contrast, the occupational self-efficacy and skills possessed scales appear as more cohesive measures concerned with personal effectiveness on the job.

Table 11

Means, (number of cases)* standard deviations and reliabilities for all variables by cohort

	Cohort 2			Cohort 3			Cohort 4		
	<u>M</u>	<u>SD</u>	<u>r</u>	<u>M</u>	<u>SD</u>	<u>r</u>	<u>M</u>	<u>SD</u>	<u>r</u>
Pre-training									
Occupational self-efficacy	3226.94 (34)	799.25	.93	3707.87 (31)	562.60	.93	3716.41 (20)	913.54	.97
Life satisfaction	37.52....(36)	5.72	.62	37.08 (36)	6.16	.66	35.34 (24)	6.08	.64
Wellbeing	23.97 (39)	3.40	.62	25.00 (36)	3.86	.74	24.48 (25)	3.40	.63
Skills needed	44.79 (39)	4.29	.79	46.38 (36)	3.81	.73	46.36 (25)	4.12	.77
Skills possessed	65.34 (38)	8.25	.88	62.79 (35)	8.55	.87	64.95 (24)	7.07	.83
Understanding of training modules	38.31 (39)	6.20	.81	39.82 (35)	5.97	.83	41.33 (25)	4.10	.70
Usefulness of training modules	25.52 (39)	6.41	.81	24.26 (35)	6.39	.82	26.83 (25)	6.92	.89
Organisational commitment	44.10 (38)	7.20	.60	42.11 (35)	7.20	.70	43.12 (25)	8.34	.78
Organisational climate (actual)	74.34 (38)	12.27	.81	70.97 (34)	13.21	.82	78.76 (25)	10.98	.72
Personal changes	5.02 (37)	1.21	.58	4.77 (36)	1.31	.60	5.28 (25)	1.13	.62
Organisational changes	4.56 (37)	1.19	.47	4.41 (35)	.92	.39	4.32 (25)	1.21	.41
Mid-training									
Occupational self-efficacy	4122.78 (38)	548.27	.97	4146.77 (31)	581.84	.96	4272.3 (23)	561.34	.96
Life satisfaction	44.62 (40)	6.9	.93	42.65 (35)	8.21	.96	39.12 (24)	4.29	.98
Wellbeing	26.38 (39)	3.64	.76	25.88 (35)	3.38	.70	28.06 (24)	3.58	.72
Skills needed	46.24 (37)	3.27	.67	45.73 (34)	3.81	.75	45.33 (24)	3.95	.78
Skills possessed	68.57 (40)	6.67	.86	67.46 (35)	7.88	.87	70.20 (24)	7.31	.86
Organisational commitment	46.32 (40)	6.59	.72	39.64 (34)	6.69	.69	43.29 (24)	8.43	.80
Organisational climate (actual)	70.47 (40)	9.88	.77	66.64 (34)	11.70	.77	75.41 (24)	10.70	.79
Organisational climate (ideal)	104.80 (40)	19.40	.95	103.38 (34)	16.67	.94	102.29 (24)	20.85	.96
Personal changes	5.35 (39)	.81	.22	4.65 (35)	1.47	.66	4.79 (24)	1.38	.58
Organisational changes	4.39 (38)	1.30	.51	4.31 (35)	1.02	.27	4.30 (23)	1.32	.50
Post-training									
Understanding of training modules	38.79 (30)	5.10	.81	39.12 (33)	4.62	.75	43.40 (22)	4.45	.88
Usefulness of training modules	38.63 (30)	4.46	.85	33.54 (33)	3.96	.82	42.72 (22)	5.74	.95

Three months post-training												
Organisational commitment	42.63	(30)	6.41	.63	38.57	(28)	9.38	.82	44.66	(18)	7.02	.76
Skills needed	47.13	(30)	3.64	.77	46.46	(30)	4.55	.85	46.50	(18)	4.78	.84
Skills possessed	71.06	(29)	7.79	.87	67.63	(30)	8.23	.90	71.66	(18)	6.39	.82
Barriers to changes	43.50	(30)	5.98	.72	41.56	(30)	7.37	.79	42.05	(18)	7.50	.83
Extent of effect of changes	51.07	(27)	9.36	.88	46.21	(28)	10.30	.79	51.66	(18)	7.66	.87
Personal changes	4.55	(29)	1.70	.77	3.57	(28)	1.66	.60	4.88	(18)	1.13	.38
Organisational changes	3.93	(29)	1.40	.61	3.10	(29)	1.34	.40	4.22	(18)	1.16	.42
Six months post-training												
Understanding of training modules	36.93	(30)	5.63	.79	33.03	(27)	6.14	.77	37.25	(16)	6.08	.79
Usefulness of training modules	37.65	(29)	4.74	.78	38.70	(27)	4.27	.74	38.75	(16)	5.90	.91
Organisational climate (actual)	76.10	(30)	12.34	.86	66.53	(28)	13.84	.83	74.87	(18)	10.06	.79
Job satisfaction	71.36	(30)	12.77	.88	62.89	(28)	13.25	.84	61.18	(16)	14.30	.90

NB. Data for Cohort 1 is not reported as members of the first cohort of trainees were not included in the main study but were participants in the pilot study reported in Appendix B

For the mid-training phase consistently high internal reliability coefficients were obtained for occupational self-efficacy (.96), the ideal organisational climate (.95) and skills possessed (.86) (Table 10). It should be noted that the reliability coefficients across the cohorts were at and above an acceptable level according to the criteria of Nunnally (1978) with the exception of the low alphas for organisational and personal changes.

Table 11 shows the **actual** organisational climate alpha coefficients (.77, .77, .79) and the **ideal** organisational climate (.95, .94, .96) from Cohorts 2, 3 and 4, respectively. The comparison might suggest that the trainees held relatively homogeneous opinions on aspects of their organisation (such as leadership, consideration, decision making, recognition of good work and the responsibility given to employees) and relatively homogeneous opinions on how they would like to see their organisation function. The items on both the ideal and actual organisational climate scales are the same; the instructions vary (see Appendix D3).

The internal consistencies for the two scales used in the post-training phase were moderate to high for each of the three cohorts: understanding (.81, .75, .88) and usefulness of the training modules (.85, .82, .95). The aggregate alphas for these constructs were .81 and .87 respectively (Table 10).

For the three months post-training phase all of the reliability coefficients, again with the exception of organisational and personal changes, were at an acceptable level by standard psychometric criteria (e.g., Nunnally, 1978). Table 10 shows that the seven internal reliability coefficients varied between .86 (skills possessed) and .47 (personal changes).

The alphas for skills possessed reported on three occasions (pre-, mid-training and three months post-training) for the present sample as a whole, is higher than that reported by Arnold, Auburn and Ley (1995). In their study, drawn from a sample of 218 psychology undergraduates, alphas of .75, .76, and .79 were observed on three occasions over a 17-month period.

For the six months post-training phase all coefficients alphas across the cohorts on all four scales (understanding of the modules, usefulness of the modules, **actual** organisational climate and job satisfaction) were in the moderate to high level, ranging between .87 (job satisfaction) and .78 (understanding of the training modules). Compared to the reliabilities for **actual** organisational climate at mid-training, at this phase the alphas were higher: .86, .83, .79 for the three cohorts respectively and the aggregate was .83 compared to the earlier .78. This might suggest that at six months after training the trainees were less divided in their perceptions of the organisation and responded in a more homogeneous way. There was a five months time delay between the two administrations, which may have minimised practice effects.

The coefficient alpha for job satisfaction observed for the three cohorts ($N = 74$, $M = 65.58$, $SD = 13.59$) is consistent with the alphas reported by Warr et al's (1979). The authors reported alphas of .85 and .88 for their samples drawn from employees in ten manufacturing plants ($N = 200$ and 390 respectively) and a combined mean value ($N = 590$) was 70.53 , $SD = 15.42$. Clegg and Wall (1981) in a study of employees in an engineering company reported a mean job satisfaction score of 71.90 ($SD = 13.85$) and an alpha of .92.

Overall it is evident that the reliability coefficients across the three cohorts for the scales within each phase of training and at the three months and six months post training phases, (with the exception of the organisational change, personal change and the organisational commitment scales) were at moderate to high level confirming that many measures had a fair degree of internal consistency.

7.3 Demographics

Demographic information for the present sample of three groups of trainees is described below. The available N s for each cohort are shown in the tables and in some cases there is a shortfall that reflects missing data. There were 13 men and 25 women in Cohort 2 and, as at the 1st January 1996, their ages ranged from 49 years to 20 years with a median of 30 years. There were eight men and 27 women in Cohort 3 and their ages ranged from 19 years to 46 years with a median of 30 years. In Cohort 4 there were two men and 20 women aged between 23 years and 53 years with a median of 32 years.

As Table 12 shows, there was a predominance of Pakeha in all cohorts. There were low numbers of Maori in each cohort and there were no Pacific Island or Asian participants in Cohort 4.

Table 12
Ethnicity of cohorts 2, 3 and 4

	Cohort 2 ($n=39^*$)		Cohort 3 ($n=37^*$)		Cohort 4 ($n=25^*$)	
	n	%	n	%	n	%
Maori	1	2.5	3	8.0	2	8.0
Pakeha	31	80.0	26	70.0	18	72.0
Pacific Island	2	5.0	1	3.0		
Asian	2	5.0	5	15.0		
Other	2	5.0			2	8.0

*m.d: Cohort 2 ($n=1$) Cohort 3 ($n=2$) Cohort 4 ($n=3$)

The participants in each cohort represented the organisation's four geographical regions: Auckland, Waikato, Wellington and Southern. Table 13 shows the percentages of participants from each region. With the exception of Cohort 4, which had fewer participants from the Auckland and Waikato regions, the regional spread was fairly even.

Table 13
Regions of origin for cohorts 2, 3 and 4

	Cohort 2 ($n=39^*$)		Cohort 3 ($n=37^*$)		Cohort 4 ($n=25^*$)	
	n	%	n	%	n	%
Auckland	10	26.0	8	22.0	2	8.0
Waikato	9	23.0	9	25.0	4	16.0
Wellington	8	20.0	9	25.0	9	36.0
Southern	10	26.0	9	25.0	7	28.0

*m.d. Cohort 2 ($n=1$) Cohort 3 ($n=2$) Cohort 4 ($n=3$)

Auckland, Waikato and Wellington regions are similar in that they cover large multi-cultural urban, industrial and rural areas whereas Southern covers a large geographical area and is predominantly rural with a largely Pakeha population. The geographical nature of the Southern region sometimes requires the case managers to travel large distances to visit clients in remote settings.

Prior to their studies in the post-graduate university training programme, the majority of the participants reported having formal qualifications less than Bachelor level. Approximately one-third of Cohort 3 and Cohort 4 had completed tertiary qualifications

that were either certificates or diplomas below Bachelor level. Table 14 shows that for Cohort 2, 13% ($n=5$), Cohort 3, 24% ($n=9$) and Cohort 4, 8% ($n=2$) had completed university qualifications.

Table 14
Educational qualifications of cohorts 2, 3 and 4, pre-training.

	Cohort 2 ($n=39^*$)		Cohort 3 ($n=37^*$)		Cohort 4 ($n=25$)	
	n	%	n	%	n	%
School certificate	12	30.0	3	8.0	5	20.0
University entrance	6	15.0	4	11.0		
Sixth form certificate	7	18.0	6	16.0	3	12.0
University bursary	4	10.0	1	3.0	2	8.0
Certificate or diploma below bachelor level	4	10.0	12	33.0	9	36.0
Bachelor degree	4	10.0	9	24.0	2	8.0
Postgraduate degree, certificate or diploma	1	3.0				
Other					1	4.0

*m.d: Cohort 2 ($n=1$) Cohort 3 ($n=2$) Cohort 4 ($n=3$)

The amount of time that the participants had worked for the organisation varied from between one and six months to more than five years (Table 15). Trainees in all the cohorts tended to be relatively long serving members of the organisation having worked for ACC for more than two years. There were generally few participants who were relatively new employees although 24% of Cohort 4 fell into this category.

Table 15
Time spent working for the organisation cohorts 2, 3 and 4, pre-training

	Cohort 2 ($n=39^*$)		Cohort 3 ($n=36^*$)		Cohort 4 ($n=25^*$)	
	n	%	n	%	n	%
0 - 6 months					1	4.0
7 - 12 months	2	5.0	2	5.0	5	20.0
<12 months - >2 years	7	18.0	8	22.0	1	4.0
2 -5 years	21	54.0	14	38.0	6	24.0
>5 years	8	20.0	11	29.0	9	36.0

*md: Cohort 2 ($n=1$) Cohort3 ($n=2$) Cohort 4 ($n=3$)

Whilst most of the participants were longer serving employees of more than two years, the results of the analysis described below suggest that they had been assigned the job of case manager at the time the organisation changed its practice to a model of case management. As noted in Chapter 1, on 7 March 1994 case management was

introduced overnight, job titles changed from 'client officer' and 'rehabilitation officer' to 'case manager'. Table 16 shows that the majority of Cohort 2 and Cohort 3 had been case managers for more than 12 months and less than two years. Unlike Cohorts 2 and 3, the largest percentage of Cohort 4, (32%), had been in the role between seven and 12 months and therefore, were somewhat less experienced as case managers.

Table 16
Time spent in the role of case manager cohorts 2, 3 and 4, pre-training

	Cohort 2 (\underline{n} = 39*)		Cohort 3 (\underline{n} = 37*)		Cohort 4 (\underline{n} = 23*)	
	\underline{n}	%	\underline{n}	%	\underline{n}	%
0 - 6 months	2	5.0	1	3.0	2	8.0
7-12 months	2	5.0	5	14.0	8	32.0
<12 months and >2 years	34	88.0	27	73.0	4	16.0
<2 years					6	24.0

*md. Cohort 2 (\underline{n} = 1) Cohort 3 (\underline{n} = 2) Cohort 4 (\underline{n} = 3)

Two participants in Cohorts 3 and 4 did not identify their job role as that of case manager.

Given that the cohorts began and completed their training at different times, and as a means of considering underlying factors that might account for possible between-cohort differences, the next section considers the extent to which there were significant differences in demographic and background variables by cohort.

7.3.1 Between cohort demographic analysis

An analysis of between cohort demographic differences was conducted. There were no significant differences between cohorts for sex, $\chi^2(2, \underline{N} = 95) = 4.8, p = .08$. There was a predominance of females in each of the training cohorts. As noted above, there were mainly Pakeha in each cohort, $\chi^2(8, \underline{N} = 95) = 7.3, p = .5$. Again, there were no significant regional differences in the number of trainees in the programme: $\chi^2(6, \underline{N} = 95) = 5.1, p = .53$. There were no significant differences between cohorts in the amount of time spent in the organisation, $F(2, 92) = .28, p = .7$, or in the role of case manager, $F(2, 90) = .74, p = .4$. There were, however, significant differences between the cohorts in formal education $F(2, 91) = 4.6, p = .01$. Using Scheffe's post-hoc test Cohort 2 reported significantly lower levels of qualifications than Cohort 3 ($p = .013$). The reason for this result might be a reflection of the variability in the criteria for entry into the training programme. As discussed in 2.3.2, the selection criteria was not clearly

understood between ACC senior managers and the training provider and it varied from branch to branch, suggesting that it was not clearly articulated from Head Office to the branches.

The following section reports the results of the quantitative analysis and where appropriate the results of the qualitative analysis. To provide a clear framework for the integration and presentation of the results, the following section is organised according to each of the research questions.

7.4. Research Questions

7.4.1 Question 1. Did the trainee characteristics influence the effectiveness of the training programme?

In order to identify those trainee characteristics that are associated with effectiveness of the programme (here “programme effectiveness” was operationalised as organisational changes, personal changes, extent of changes) a standard multiple regression analysis was conducted. “Organisational changes” were perceptions that there had been change in the organisation as a result of training in the following areas: internal communication, staff turnover, awareness and acceptance of organisational policies, understanding of ACC’s regulations and ethical and legal requirements, understanding between case managers and claimants, and understanding between case managers and supervisors. “Personal changes” were perceptions that there had been personal change as a result of training in the following areas: job satisfaction, job commitment, attitude to change, quality of managerial performance, interpersonal skills development, and time management. “Extent of changes” asked respondents about the extent they had been able (post-training) to implement changes in their work in a diverse range of areas including: delivering a service more appropriate to Maori, promoting an holistic approach to clients’ rehabilitation, improving interviewing and negotiating techniques, carrying out more face-to-face contact with key stakeholders viz., treatment providers, service providers and employers, reducing caseload, and encouraging improved communication in the branch.

Organisational changes, personal changes, and extent of changes were entered in the analysis as the dependent variables and the wellbeing, life satisfaction, skills possessed and occupational self-efficacy of respondents were the independent variables. Two standard dummy variables (e.g., Brannic, n.d., http) representing membership of the three cohorts were also entered in the analysis.

The essential idea being tested here was whether there were pre-existing identifiable characteristics of trainees that were significantly associated with post-training outcomes. Specifically, these trainee characteristics were general psychological wellbeing, life satisfaction, occupational self-efficacy and current level of rehabilitation practitioner skills and competencies. Wellbeing, life satisfaction, occupational self-efficacy and skills possessed (all assessed prior to training commencement) were regressed against the DV's that were assessed at three months post training.

The data were screened for assumptions for multiple regression, prior to analysis. Using conventional but conservative alpha levels ($p < .001$) as recommended by Tabachnik and Fidell (1989), there were two significant univariate outliers on life satisfaction and occupational self-efficacy. Using the $p < .001$ criterion for Mahalanobis distance there was one multivariate outlier. These three outliers were removed from subsequent analyses.

The results of this analysis are presented in Table 17 for the pre-training IV's. The table displays the standardised regression coefficients (beta), and \underline{R} , \underline{R}^2 and adjusted \underline{R}^2 . The difference between \underline{R}^2 and adjusted \underline{R}^2 reflects "adjustment made for expected inflation in sample \underline{R} " (Tabachnik & Fidell, 1989, p.160) as a function of sample size, number of independent variables and the value of \underline{R}^2 .

For the extent of changes variable, tapping aspects of the case managers' work that the trainees had changed since training such as their approach to claimants and service delivery, the \underline{R} for regression was not significantly different from zero, $F(6, 44) = 1.55$, $p = .18$. For the personal changes variable, tapping six work related changes including job satisfaction, commitment and time management, the \underline{R} for regression was not significantly different from zero, $F(6, 44) = 2.26$, $p = .054$.

Table 17

Standard multiple regression of pre-training wellbeing, life satisfaction, skills possessed and self-efficacy against three-month post-training extent of changes, personal changes and organisational changes showing R^2 , adjusted R^2 , and standardised regression coefficients (betas)

Variables	Beta		
	Extent of changes (dv)	Personal changes (dv)	Organisational changes (dv)
Vector 1	-.33	-.18	-.18
Vector 2	-.43	-.39	-.22
Wellbeing	.12	.03	.14
Life satisfaction	.13	.00	-.06
Skills possessed	.12	.16	.41**
Self-efficacy	.07	-.33	-.48*
R	.42	.49	.59**
R^2	.17	.24	.34
Adjusted R^2	.06	.13	.25

* $p < .05$

** $p < .01$

*** $p < .001$

For the organisational changes variable, tapping six areas of change including staff turnover, improved interpersonal and technical understandings and communication, the R for regression was significantly different from zero, $F(6, 44) = 3.8$, $p = .004$. Higher levels of pre-training occupational self efficacy were significantly associated ($p = .001$) with a perception of less post-training organisational change, and higher levels of pre-training skills and competencies were significantly associated ($p = .004$) with a perception of more post-training organisational change.

The trainees' pre-training perceptions of their personal wellbeing, life satisfaction, current skill level and occupational self-efficacy, were mostly unrelated to the perceptions of the degree and variety of ways in which they were able to effect post-training change in the workplace. The notable expectation to this was the organisational changes result. The findings are somewhat counterintuitive in the sense that high levels of pre-training occupational self confidence are associated with perceptions of **less** post training organisational change, while high levels of pre-training skills and competencies are associated with perceptions of **more** post-training organisational change. Given the conceptual overlap between the measures one might have expected a more consistent relationship with post training perceptions. At an empirical level, the occupational self-

although the size of the correlation was relatively modest. It may be the case that the skills and the self-efficacy measure tap into relatively different aspects of an overall perception of 'occupational competence' and this may account for the differing pattern of relationships with post-training organisational change perceptions.

Although the trainees' perceptions of their wellbeing, life satisfaction, current skill level and occupational self-efficacy, were generally statistically non-significant in terms of their relationship with post-training change perceptions, the trainees' responses to an open ended question at six months after training provided another perspective. The qualitative analysis showed that the trainees believed that they themselves were the most important factor in facilitating changes by transferring their training into the workplace.

The trainees were asked about the single most important factor in helping transfer the knowledge, skills and abilities they acquired during training taking into account personal attributes and environmental factors. Their personal characteristics emerged as the most useful determinant in the transfer process and the environmental factors, secondary. Table 18 displays the results.

Table 18

Single most important factor facilitating the transfer of training six months post-training

Primary determinant

- | | |
|-------------------------|---|
| Trainee characteristics | <ul style="list-style-type: none"> - knowing that I had the necessary skills and determination to achieve whatever I need to for my personal growth - loyalty to the organisation, given the investment they had made in me, equally as important is my desire to always achieve the best possible - motivation to obtain another position combined with the skills and knowledge learned on the diploma course - my willingness to try new ways of case management – especially taking risks (i.e., pushing boundaries of legislation - determination to use skills which I had developed during the course - confidence in implementing rehabilitation strategies |
|-------------------------|---|

Secondary determinant

- | | |
|-----------------------|---|
| Environmental factors | <ul style="list-style-type: none"> - support from colleagues who had completed the course prior to me - feedback and sharing with other cohort members - office transfer - change in role |
|-----------------------|---|

The trainees suggested that the training programme had provided them with new knowledge and skills and it was their determination, confidence and willingness that encouraged them to implement their training and the new model of case management. It also emerged that the training provided them with confidence and motivation to transfer the training to another setting.

The trainees' characteristics mentioned most frequently were perseverance, motivation, confidence, ambition, and self-knowledge. The following comments give illustration:

“confidence in implementing rehabilitation strategies as a result of knowledge gained on course”

“personal interest and motivation to carry out my work in a more effective way”

“I was determined to make a difference”.

Additional help in transferring their newly acquired knowledge and skills came from colleagues who had also completed the training programme and other case managers with whom the trainees worked. It emerged that the case managers who had been on the training provided support for, reminded each other about aspects of the course and that they had, either consciously or unconsciously, formed “buddy systems” within their branches. For example, colleagues who had been on the course “assisted in building on new knowledge learned” and encouraged the each other “to try new methods of working practice.” Untrained case managers were sometimes helpful in that they asked for advice, which acted as a prompt and reinforced the learning.

The apparent contradiction between the quantitative and qualitative results, noted above, may be an artefact of the way the question was framed and more of a reflection of the trainees' dissatisfaction with workplace characteristics. When the trainees considered their personal attributes and the environmental factors and personal characteristics emerged as the most important factor. After being back in the workplace for six months, the trainees perceived that any attempts to transfer their training was due to their own efforts and not, primarily, something prompted or supported by their

supervisors. The trainees perceived themselves as the primary facilitators of transfer and any features of the workplace such as support from their colleagues and management were secondary.

7.4.2 Question 2. Were there differences in the trainees' reported workplace self-efficacy over time?

In order to analyse the question of the extent to which the trainees reported differences in their workplace self-efficacy, a change in occupational self-efficacy score was calculated which represented total self-efficacy mid-training minus total self-efficacy pre-training. ($M = 784.24$, $SD = 640.30$). The calculation of the change score in this manner means that a larger score represented a higher occupational self-efficacy score mid-training. Eight percent of the trainee participants reported a change in self-efficacy in a negative direction at mid-training. (The occupational self-efficacy mean and standard deviation scores for each cohort are presented in Table 11).

In order to analyse between cohort differences in occupational self-efficacy change, a univariate ANOVA was conducted between cohorts with formal education levels, time in the organisation and time in the role entered as covariates. Education level was included as a covariate because there were significant between cohort differences in education that were noted earlier in the analysis of demographic and background variables. The rationale for including time in the organisation and time in the role as covariates centred around the idea that the development of occupational competencies (and hence a sense of occupational self-efficacy) presumably requires some time in the organisation and in the role.

There were no significant effects for formal education, $F(1, 66) = .03$, $p = .8$, time in the organisation, $F(1, 66) = .01$, $p = .8$ and time in the role, $F(1, 66) = 2.3$, $p = .12$. After controlling for the effects of the covariates, there was a significant cohort main effect $F(2, 66) = 3.7$, $p < .05$. Bonferroni's test showed that Cohort 2 reported significantly higher levels of change in occupational self-efficacy than Cohort 3. None of the other pairwise comparisons was significant.

The results suggest that during training Cohort 3 and Cohort 4 trainees' perceptions of their occupational self-efficacy remained stable but Cohort 2 trainees perceived that their occupational self-efficacy increased. The differing educational profiles of Cohorts 2 and 3 may have contributed to this effect. Prior to training the majority of Cohort 2 had completed formal education qualifications to below university level. Thus, success with their university work may have given them a sense of mastery over the skills associated with acquiring knowledge and a heightened sense of mastery over their workplace competencies.

Another possible explanation for this difference between the cohorts may be a training order effect that needs to be investigated. Because the sample was selected by management for participation in training from a large pool of applicants, it may be conceivable that motivation to succeed, work performance and experiences of the earlier cohort were different from those who were subsequently available for training.

As noted above, the criteria for entry into the training was somewhat elastic and it is possible that those who were selected for the second cohort perceived themselves to have more need of the training than those not selected at that time. If that was the case, and coupled with their prior formal education which was below university graduate level, they may have perceived that they were not as efficacious in their work as rehabilitation practitioners and reported lower self-efficacy than the later cohorts. Thus, order and selection effects may account for the difference in Cohort 2's occupational self-efficacy.

7.4.3 Question 3. Did the training alter the trainees' pre-training perceptions of the skills required for the job of case manager and their perceptions of their personal skill level?

The total skills needed and skills possessed ratings for each cohort over each measurement period (pre, mid-training- and three months post-training) are presented in Table 19.

The total skills needed and skills possessed ratings were analysed in an ANOVA with time of measurement (pre-training vs. mid-training vs. three months post-training) as a within-subjects factor. For all analyses effect sizes are reported as partial Eta squared

Table 19

Mean scores and standard deviations for skills needed and skills possessed at pre-training, mid-training and three months post-training by cohort

	Pre-training		Mid-training		Three months post-training	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Skills needed						
Cohort 2	44.8	4.2	46.4	3.1	46.9	3.4
Cohort 3	46.0	4.0	45.5	3.8	46.2	4.6
Cohort 4	45.9	4.6	45.7	4.3	46.7	5.2
Skills possessed						
Cohort 2	65.3	8.8	68.1	5.8	70.6	7.5
Cohort 3	62.1	8.5	66.8	6.6	67.5	8.5
Cohort 4	66.4	6.3	72.2	5.6	72.5	6.0

values. Measures of effect size in ANOVA are measures of the degree of association between an effect (e.g., a main effect, an interaction) and the dependent variable. Becker (1999, <http>) notes that four of the commonly used measures of effect size in ANOVA are: Eta squared, partial Eta squared, Omega squared, and the Intra-class correlation.

The first two are estimates of the degree of association for the sample and the last two are estimates of the degree of association in the population. Partial Eta squared is readily available in SPSS for Windows and, as Becker notes, is sometimes preferable to Eta squared in the sense that one of the problems with Eta squared is that the values for an effect are dependent on the number of other effects and the magnitude of those other effects.

The analysis was conducted separately for each cohort therefore, in effect, each cohort represents a (somewhat) independent replication of the potential training effect. This approach to the analysis is effectively an extension of the one-group pretest-posttest type of design that is based on within-individual treatment/intervention/training comparisons. The problems with this type of approach are well known and centre round threats of history, maturation, testing and instrumentation e.g., Cook et al., (1990). There was a relatively lengthy time interval between data collection periods, which should have minimised potential testing effects. Further, there were no changes in measuring instruments for particular variables that might account for any pretest-posttest effects.

For Cohort 2, the main effect of time of measurement on skills needed ratings was significant $F(2, 52) = 3.56, p=.035, \text{Eta squared} = .12$. This hypothesised training effect accounted for 12% of the variability in skills needed ratings. The sphericity assumption was met (Mauchly's $W = .94, p=.50$) so no corrections were applied to the degrees of freedom. Post hoc comparisons were performed using the Bonferroni adjustment for multiple comparisons. Skills needed ratings were significantly increased from a mean of 44.8 ($SD = 4.2$) pre-training to a mean of 46.9 ($SD = 3.4, p=.04$) three months following training. There was a non significant difference between the pre-training score and the mid-training score ($M = 46.4, SD = 3.1, p=.27$). The difference between mid-training mean and the three-month follow-up mean was not significant. The rating of skills needed increased between pre-training and three months follow-up.

The results suggest that the trainees in Cohort 2 incrementally changed their perceptions of the skills they needed for work over time. From the beginning of the training to three months after the course, a 40-week period, there was a significant change in their views about the skills they required to perform the job of case manager.

For Cohort 2, the main effect of time of measurement on skills possessed ratings was significant: $F(2, 54) = 8.6, p=.001, \text{Eta squared} = .24$. This training effect accounted for 24% of the variability in skills possessed ratings. The sphericity assumption was met (Mauchly's $W = .97, p=.75$) so no corrections were applied to the degrees of freedom. Post hoc comparisons were performed using the Bonferroni adjustment for multiple comparisons. Skills possessed ratings were increased from a mean of 65.3 ($SD = 8.8$) pre-training to a mean of 70.6 ($SD = 7.5, p=.002$) three months following training. There was a non significant difference between the pre-training score and the mid-training score ($M = 68.17, SD = 5.8, p=.07$). The difference between mid-training mean and the three-month follow-up mean was also not significant ($p=.18$). The rating of skills possessed increased between pre-training and three months follow-up.

For Cohort 3, the main effect of time of measurement on skills needed ratings was not significant: $F(2, 54) = .36, p=.69, \text{Eta squared} = .013$. The training effect accounted for slightly over 1% of the variability in skills needed ratings.

For Cohort 3, the main effect of time of measurement on skills possessed ratings was significant: $F(2, 54) = 10.4, p < .001, \eta^2 = .28$. The training effect accounted for 28% of the variability in skills possessed ratings. The sphericity assumption was met (Mauchly's $W = .94, p = .5$) so no corrections were applied to the degrees of freedom. Post hoc comparisons were performed using the Bonferroni adjustment for multiple comparisons. Skills possessed ratings were increased from a mean of 62.1 ($SD = 8.5$) pre-training to a mean of 66.8 ($SD = 6.6, p = .002$) mid-training and a mean of 67.5 ($SD = 8.5, p = .002$) at three months post-training. The mid-training to three-month post-training was not significant.

For Cohort 4, the main effect of time of measurement on skills needed ratings was not significant: $F(2, 26) = .38, p = .68, \eta^2 = .029$. The training effect accounted for approximately 3% of the variability in skills needed ratings.

For Cohort 4, the main effect of time of measurement on skills possessed ratings was significant: $F(2, 24) = 8.0, p = .002, \eta^2 = .40$. The training effect accounted for 40% of the variability in skills possessed ratings. The sphericity assumption was met (Mauchly's $W = .86, p = .45$) so no corrections were applied to the degrees of freedom. Post hoc comparisons were performed using the Bonferroni adjustment for multiple comparisons.

Skills possessed ratings were significantly increased from a mean of 66.4 ($SD = 6.3$) pre-training to a mean of 72.2 ($SD = 5.6, p = .004$) mid-training and a mean of 72.5 ($SD = 6.0, p = .02$) at three months post-training. The mid-training to three months post-training was not significant.

Thus, the results suggest that the training similarly altered Cohorts 2, 3 and 4 trainees' perceptions of their personal skill level. The biggest change to their perceptions about the level of skill they possessed was during the first 12 weeks of training. However, unlike Cohort 2 whose perceptions of the skill level needed for the job was altered by the training, the training did not change Cohorts 3 and 4's perceptions of the level of skills they required to work successfully as case managers.

The analysis reported above were within-subject repeated measures ANOVA and performed separately for each cohort using the aggregates of the skills measures. Given that some degree of precision is lost with the use of aggregate skills measures and in order to provide some additional clarification of these findings, some further analyses were conducted using skills subscales scores. These subscales were titled “dynamism”, “cognitive”, “communication” and “practicality” skills. “Dynamism” included items such as ‘the ability to negotiate, sell and debate effectively’, ‘ability to think on your feet’, and ‘ability to readily establish good relationships with people’. “Cognitive” included items such as ‘the ability to accurately retain and recall information’, ‘the ability to notice things in their detail’, and ‘ability to draw valid conclusions from known information’. “Communication” included items such as ‘the ability to obtain an accurate impression of the meaning of speech and writing’, and ‘the ability to communicate effectively in speech/writing’. “Practicality” included items such as ‘the ability to picture descriptions of three-dimensional objects, or to understand maps/plans’, and ‘ability to use your hands in careful, deft or skilled ways’.

Cohort 2 reported a significant increase over time in the perceived level of **cognitive** skills needed for the role of case manager. This appears to have been the source of the overall significant main effect for skills needed (measured in the aggregate) reported earlier for Cohort 2.

All cohorts reported significant increases in the level of skills possessed over time when skills were measured at aggregate level. At a subscale level, Cohort 2 reported significant increases in their own levels of **dynamism** and **cognitive** skills over time. Cohorts 3 and 4 reported significant increases in their own levels of **dynamism**, **cognitive** and **communication** skills over time. There was no change over time in ‘practicality’ skills, which is perhaps not surprising given the nature of the items that comprise the scale.

7.4.4 Question 4. Were organisational and personal changes brought about by the training?

The organisational and personal changes ratings for each cohort over each measurement period (pre, mid-training and three months post-training) are presented in Table 20.

Table 20

Mean scores and standard deviations for organisational and personal changes at pre-training, mid-training and three months post-training by cohort

	Pre-training		Mid-training		Three months post-training	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Organisational changes						
Cohort 2	4.45	1.21	4.33	1.27	3.83	1.55
Cohort 3	4.37	.96	4.25	1.05	3.14	1.37
Cohort 4	3.83	1.55	3.14	1.37	4.00	1.15
Personal changes						
Cohort 2	4.84	1.31	5.38	.75	4.61	1.49
Cohort 3	5.00	.96	4.70	1.53	3.51	1.67
Cohort 4	5.42	.93	4.78	1.31	4.85	1.23

The total organisational and personal change ratings were analysed in an ANOVA with time of measurement (pre-training vs. mid-training vs. three months post-training) as a within-subjects factor. The analysis was conducted separately for each cohort. For Cohort 2, the main effect of time of measurement on organisational change ratings was not significant $F(2, 46) = 2.07$, $p = .13$, Eta squared = .08. The hypothesised training effect accounted for 8% of the variability in organisational change ratings.

For Cohort 3, the main effect of time of measurement on organisational change ratings was significant: $F(2, 52) = 15.2$, $p < .001$, Eta squared = .37. The training effect accounted for 37% of the variability in organisational change ratings. The sphericity assumption was met (Mauchly's $W = .87$, $p = .18$) so no corrections were applied to the degrees of freedom. Post hoc comparisons were performed using the Bonferroni adjustment for multiple comparisons. Organisational change ratings were not significantly increased from a mean of 4.37 ($SD = .96$) pre-training to a mean of 4.25 ($SD = 1.05$) mid-training. There was a significant difference between the mid-training score and the three-month follow-up score ($M = 3.14$, $SD = 1.3$, $p = .001$). There was also a significant difference between pre-training and three-month follow-up ($p < .001$).

For Cohort 4, the main effect of time of measurement on organisational change ratings was not significant $F(2, 24) = .91, p=.41, \eta^2 = .07$. The training effect accounted for 7% of the variability in organisational change ratings.

The results above suggest that Cohorts 2 and 4 perceived the training did not bring about organisational changes. Contrastingly, Cohort 3 reported that, over time, the training brought about organisational changes but that these changes were fewer. In all cohorts the direction of the effects was in a negative direction. There were high pre-training expectations about changes that would be brought about as a consequence of training and these expectations were not fulfilled in the sense that all ratings reduced over time which signalled a perception of less 'actual' change occurring in the organisation.

For Cohort 2, the main effect of time of measurement on personal change ratings was significant $F(2, 50) = 3.62, p=.034, \eta^2 = .13$. The training effect accounted for 13% of the variability in personal change ratings. The sphericity assumption was met (Mauchly's $W = .91, p=.34$) so no corrections were applied to the degrees of freedom. Post hoc comparisons were performed using the Bonferroni adjustment for multiple comparisons. There were no significant differences over the three measurement periods, which is possibly a reflection of the relatively 'weak' main effect and the fact that the Bonferroni adjustment may be too conservative here.

For Cohort 3, the main effect of time of measurement on personal change ratings was significant $F(2, 52) = 9.29, p<.001, \eta^2 = .26$. The training effect accounted for 26% of the variability in personal change ratings. The sphericity assumption was met (Mauchly's $W = .96, p=.62$) so no corrections were applied to the degrees of freedom. Post hoc comparisons were performed using the Bonferroni adjustment for multiple comparisons. There were no significant differences between pre-training ($M = 5.0, SD = .96$) and mid-training means ($M = 4.7, SD = 1.5$). There was a significant difference between pre-training and three-month follow-up ($M = 3.5, SD = 1.6, p=.002$). There was also a significant difference between mid-training and three-month follow-up ($p=.004$).

For Cohort 4, the main effect of time of measurement on personal change ratings was not significant $F(2, 26) = 2.4, p = .107$, Eta squared = .16. The training effect accounted for 16% of the variability in personal change perceptions.

In summary, the results above suggest some inconsistencies between cohorts in terms of the pattern of significant findings. Cohort 3 reported significant differences in organisational change perceptions whereas Cohorts 2 and 4 did not. Cohorts 2 and 3 reported significant differences in personal change perceptions whereas Cohort 4 did not.

Despite the apparent inconsistencies above the pattern becomes clearer when one considers the direction of the effects. For all cohorts the direction of the change ratings was negative – there were high pre-training expectations about the extent to which training would result in change at the personal/professional level, and these expectations were not met. Back in the workplace, trainees reported a lower level of ‘actual’ change than they had anticipated would occur prior to the commencement of training. These results may be encapsulated in comments made by trainees at six months post-training which seem to reflect the disappointment and frustration they experienced not having their expectations met:

“less satisfied with the petty bullshit and head office directives”

“it broadened my horizons – made me far more ambitious, made rehabilitation seem a worthwhile profession – just can’t seem to practice it effectively in this environment”

“self-awareness - ...drive but I do get sick of being restricted by ACC..”

These comments were echoed by some supervisors who told the author: “since the course the case manager has become aggressive in communication, negative to the corporation and difficult to manage” and “very dissatisfied with case management.”

When the trainees were asked at six months after training “As a result of your training, did you try to make any changes in your work behaviour?” the majority reported that

they had attempted to make changes in their work behaviour. The analysis of the open-ended question is reported below.

Attempted changes in work behaviour

With the exception of one participant in Cohort 3 and two in Cohort 4, all the trainees reported trying to effect work behaviour changes in the work environment since the training programme had been completed. A large number of responses illustrated that the new direction in the way case management was promoted during the training was being attempted six months after completion of the programme. The analysis revealed that the trainees were more cognisant of treating their clients as individuals as opposed to “files” or “case numbers” and were attempting to focus their service delivery around the clients’ needs.

As Table 21 indicates, the responses revealed a greater sensitivity to claimants as people from a variety of ethnic backgrounds and whose injuries affect them in differing ways. The responses also revealed the trainees’ awareness of the case management processes such as determining the level of assessment needed, understanding the clients’ needs, developing and implementing a costed plan and monitoring the services. They became aware of the need for thorough planning for rehabilitation and the value in co-operating with clients and, when appropriate, their whanau. This contrasts with the paper-based processing style of work practice which involved the ‘case manager’ making decisions without a clear understanding of the impact of injury on their clients, without working in partnership with their clients and making unilateral decisions guided by their understanding of the legislation and ACC’s guidelines. (NZPA (1996) reported claims processing errors were estimated at \$4.94 million in 1994-95). Rather than authorising weekly financial compensation and, maybe, periodically a brief discussion about employment goals/attempts with e.g., a person with a head injury, the trainees were, self-reportedly, more sensitive and responsive to the clients and gained a better understanding of the impact of the injury.

The trainees therefore had tried to practice case management as a participatory process with a greater sensitivity towards their clients and with an empathic understanding of clients’ needs. So in order to implement the new way of work practice, the trainees

Table 21
Attempted changes in work behaviour six months post-training

Individualised		
Holistic Rehabilitation & Facilitation	greater sensitivity to claimants	<ul style="list-style-type: none"> - looking at the person as a whole not just with an injury - taking consideration of cultural differences - more client centred, owned rehabilitation plans - more effort to listen and understand claimant needs - an awareness of culture and correct pronunciation of Pacific Island and Maori words, names, place names etc. - more flexible in my dealings with claimants
	greater awareness of case management	<ul style="list-style-type: none"> - initial interview - gather more information by asking more questions which incorporate family, whanau etc. - more effective evaluation of files and rehabilitation - building up more rapport with clients - negotiation and facilitation skills - again better interview and assessment skills - focus on case management as opposed to processing but not as successful as I would like due to having to process still
	time management	<ul style="list-style-type: none"> - time management skills improving - workload managed more efficiently - started off well (time management) and to a certain extent is still going well but not as I would want

reported that they had made attitudinal changes towards their clients and had attempted changes to their time management. To successfully rehabilitate clients there was a need to manage workloads more efficiently although how they attempted that is unclear. Some participants, however, reported time management was difficult on account of the volume of case files and the requirement to “clear the backlog”.

The data suggests that the trainees gained an understanding of how to work more effectively as rehabilitation practitioners and had an understanding of the competencies and skills required e.g., attentive listening to clients’ needs, interviewing and assessment skills and co-ordination, facilitating and evaluation of rehabilitation plans. It appears also that the trainees attempted to make changes in their work behaviour incorporating these aspects of rehabilitation practitioner competencies. What is clear from the data is that all the trainees attempted change in the workplace aligned to the principles of case management (see 1.3) and advocated in the training programme (see 2.3.1). However, what is unclear is if the trainees were successful in their attempted changes or, if they

were, the degree to which they were successful. The following addresses the question examining the extent, if any, of the behaviour changes impacting on the workplace.

7.4.5 Question 5. To what extent, if any, did behaviour change, as a result of training, impact on the trainees' workplace at the individual and organisational levels?

The reader will note that there is no quantitative data reported for question 5 and this requires explanation. The extent of changes measure, tapping aspects of the case managers' work that the trainees had changed since training such as their approach to claimants and service delivery, was developed for the evaluation research from information gleaned from the pilot study. It was administered to the trainees at three months post-training only and this, unfortunately, precluded any pre-test/post-test comparison. Such a comparison might have given a better understanding of the degree to which transfer of training occurred. With Cronbach's alpha of .85 for the present sample any future evaluation of rehabilitation practitioner training might incorporate this measure.

The qualitative analysis of question 4, reported above (7.4.4), suggests that the trainees did try to make changes in the workplace once they had returned to work. Question 5, therefore, addresses the impact of those changes asked in open-ended questions: "How do you think your training has affected the corporation? Your branch? Your colleagues? Your clients?" Thus, research question 4 asked of any attempts in work behaviour as a consequence of the training and research question 5 relates to the outcomes of those attempts.

At six months post-training, the trainees reported that behaviour changes impacted considerably on the workplace with both beneficial and deleterious effects. The following section reports the analysis of the qualitative data asking the trainees about the extent to which their behaviour change, as a result of the training, impacted on the workplace (here conceptualised as organisation, branch, colleagues and clients).

Impact of the training on the organisation

Whilst the organisation provided the training programme, the responses to the question on the impact of training on the organisation, asked of the trainees six months after

training, revealed a dissonance between the training and the acceptance of its practice and utility within the organisation. Table 22 displays the summary themes and comments. The training up-skilled staff in ACC's strategic direction with the emphasis on rehabilitation of its clients and greater detail to case management, as opposed to processing the files, however the implementation was thwarted at branch level. It appeared that the organisation itself did not have the ability, possibly because of existing legislation and regulations and the number of clients requiring its services, to effectively change direction in terms of its new emphasis on rehabilitation.

Whilst the trainees were versed in rehabilitation practice the organisation was still geared towards their traditional role of claim processing and financial compensation. This was expressed in comments such as:

“the organisation neither understands disability nor rehabilitation; it sends case managers to undergo university training but fails to make any real changes to facilitate practical application of this training”

“get middle management on-side with the philosophy and practice of rehabilitation”

“skills learnt in negotiating and process analysis were invaluable however the environment to work in is far behind the concepts being presented”

Trainee disaffection with the organisation and the training's minimal impact on the organisation were the predominant themes to emerge from the question asking about the impact of the training on the organisation. . From the point of view that there was trainee disaffection and minimal impact on the organisation, the training can be seen to have had a negative effect. This result concurs somewhat with the findings reported for question 4 that showed that the trainees had expectations of organisational changes but generally these expectations were not met. In the case of Cohort 3, there were organisational changes but they were in a negative direction. A lesser theme was the rehabilitation of clients, ostensibly a more positive impact.

Table 22 .**Impact of training on the organisation six months post-training**

Disaffection of trainees	<ul style="list-style-type: none"> - raised the skill level of a large number of organisation staff but there is now all these dissatisfied staff unable to practice rehabilitation effectively - given staff determination and will to succeed and improve; however, the organisation's culture withdraws this feeling after awhile - ACC likes to think that training will lead to service improvement; until ACC changes its organisation and management culture and structure this will not happen - don't feel it has, as a lot of the time I am stopped at a branch level for putting new skills and ideas into place - they know I attended the course, that's about all
Minimal impact	<ul style="list-style-type: none"> - management culture and structure this will not happen - no indicators that my training has impacted at all - they know I attended the course - that's about all - little impact... it has been complimentary to employing people with a professional background
Rehabilitation of clients	<ul style="list-style-type: none"> - rehab. plans resulting in return-to-work or return-to-independence - success rate in getting people back to work is far higher - the organisation now has a strong group of individuals that can effect change with a firm view of rehabilitation, encouraging and maintaining the direction the organisation is working towards

However, in mentioning "success" rates in getting people back to work or returned to independence it is unclear if the clients were, in fact, rehabilitated or merely "off the books" and transferred onto another type of social welfare such as the Sickness Benefit or the Unemployment Benefit. The number of people whom the trainees regarded as successfully rehabilitated is unknown neither is it known whether they were long term claimants (known in ACC as "the tail") or new claimants who were prevented from becoming dependent on the scheme. A recent ACC media release reported that the ACC tail of long-term claimants had been reduced by a third in the last three years from 30,000 at the start of 1997 to 19,903 at the end of February, 2000 (ACC, 2000a, [http](#)). The Chief Executive (previously known as the Managing Director) attributed the reduction to lower injury rates and better rehabilitation and case management preventing people getting onto the tail. It would be fallacious nevertheless to suggest that was in any part due to the training programme discussed in the thesis because there is no evidence to suggest that. The reduction of the tail might simply be due to the tightening

of regulations and policy changes such as the short-term devolvement of workplace injury compensation in 1999.

Impact of the training on the branch

The greatest effect of the training on the branch was that the trainee became a resource person and was more work involved both in the office and in the community assuming the roles of advocacy for ACC and case management. The trainees facilitated workshops and led seminars focused on a variety of topics e.g., KidsSafe programme, General Practitioners' training (how to fill out the ACC documentation), interviewing techniques, and "Fit for Selected Work" (FFSW) programmes with major employers, e.g., IRD, Income Support, and meat processing plants. In that sense, the effect of the training went beyond the individual trainees and spilled over to others in the workplace and community. The trainees perceived that they were able to offer guidance and support to their colleagues and that, by their example, were able to contribute more to their team. One commented:

"With the increased responsibility in my new role, the branch has a representative that may impart much of the knowledge gained through Victoria in a clear, concise and confident manner to clients, employer, and other health professionals."

Not all trainees viewed the training as having a positive impact and some were sceptical about the training suggesting that the training offered the branch a better public image: e.g., "more graduates to skite about" and "able to portray a more knowledgeable and professional image".

Table 23 shows the two major themes to emerge from the question regarding the impact of the training on the branch: (1) that the branch had benefited as they had 'acquired a resource person' in the trainees and (2) that the training was harmful to the day-to-day functioning of the branches and therefore the impact was 'negative'. Trainees' statements are provided to illustrate the impact.

To a slightly lesser degree a negative influence on the branch was evidenced by responses suggesting that there were unfulfilled trainee expectations and that nothing

Table 23**Impact of the training on the branch six months post-training**

Acquired a resource person	<ul style="list-style-type: none"> - by being positive and encouraging about case management and promoting the organisation in the community - more interested and self-aware case managers help the ones who haven't been on the course and show support to the office - higher knowledge base for branch benefit - able to offer them other options; better outcomes in return to work and satisfaction surveys - more people come to me for help - I am able to provide that which in turn helps the branch get better results - more proactive, more confident, more involved in branch activities - assisting with changing culture of office
Negative influence	<ul style="list-style-type: none"> - some clients don't want to be rehabilitated so they complain when pursued about return to work etc - dissatisfied staff unable to practice rehabilitation effectively; it has given us expectations that are unable to be filled in over current roles - no graduates have been promoted or given special tasks; in fact, some have been openly chastised and alienated by management - decreased staff levels, increased stress levels - branch has been disadvantaged as experienced staff have been absent over many months (on-campus and practicum) and this has reduced the quality - resentful...and high pressure

much had changed in the branch because “nothing special has been put in place” to accommodate the training. Some trainees also perceived that some clients were resistant to return to work and that caused tension between the clients and their case managers and that strain affected the branch as a whole. Several reported that working with clients can be unsafe and very unpleasant when angry, frustrated, disaffected and mentally disturbed claimants visit the branches threatening violence and shouting abuse at the case managers. Indeed, an extreme confrontation between a client and his case manager resulted in the murder of the ACC case manager at work in the Henderson branch, June 1998.

The training further negatively affected the branch when trainees were either on campus or during their practicum and on study leave. Branches operated at less than full staffing levels, the trainees' clients required the attention of remaining case managers and new cases had to be allocated and attended to. These concomitant factors all contributed to high levels of stress within the offices.

Impact of the training on colleagues

Table 24 shows that the main theme to emerge from the question regarding the impact of the training on their colleagues was that the training had engendered a collegial atmosphere between the trainees and non-trainees. However, not all the trainees perceived the impact of the training on their colleagues to be helpful, which reflected the comments made about the impact on the branch. Similarly, some of the comments referred to the time that the training programme was in process e.g., “the training caused stress on colleagues with having to cover each time someone went on the course”. Others suggested that the training had limited effect on their colleagues, e.g.,

“they are aware of my training and caseload work but haven’t really taken on anything personally”

Although some trainees reported the training had affected the branch in a negative way, most perceived that the training had had some benefits for their colleagues. The trainees perceived that they had assumed a more active role, and co-operative and collaborative profiles in the workplace and attributed this to the knowledge and skills they had gained.

Table 24

Impact of the training on colleagues six months post-training

Engendered a collegial spirit	<ul style="list-style-type: none"> - more support for them particularly with difficult scenarios and problems and legislative queries - supporting colleagues emotionally as well as teaching them to look at themselves and problem solve, plan and set goals - higher respect from colleagues and they all ask me for advice on case management etc - have been sought out for advice and consultation - supporting my colleagues and encouraging them to be innovative
	<ul style="list-style-type: none"> - not well - some have demonstrated an ‘it’s easy for you’ attitude and resentment - colleagues think there is a feeling elitism because some have the diploma

According to the trainees they were supporting their colleagues, giving them advice, assisting with problem solving and influencing their colleagues’ way of practice. They saw themselves as having a wider knowledge of rehabilitation which they were able to

share with their colleagues though one commented “some expect you to have all the “golden answers”.

It appeared that some of the trainees were almost evangelical in trying to effect work behaviour changes in their colleagues and influence them in the rehabilitation practices espoused in the training. For example:

“I am trying to educate them in listening and assessing their perception of their role. They must recognise and respond to the social work component of rehabilitation case management and assist their clients fully. I want them to understand advocacy is also what they must accept – advocacy for the client.”

Overall, the majority of trainees believed that they had a beneficial affect on their colleagues particularly when they were working with them one-to-one giving advice and support.

Impact of the training on the clients

The dominant theme that emerged from the question about the training effects on their clients was that of ‘personalised case management’. The trainees self-reported that they were more skilled, empathetic, confident and professional case managers delivering a rehabilitation service targeted to their clients’ individual needs (Table 25).

Table 25

Impact of the training on the clients six months post-training

Personalised manager	case	<ul style="list-style-type: none"> - have become less ‘formulaic’ in approach - more flexible and encouraging participation in clients own rehabilitation; not so predetermined on what needs to be done - knowledge of treating these clients as people and not ‘files’ is a notable change - treat my clients better by looking at them as a person and considering all factors that may hinder their rehabilitation - increased understanding of their individual needs: cultural, medical, social, vocational aspects - direct open communication with my clients resulting in favourable outcomes such as return to work - seen more individually as opposed to a collective group of claimants - more client centred, appropriate to needs
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The trainees' believed their behaviour changes, as a result of the training, resulted in improved rapport, realistic goal setting and attainment, more useful and meaningful rehabilitation plans and more effective, durable rehabilitation for the clients. The emphasis, therefore, was on an individualised needs based service delivery.

The clients reportedly had benefited in that they were now receiving a more comprehensive service delivery through the "holistic approach" and were participating in their own rehabilitation plans. For example:

"..definitely getting an improved service – more client centred, appropriate to needs, improved knowledge of disability"

"I attempt to give my clients personal attention, I consider holistically all their needs, not only those of the corporation"

"I think more holistically when dealing with clients and no longer place them in 'boxes' creating a rehabilitation plan with them".

"hopefully seen more individually as opposed to a collective group of claimants i.e., to look at totally individual responses to individual needs"

Although the majority of trainees responded that there was a positive impact on the clients there were negative replies. For example:

"am competent of holistic assessment but cannot put it into use. ACC is only interested in outcomes"

"it hasn't"

Several participants reported that they no longer had direct contact with clients, they had transferred to head office or had assumed supervisory roles within the organisation and were no longer acting as rehabilitation practitioners.

Overall, the extent of the impact of the training on the organisation as a whole appeared to be very mixed and contradictory. Many trainees were frustrated by the organisation's investment in the training programme because it set them up for something they were not able to adequately deliver. They suggested that the organisation did not adequately provide supervision or caseload support for the implementation of the course content. The trainees were motivated to apply their training back in the workplace and believed they were prepared with the knowledge and skills required of rehabilitation practitioners to lead the way in case management. However, they perceived that their immediate supervisors were not on-side with the philosophy espoused in the training programme and were obstructive in supporting them transfer their training. From a supervisor's perspective, however, it may have been that the supervisors were alienated from the training because they did not see it fitting into the existing culture of ACC. This was expressed to the author by one supervisor who said:

“Transfer is hindered by the somewhat unbalance view of rehabilitation presented by the course, which does not ‘gel’ with the realities of claimants or branch life. Excessive claimant advocacy approach leads to insufficient acknowledgement of the fact that some claimants, despite all the encouragement in the world “screw the system” and actively work against reducing their dependency on the scheme and hence require the corporation “calling some of the shots” rather than the claimant being entirely “the centre of the universe”.

The reported resistance to the espoused model of rehabilitation is perhaps understandable given that the supervisors were not trained in the new model of work practice and were under-resourced both in staffing and finance. Additionally, as discussed in Chapter 1, ACC is highly regulated and its policies, procedures and governing legislation these do not encourage flexibility and creativity in decision-making. One supervisor told the author:

“The case managers are constantly told at Victoria to go back and be (1) innovative (2) creative and (3) work differently. The reality is the legislation only allows a limited degree of creativity. Other staff can become disillusioned when someone comes back apparently “full of it” (quote!).”

In sum, the analysis suggests that the trainees had developed personally and professionally and when they reported on the ways in which the training had impacted on the branch they frequently mentioned that the branch had gained new expertise in rehabilitation. The trainees became mentors and called upon in their branches as a resource person. The analysis suggested that the trainees were more focused on the rehabilitation of their clients. Furthermore, they were willing to assist their colleagues in ways that would encourage a more widespread practice of holistic rehabilitation taking into account the clients' medical, social, financial and vocational needs. However, the impact of this focus on rehabilitation was not affected to the trainees' satisfaction. On the downside the trainees expressed frustration and dissatisfaction because they were not able to practice rehabilitation as they had expected. The managers' lack of understanding and / or the lack of resourcing in the branches were partially held responsible for the lack of opportunity to rehabilitate their clients but some in some cases where the trainees tried to effectively case manage they were blocked by the client. Several trainees reported that their clients were unwilling to be "rehabilitated" and preferred to continue with weekly compensation payments rather than return to work or independence.

Question 5 responses suggest that the trainees gained an understanding of rehabilitation service delivery and the following question shows the extent to which the training modules were understood by the trainees over time and to what extent the trainees perceived the modules as being useful.

7.4.6 Questions 6 and 7. Over time, to what extent were the training modules understood by the trainees and to what extent were the training modules useful?

The total module usefulness and understanding ratings (rehabilitation policy in practice; personal and professional skills development; principles and practices of rehabilitation; culture, gender, class, age and ability issues; research design and methodology; legislation, regulation, policy and implications for case management; developing a practicum learning contract; and, review of learning, presentation of project findings) for each cohort over each measurement period (pre, post-training and six months post-training) are presented in Table 26. At pre-training the trainees were asked what they expected to get out of the modules covered in the course and what their current

understanding was. In other words, they were asked how useful (relevant) did they think the modules would be for their work from a rating of minimally useful to highly relevant

Table 26

Mean scores and standard deviations for usefulness and understanding of the modules at pre-training, post-training and six months post-training by cohort

	Pre-training		Post-training		Six months post-training	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Usefulness of modules						
Cohort 2	36.63	5.35	39.63	4.88	36.00	5.75
Cohort 3	39.33	6.47	38.75	4.89	33.29	6.40
Cohort 4	41.23	3.81	44.46	3.20	38.69	4.87
Understanding						
Cohort 2	24.18	6.86	39.00	4.73	37.27	4.45
Cohort 3	24.91	6.07	38.08	4.96	38.91	4.06
Cohort 4	29.15	7.48	43.07	5.37	40.46	3.23

to daily work. They were asked to rate their present understanding of the modules from a vague understanding only to excellent understanding. Post-training the same questions were asked but with a change in emphasis: the trainees were asked what they got out of the modules covered in the course – how useful (relevant) had the modules been in their work and how did they rate their present understanding. The rating scale was unchanged.

The total module usefulness rating was analysed in an ANOVA with time of measurement (pre-training vs. post-training vs. six months post-training) as a within-subjects factor. The analysis was conducted separately for each cohort.

For Cohort 2, the main effect of time of measurement on module usefulness ratings was significant: $F(2, 24) = 5.52, p < .01, \text{Eta squared} = .21$. The hypothesised training effect accounted for 21% of the variability in module usefulness ratings. The sphericity assumption was met (Mauchly's $W = .8, p = .13$) so no corrections were applied to the degrees of freedom. Post hoc comparisons were performed using the Bonferroni adjustment for multiple comparisons. Module usefulness ratings increased from a mean of 36.6 (SD = 5.3) pre-training to a mean of 39.6 (SD = 4.8, $p = .07$) post-training. There was a significant difference between the post-training score and the six months follow-

up score ($M = 36.0$, $SD = 5.7$, $p=.002$). However, the difference between pre-training mean and the six months follow-up mean was not significant. The rating for the usefulness of the modules increased over the period of training but this increase was not maintained at the six months follow-up where the overall mean usefulness rating had fallen below pre-training levels.

For Cohort 2, the sphericity assumption was not met (Mauchly's $W = .54$, $p=.002$) so the Huynh-Feldt correction was applied. The main effect of time of measurement on module understanding ratings was significant: $F(1.4, 30.1) = 79.9$, $p<.001$, Eta squared = .79. The training effect accounted for 79% of the variability in module understanding ratings. Post hoc comparisons were performed using the Bonferroni adjustment for multiple comparisons. Module understanding ratings significantly increased from a mean of 24.1 ($SD = 6.8$) pre-training to a mean of 39.0 ($SD = 4.7$, $p<.001$) post-training. There was a non-significant difference between the post-training score and the six months follow-up score ($M=37.2$, $SD = 4.4$, $p=.09$). The difference between the pre-training and six months follow-up score was significant $p<.001$. The rating for the understanding of the modules increased over the period of the training and this difference was maintained at six months follow-up compared to pre-training levels.

For Cohort 3, the main effect of time of measurement on module usefulness ratings was significant: $F(2,46) = 13.28$, $p<.001$, Eta squared = .36. The training effect accounted for 36% of the variability in module usefulness ratings. The sphericity assumption was met (Mauchly's $W = .90$ $p=.31$) so no corrections were applied to the degrees of freedom. Post hoc comparisons were performed using the Bonferroni adjustment for multiple comparisons. Module usefulness ratings did not increase significantly from a mean of 39.3 ($SD = 6.4$) pre-training to a mean of 38.7 ($SD = 4.8$) immediately following training. There was, however, a significant difference between the post-training score and the six months follow-up score ($M = 33.2$, $SD = 6.4$ $p<.001$). The difference between pre-training mean and the six months follow-up mean was also significant. The rating for the usefulness of the modules did not increase over the period of training but did increase from pre-and post-training levels to six months post-training.

For Cohort 3, the main effect of time of measurement on module understanding ratings was significant: $F(2, 46) = 61.1, p < .001$, Eta squared = .72. The training effect accounted for 72% of the variability in module understanding ratings. The sphericity assumption was met (Mauchly's $W = .90, p = .31$) so no corrections were applied to the degrees of freedom. Post hoc comparisons were performed using the Bonferroni adjustment for multiple comparisons. Module understanding ratings were significantly increased from a mean of 24.9 ($SD = 6.0$) pre-training to a mean of 38.0 ($SD = 4.9, p < .001$) immediately following training. There was a significant difference between the pre-training score and the six months follow-up score ($M = 38.9, SD = 4.0, p < .001$). The difference between the post-training and six months follow-up score was not significant. The rating for the understanding of the modules increased over the period of the training and this difference was maintained at six months follow-up compared to pre-training levels.

For Cohort 4, the main effect of time of measurement on module usefulness ratings was significant: $F(2, 24) = 11.5, p < .001$, Eta squared = .49. The training effect accounted for 49% of the variability in module usefulness. The sphericity assumption was met (Mauchly's $W = .60, p = .06$) so no corrections were applied to the degrees of freedom. Post hoc comparisons were performed using the Bonferroni adjustment for multiple comparisons. Module usefulness ratings did increase significantly from a mean of 41.2 ($SD = 3.8$) pre-training to a mean of 44.5 ($SD = 3.2, p = .004$) immediately following training. There was a significant difference between the post-training score and the six months follow-up score ($M = 38.6, SD = 4.8, p = .002$). The difference between pre-training mean and the six months follow-up mean was not significant. The rating for the usefulness of the modules increased over the period of training but reverted back to below pre-training levels at six months post-training.

For Cohort 4, the main effect of time of measurement on module understanding ratings was significant: $F(2, 24) = 36.07, p < .001$, Eta squared = .75. The training effect accounted for 75% of the variability in module understanding ratings. The sphericity assumption was met (Mauchly's $W = .64, p = .09$) so no corrections were applied to the degrees of freedom. Post hoc comparisons were performed using the Bonferroni adjustment for multiple comparisons. Module understanding ratings were significantly

increased from a mean of 29.1 ($SD = 7.4$) pre-training to a mean of 43.1 ($SD = 5.3$, $p < .001$) immediately following training. There was a non-significant difference between the post-training score and the six months follow-up score ($M = 40.4$, $SD = 3.2$, $p = .11$). The difference between the pre-training and six months follow-up score was significant $p < .001$. The rating for the understanding of the modules increased over the period of the training and this difference was maintained at six months follow-up compared to pre-training levels.

Overall, the results of the analysis for the questions regarding the understanding and the relevancy of the modules suggest that at pre-training, the trainees had moderate understanding and held high expectations for the usefulness of the modules. At mid-training, the trainees increased their understanding and for Cohorts 2 and 4 their perceptions of the relevancy increased. Then, at after six months back on-the-job, though the levels of understanding remained relatively high, the course material was seen as less useful. Although these ratings were self-reports of learning, it might be assumed that learning took place in that all the trainees who completed the training passed with a post-graduate diploma. Further one could assume that this diploma would not have been granted had the trainees not successfully completed their coursework. Of the 74 trainees in Cohorts 2, 3 and 4 who responded to the question "At this stage, have you obtained a pass in the Diploma in Rehabilitation Studies?" 100% reported that they had (Collinson & Brook, 1997).

The training modules were learned but the analysis shows that as time goes on, the material became less relevant for implementation in the workplace. It may be that opportunity for implementation of the training was not provided and therefore not reinforced in the workplace. As a consequence, the training lost its contextual relevance and arguably, its potency as a tool for change, over time. This concurs with the qualitative data attached to question 5 which suggested that the trainees had new understandings of the principles and practices for successful rehabilitation of their clients but they were not able to put these into practice because of organisational constraints.

The trainees maintained their understanding of the modules over time and as the results show that for each cohort the training accounted for more than 70% of their

understanding of the modules. However, the training accounted for less than 50% of module usefulness and in the case of Cohort 2, it was a low 21%. This apparent lack of usefulness may give insight into the lack of or the negative impact of the training on organisational changes reported in 7.4.4 above. It may be that because the trainees perceived the modules to be less than relevant in their day-to-day work practice they became frustrated and disaffected with the organisation, as shown in Table 22. The trainees had held expectations that the modules would be relevant to their work and expected that organisational and personal changes would occur as a result of their training.

The training was initiated to bring about change in the organisation and the trainees expected that it would bring about such change as well as personal changes for themselves. Yet training accounted for less than 10% of organisational change reported by Cohorts 2 and 4 and whilst the training effect on organisational change for Cohort 3 was 37%, the change was in a negative direction. There appears to be a Catch 22 situation between the training and organisational changes. Organisational change could not happen until the training was implemented and the training could not be implemented until organisational change occurred. This impasse may be the crux as to the why the training did not significantly effect organisational change.

The training accounted for less than 15% of personal changes for Cohorts 2 and 4 and 26% for Cohort 3. Had the training been perceived by the trainees as more relevant it might have had a more positive effect on the trainees' assessments of their personal changes.

7.4.7 Question 8. What, if any, workplace characteristics facilitated transfer of training in the organisation?

In order to identify those workplace characteristics that are associated with facilitation of the transfer of training (here operationalised as 'extent of changes') a standard multiple regression analysis was conducted with extent of changes (three months post-training) as the dependent variable and the organisational climate (pre-training), usefulness of the modules (post-training) and satisfaction with support (three months

post-training) as the independent variables. Two standard dummy variables (Brannic, n.d., http) representing the three cohorts were also entered in the analysis

The data were screened for assumptions for multiple regression, prior to analysis. No variables were found to be significantly skewed and nor were there any significant univariate or multivariate outliers (using the criteria outlined for research question 1 analysis described earlier).

The results of this analysis are presented in Table 27 which displays the standardised regression coefficients (beta), and R , R^2 and adjusted R^2 . For the extent of changes variable the R for regression was not significantly different from zero, $R=.40$, $F(5, 52) = 2.0$ $p=.08$.

Table 27

Standard multiple regression of organisational climate (pre-training), usefulness of modules and satisfaction with support against extent of changes showing R^2 , adjusted R^2 , and standardised regression coefficients (betas)

Variables	Beta
Vector 1	-.04
Vector 2	-.17
Organisational climate (pre-training)	.13
Usefulness of modules (post-training)	.27
Satisfaction with support	.02
R	.40
R^2	.16
Adjusted R^2	.08

* $p < .05$

** $p < .01$

*** $p < .001$

The trainees' perceptions of pre-training organisational climate, the extent to which the modules were seen as useful post-training and ratings of supervisory support were unrelated to the perceptions of the degree and variety of ways in which they were able to effect post-training change in the workplace (which was here conceptualised as simply 'extent of changes').

The above analysis was recalculated in a similar fashion but with mid-training rather than pre-training organisational climate as one of the independent variables (Table 28).

Table 28

Standard multiple regression of organisational climate (mid-training), usefulness of modules and satisfaction with support against extent of changes showing R^2 , adjusted R^2 , and standardised

regression coefficients (betas)

Variables	Beta
Vector 1	-.04
Vector 2	-.19
Organisational climate (mid-training)	.11
Usefulness of modules (post-training)	.26
Satisfaction with support	.06
R	.41
R^2	.17
Adjusted R^2	.09

* $p < .05$

** $p < .01$

*** $p < .001$

The overall effect was still not significant: $R = .41$, $F(5, 53) = 2.1$ $p = .07$. Additional correlational analyses of organisational climate subscales (measured at pre-test and mid-training) showed no relationship with extent of changes.

Workplace support to facilitate transfer of training

At the completion of the training the trainees identified several kinds of support they required to help them in implementing their workplace behaviour changes. Their suggestions are shown in Table 29 under the themes organisational support and caseloading. Of prime importance to the trainees was that the organisation be familiar and in accord with the theory and practice of rehabilitation so that they could apply their training. At pre-training, the trainees were expecting organisational and personal changes (7.4.4 above) to be brought about and after completion of the course they had an understanding of the principles and practices of rehabilitation and the cultural and legal issues surrounding case management in New Zealand (7.4.6 above). They anticipated that they would need assistance to effect change from all levels of the organisation though particularly from their superiors (regional office managers, branch managers and PCMs), frequently referred to as “management”.

In other words, the trainees wanted to be able to rehabilitate their clients by returning them to, or as near to, pre-injury state of health and work readiness by offering a

Table 29**Suggestions of support for implementing workplace behaviour change**

Organisational support	<ul style="list-style-type: none"> - commitment from head office to value the importance of holistic evaluation and rehabilitation planning - regional or branch manager to support initiatives - branch, especially, branch manager and principal case manager - middle management - change in office structure that allows administration / processing type work to be undertaken fully by persons other than case managers - more structured imposition of change from head office
Caseloading	<ul style="list-style-type: none"> - lower caseloads - manageable caseload - support in the form of processing to allow active case management to begin - ensure workloads are realistic

comprehensive service. This entailed assessing, co-ordinating treatment/service providers and evaluating rehabilitation plans and authorising the financial compensation to the client and their providers. The rehabilitation practitioner role brought with it demands for increased face-to-face consultations and close collaboration with a range of service and treatment providers. All of this required additional time and resources whilst did not assist with managing burgeoning caseloads.

The trainees wanted head office to ratify the new model of practice beyond funding the programme and demonstrate commitment to intensive case management and rehabilitation. For example:

“commitment from head office to value the importance of holistic evaluation and rehabilitation planning..corporate culture needs to incorporate quality control measure”

As well as head office commitment the trainees suggested day-to-day support from their branch manager and PCM so that they would be adequately resourced in practical ways such as having a computer available for their use, clerical staff to assist with administration. There were calls for changes to the ACC legislation however the changes were unspecified. The existing legislation was perceived by some of the trainees to be too inflexible in its application and whilst ACC does not set legislation,

staff can influence policy advisers and policy makers. The highly regulated workplace did not, or could not, altogether tolerate “the creativity and flexibility” that the training programme encouraged.

Clearly, the trainees needed support with their caseloads: their high numbers of cases to manage emerged as a secondary theme. Trainees called for support in processing of files to enable them to case manage effectively. Trainees’ comment included:

“lower caseloads - this is a real concern to me. I have enjoyed having a look into what active case management can be like while on my practicum and I’m worried about the extra 150 files I know will be dumped on my desk upon my return. The organisation has to learn to spend money to make money regarding staff levels.”

“I know you will hear this all the time: caseload caseload caseload”

“more support in the form of processing to allow active case management to begin”

Some trainees suggested that there needed to be changes within the branches to accommodate the case management. It was suggested that there needed to be staff other than case managers available to process claims that required ACC intervention for a short time, less than six weeks (e.g., claims concerning minor fractures and injuries). The administration and processing of “simple” claims by others would support the newly trained in their efforts to focus on rehabilitation. In effect, staff administering, processing short-term claims would, theoretically, reduce caseloading and assist the trainees in the case management of claimants with more serious, complex personal injuries for whom rehabilitation was targeted. The current organisational structure was seen as obstructive and incompatible with the rehabilitation model.

In effect, what the trainees were saying was that for them to apply their training they were not going to be able to do it on their own with the current level of work and the resources available to them, they needed support from their organisation.

7.4.8 Question 9. What, if any, workplace characteristics inhibited transfer of training in the organisation?

In order to identify those workplace characteristics that are associated with inhibiting the transfer of training (here operationalised as extent of changes) a standard multiple regression analysis was conducted with extent of changes (three months post-training) as the dependent variable and the organisational climate (pre-training), usefulness of the modules (post-training) and barriers to change (three months post-training) as the independent variables. Two standard dummy variables (Brannic, n.d., http) representing the three cohorts were also entered in the analysis.

The data were screened for assumptions for multiple regression, prior to analysis. The barriers to change variable was not significantly skewed and there were no significant univariate outliers for barriers to change. No significant multivariate outliers emerged when barriers to change was included in the analysis.

The results of this analysis are presented in Table 30 which displays the standardised regression coefficients (beta), and R , R^2 and adjusted R^2 . For the extent of changes variable the R for regression was significantly different from zero, $R=.42$, $F(5, 55) = .24$, $p=.049$. Altogether 17% (10%) adjusted of the variability in extent of changes was accounted for by knowing scores on these variables.

Table 30

Standard multiple regression of organisational climate (pre-training), usefulness of modules and barriers to change against extent of changes showing R^2 , adjusted R^2 , and standardised regression coefficients (betas)

Variables	Beta
Vector 1	.03
Vector 2	-.15
Organisational climate (pre-training)	.14
Usefulness of modules (post-training)	.26
Barriers to change	-.22
R	.42
R^2	.17
Adjusted R^2	.10

* $p<.05$

** $p<.01$

*** $p<.001$

The trainees' perceptions of pre-training organisational climate, the extent to which the modules were seen as useful post-training and ratings of barriers to change were related (albeit weakly) to the perceptions of the degree and variety of ways in which they were able to effect post-training change in the workplace (which was here conceptualised as simply 'extent of changes').

The above analysis was recalculated in a similar fashion but with mid-training rather than pre-training organisational climate as one of the independent variables (Table 31).

The overall effect was still not significant $R=.41$, $F(5, 56) = 2.3$, $p=.05$.

Table 31

Standard multiple regression of organisational climate (mid-training), usefulness of modules and barriers to change against extent of changes showing R^2 , adjusted R^2 , and standardised regression coefficients (betas)

Variables	Beta
Vector 1	.05
Vector 2	-.14
Organisational climate (mid-training)	.13
Usefulness of modules (post-training)	.28
Barriers to change	-.20
R	.41
R^2	.17
Adjusted R^2	.09

* $p<.05$

** $p<.01$

*** $p<.001$

Perceived barriers to implementing change

The qualitative analysis thus far has reported that the trainees attempted to to apply their training once they were back in full-time employment. They had suggested that they would need help from head office, their branch manager and PCM to effect change but any changes that they had made were primarily due to their efforts.

The main theme to emerge in the preceding question concerning the support that the trainees might need once they were back in the workplace was the need for the organisation through its senior and middle managers to actively endorse their work as rehabilitation practitioners by providing adequate resources especially to help with case loading.

This final section identifies aspects of the organisation that the trainees perceived to stymie the transfer process. It is important perhaps as it gives the trainees' opinions on why the training did not transfer to the extent that they would have liked.

The theme here reflects those that emerged when the trainees were asked immediately after training what support they would need. In an open-ended question, the participants were asked, at three months post-training, to specify any barriers they had encountered in implementing change. As shown in Table 32, the barriers that the trainees mentioned fell into three distinct groups: caseloads, management and organisational changes.

The number of cases that the rehabilitation practitioners had on their books at six months post-training ranged between 117 and 143 and according to the trainees the optimal number to case manage effectively would be approximately 65 (Collinson & Brook, 1997). Thus, it is unsurprising that caseloads were reported as being too high, there was a lot of processing involved, new caseloads to manage and, the complexities of some files demanded substantial amounts of time. Trainees commented:

“got 150 odd files thrown at me – impossible to make much of a difference”

“after training came back to 220 files, easy to slip back into the rut if you have a large caseload”

The issue of high and complex caseloads is not new but issues pertaining to the treatment of these caseloads advocated by the training and arguably, required for effective rehabilitation, did add the additional elements of time and resource and outcome expectation. Whilst training may not have been directed at reducing caseloads, although Potts (1995) perceived a reduction in the number of caseloads as a benefit of the training (see 2.1), the training was aimed at the more efficient management of them. The main determinant of caseloading numbers depends on a myriad of external factors such as industrial accidents, domestic violence, motor vehicle accidents, “acts of god” etc., not by the organisation. What can be determined by the organisation is the way the caseloads are distributed that

required perhaps a team approach and more streamlined systems within the branches.

Table 32

Perceived barriers to implementing change three months post-training

Caseloads	<ul style="list-style-type: none"> - caseloads and processing components of work, unable to effectively practice the skills I have learnt to any great extent - new caseload where previous case manager had little compensation knowledge, meaning a lot of financial errors and overpayments - very high caseload, lots of processing; haven't felt like I can contribute or had assistance to reduce - unmanageable case load
Management	<ul style="list-style-type: none"> - management have not provided ongoing support or encouragement - lack of consultation and communication in relation to change in branch work - no credibility with management - Victorian' type attitudes by supervisors towards creative vocational rehab. cannot see beyond regulations to allow case managers to 'cut deals' and enable people to leave scheme voluntarily
Organisational change	<ul style="list-style-type: none"> - organisational restructure - lack of coherence nationally in the proposed restructure; will I still have a meaningful job? - staff reductions, new staff, changes in branch structure - all the changes, further paperwork, technical requirements, hindering my ability to meet with claimants

Management, generally, was viewed unfavourably because they appeared to the trainees to frustrate the implementation of their training and did not provide ongoing support and supervision. As noted above it seems that some supervisors were relatively uninformed about the training and had a poor opinion of it. They were less willing to 'take risks' and adhered to the familiar way of work practice. These comments reflect the trainees' perceptions of middle management:

"due to management having such a hard line to clients i.e., kick off books asap! Difficult to implement being more professional and caring to clients. But have done so with criticism from management."

"some managers thought it was a waste of time and their attitude remains destructive"

“Victorian type attitudes by superiors towards creative vocational rehab.... cannot see beyond regulations to allow case managers to ‘cut deals’ and enable people to leave scheme voluntarily”

“change can only be made when management are willing to consider new ideas”

The third barrier was the organisational change throughout the country that cast a shadow of insecurity and had a destabilising effect on the trainees. There were uncertainties about future employment in the organisation. For example:

“The imminent restructuring has made the recent past difficult in terms of job expectations and security”

Overall, it emerged that the training programme was undertaken at a time when ACC was initiating other major changes at branch level. Several smaller branches were amalgamated and regional offices were disestablished while Cohort 4 was in training. The trainees were dissatisfied with the level of support they were given after training and the lack of opportunity they were given by their managers. These perceived barriers were attributed to their failure to transfer the training to the degree that they had expected.

7.5 The Recurrent Institutional Cycle Design

In an ideal world, organisational evaluation research would employ classical experimental design that is characterised by randomisation in selecting treatment and control groups. However, in many organisational contexts and in many social programmes it is neither possible nor appropriate to assign people to treatment groups. Sahn (n.d., <http>) suggests reasons why it is often not possible to use a classical experimental design in evaluating social programmes for the following reasons: (1) programme planners and staff may resist randomisation as a means of allocating treatments, arguing for some other criterion, e.g., need or merit; (2) the randomisation process is difficult to carry out correctly in highly dynamic environments, resulting in non-equivalent (test and control) groups; (3) there is a high likelihood of spill-over effects from the treatment to control population; and, (4) the expense of running sound experiments precludes their use on a wide scale. In the present study a classical

experimental design was not possible: the training cohorts were selected for training by ACC although randomisation was carried out in the attempt to arrange a control group.

A design that is appropriate in situations where there is not an available control group and a programme is repeated on a cyclical basis to new cohorts of participants/trainees is the “patched-up design” (Campbell & Stanley, 1966) known as “the recurrent institutional cycle design” (Cook, Campbell & Perrachio, 1990). Because of the design’s features i.e., its compensation for a control group and its suitability in cyclical treatment/training, the recurrent institutional cycle design could have widespread applicability in organisational and educational settings. It has been used, for example, in evaluating the effects of a nursing programme (Psathas & Plapp, 1968); service effectiveness in a mental health setting (Speer & Swindle, 1983); telecourse evaluation (Shavelson, Webb & Hotta, 1987); and an inpatient programme for chronic Post-Traumatic Stress Disorder (Isotupa & Korabik, 2000).

Recognising the utility of the recurrent institutional cycle design, it was decided to use an approximation to this approach as a data analysis strategy in the study. This is a compensatory design “particularly well-suited to the situation” faced in the present context (P. Taylor, personal communication, 18 November, 1998) where there were problems in sourcing a control group. The recurrent institutional cycle design compares the trainees’ post-test data with pre-test data.

The schema for the present application and approximation of the recurrent institutional cycle design is represented in Table 33.

Table 33

The recurrent institutional cycle design (adapted from Campbell & Stanley, 1966)

	<i>Training</i>	<i>Observation</i>	<i>Training</i>	<i>Observation</i>
Cohort 2	X	three months post training O ₁		
Cohort 3		pre-training O ₂	X	three months post-training O ₃
Cohort 4				pre-training O ₄

In theory, Cohort 2 would have completed their training at the same time as Cohort 3 began training and given the pre-test as they entered the programme. Cohort 4 would

have been pre-tested on entry when Cohort 3 had completed their training. In reality, the training was staggered and cyclical but there was some overlap in the start and finish times for the cohorts and therefore, the approach is an approximation. Further, because there was insufficient data immediately post-training, three month post-training data was used in the analysis.

The application of the recurrent institutional cycle design concept allows for longitudinal and cross-sectional comparisons to be made and it is the pattern of differences rather than any single comparison that forms the basis for interpretation (Psanthas & Plapp, 1968). Theoretically, if the training has effects the following comparisons should show differences that are in the same direction and similar: O_1 vs. O_2 ; O_2 vs. O_3 ; O_3 vs. O_4 . All these comparisons involve pre and post-training scores. In theory, comparing Cohort 2 (three months post-training) with Cohort 3 (pre-training) is similar to comparing a training group with a no-training control (albeit not as confidently) and likewise for the Cohort 3 vs. Cohort 4 comparison. The analysis reported here includes the between group comparisons, O_1 vs. O_2 and O_3 vs. O_4 and includes the within-group comparisons (O_2 vs. O_3) which were reported more fully in research questions 3 and 4 above. Thus, between-group and within-group analyses for the cohorts on skills needed and possessed and personal and organisational changes are reported and discussed briefly below in an attempt to interpret the training effect.

The recurrent institutional cycle design may help to answer questions about the programme's effectiveness due to the training. Theoretically, a training main effect is suggested if the O_1 and O_3 are higher than O_2 and O_4 and if O_2 and O_4 are not different from each other. A partial control for history can be provided if O_1 is greater than O_2 and O_3 is greater than O_4 as this would suggest that the training has been effective at two different times. Selection can be ruled out because the same people are involved in some of the comparisons (Cook et al., 1990).

In the present study a series of t tests was conducted comparing Cohort 2, three months post-training with Cohort 3 pre-training on organisational changes, personal change, organisational commitment, skills needed and skills possessed. A similar set of

analyses was conducted comparing Cohort 3, three months post-training with Cohort 4 pre-training.

Table 10 above gives the means scores and reliabilities for the variables of interest, viz., organisational changes, personal change, organisational commitment, skills needed and skills possessed. As Table 7 shows these were the only variables available for the analyses. Cook et al., (1990) suggest that the recurrent institutional cycle design should only be used with reliable measures and large numbers. Therefore, with regard to the first recommendation, it must be noted that two measures in the application of the design have low internal reliabilities: personal changes (.60 and .58) and organisational changes (.42 and .47) for pre-training and three months post-training, respectively. In the absence of any more robust scales, they were included in the analysis. The other recommendation of the recurrent institutional cycle design, that it should only be used with "large samples" (Cook et al., 1990, p.535), is less defined. The interpretation of "large samples" is unclear and the number of trainees in the present study was all that was available.

A series of t tests was conducted comparing Cohort 2, three months post-training with Cohort 3 pre-training on organisational changes, personal change, organisational commitment, skills needed and skills possessed. In this set of analyses Cohort 3 was, in effect, the control for Cohort 2. A similar set of analyses were conducted comparing Cohort 3, three months post-training with Cohort 4 pre-training; this time Cohort 4 acts as the control for Cohort 3. Table 34 gives the means and standard deviations scores for the relevant variables by cohort.

Differences in mean total scores between Cohort 2 (three months post-training) and Cohort 3 (pre-training) on organisational changes, $t(59) = -1.61$, $p=.11$; personal changes, $t(61) = -.70$, $p=.48$; organisational commitment, $t(61) = .31$, $p=.48$; and skills needed $t(62) = .66$, $p=.51$ were not significant. These results suggest that the training did not have an impact on the trainees' perceptions of organisational changes, personal

Table 34

Mean scores and standard deviations for organisational changes, personal changes, organisational commitment, skills needed and skills possessed at pre-training (Cohorts 2 and 3) and three months post-training (Cohorts 3 and 4).

Variables	Cohort 2		Cohort 3		Cohort 4	
	M	SD	M	SD	M	SD
Three months post-training						
Organisational changes	3.8	1.4	3.1	1.3		
Personal changes	4.5	1.7	3.5	1.6		
Organisational commitment	42.7	6.4	38.5	9.3		
Skills needed	46.8	3.4	46.4	4.5		
Skills possessed	70.6	7.5	67.6	8.2		
Pre-training						
Organisational changes			4.3	.93	4.3	1.2
Personal changes			4.7	1.3	5.5	.80
Organisational commitment			42.	7.3	43.7	6.6
Skills needed			46.2	3.8	46.1	4.3
Skills possessed			62.9	8.6	64.9	7.2

changes, their organisational commitment or the skills needed for the job. However, differences in mean total scores between Cohort 2 and Cohort 3 on skills possessed were significant, $t(60) = 3.6$, $p = .001$. Cohort 2, once they had been back in the workplace for three months working as full-time rehabilitation practitioners, rated their level of skills higher, on average, than did Cohort 3 who were still to begin their training. This suggests that the training may have had an impact on the individuals' perceptions of their personal work-related skills as rehabilitation practitioners.

Differences in mean total scores between Cohort 3 (post-training) and Cohort 4 (pre-training) skills needed, $t(50) = .22$, $p = .82$ and skills possessed were not significant, $t(49) = 1.2$, $p = .23$. However, differences in mean total scores between Cohort 3 (post-training) and Cohort 4 (pre-training) on organisational changes, $t(49) = -3.4$, $p = .001$; personal changes, $t(48) = -4.9$, $p = .00$; organisational commitment, $t(48) = -2.1$, $p = .03$ were significant. Cohort 4, on average, rated organisational changes, personal changes and organisational commitment higher than Cohort 3, which suggests that the training programme had an unfavourable effect on Cohort 3. Three months after training and being back in their roles as rehabilitation practitioners Cohort 3 rated organisational changes, personal changes and organisational commitment significantly lower than the control group (Cohort 4) rated the same variables at pre-training.

Overall, the pattern of results of the recurrent institutional cycle design analysis shows that the training programme, to some degree, affected the cohorts differently. In the first series of analysis between Cohorts 2 and 3 (with Cohort 3 as the control) the training seems to have made no difference to Cohort 2 in their perceptions of the organisational and personal changes, no difference to their level of organisational commitment and no difference to their perceptions of the skills required to carry out their work. It was only in the area of their personal self-rated skills that the training appears to have benefited Cohort 2. Therefore, it might be suggested that the training programme had relatively no effect on Cohort 2.

Table 35
Summary of the results of the recurrent institutional cycle design

	<i>Coh 2/3</i>	<i>Coh 3/4</i>
Organisational changes	n.s	-3.4**
Personal changes	n.s	-4.9**
Organisational commitment	n.s	-2.1*
Skills needed	n.s	n.s
Skills possessed	3.6**	n.s

* $p < .05$

** $p < .01$

*** $p < .001$

In the second series of analysis between Cohorts 3 and 4 (with Cohort 4 as the control) it appears that the training did not increase the Cohort 3's perceptions of the organisational and personal changes and their commitment to ACC, or even hold them constant. It appears that the training might have decreased them. There was no observable effect of the training on the perceptions of the skills needed for the job or the skills Cohort 3 perceived they possessed.

The only similar result between the two sets of analyses was for the variable skills needed and its non-significance suggests that the training had no effect on Cohorts 2 and 3's perceptions of the skills they needed for their work as rehabilitation practitioners.

As a between-subjects analysis the recurrent institutional cycle design analysis reinforces the within-subject analyses reported for research questions 3 and 4 above that showed, in the main, that the training had mixed effect and that it was fairly limited in its effectiveness. For example, the results of the within-group analyses on

organisational and personal changes (research question 3) showed some inconsistencies between the cohorts in terms of the pattern of significant findings on organisational and personal changes. This inconsistency may be a function, in part, of the low reliabilities of these changes measures. Pre-training to three months post-training there were no significant differences for Cohorts 2 and 4 on organisational changes yet in the same period Cohorts 2 and 3 showed significant personal change. So, for Cohort 2 there were no organisational changes but there were personal changes. For Cohort 3 there were organisational and personal changes and for Cohort 4, no organisational and no personal changes. Importantly, however, where there were changes they were in a negative direction which might suggest that the training had an adverse effect.

The results of research question 4, described above, report the within-group analyses on the skills needed for rehabilitation practice and the skills possessed. They show that over time Cohort 2 reported a significant difference in their perceptions of the skills they **needed** but Cohorts 3 and 4 did not. The between-group analyses, reported in the recurrent institutional cycle design above, showed that there were no significant differences over time for Cohort 2 vs.3 and Cohort 3 vs. 4 comparisons. There is consistency in the non-significance observed for Cohort 2 on skills needed.

For their self-rated perceptions of the skills that they **possessed** (research question 4) Cohorts 2, 3 and 4 showed significant differences over time. This pattern was reinforced by the Cohort 2 vs. 3 comparison but not the Cohort 3 vs. 4 comparison.

Taken as a whole the picture that emerges from the recurrent institutional cycle design analysis seems to suggest that the training programme affected the cohorts differently – Cohort 3 were affected negatively in that there were decrements in their perceptions on organisational and personal changes and their organisational commitment. For Cohort 2 the training appears to have had an effect on their personal skill level but no effect on their perceptions of organisational and personal changes, the level of skills they need for their work or their organisational commitment.

7. 6 Chapter Summary

Chapter 7 has presented the results of the quantitative and qualitative analyses of the data obtained to answer the nine research questions. The data the qualitative and quantitative analyses were reported together and comparisons were drawn between the two sets of data. The findings were that (1) the trainee characteristics of well-being, life satisfaction and self-efficacy were not associated with the “transfer of training” – in the results this is ‘programme effectiveness’ and is operationalised as the various change measures yet the trainees reported in an open-ended question that they were the key determinant of any change in workplace behaviour; (2) the level of occupational self-efficacy remained stable for Cohorts 3 and 4 during training and increased for Cohort 2; (3) the level of skills that the trainees perceived were needed for the job of case manager did not change over time for Cohorts 3 and 4 but for Cohort 2 there were significant changes; (4) as time went on there were increases in the level of skills that the trainees’ believed they possessed and this was confirmed in the qualitative data that revealed that the trainees perceived they had acquired knowledge, skills, abilities and attitudes expected of rehabilitation practitioners; (5) Cohort 3 perceived that the training brought about organisational changes and for Cohorts 2 and 3 there were personal changes but they were in a negative direction. The qualitative data revealed that the trainees had attempted to make changes in their practice; (6) over time the trainees increased their understanding of the content of the modules and this was confirmed by their comments; (7) during training the modules were perceived as relevant in the workplace but this was not sustained over time and at six months post training had regressed to before training levels, possibly because they were not able to put the training into practice as often as they had anticipated; (8) workplace characteristics, operationalised as organisational climate and support did not facilitate, transfer of training and (9) workplace characteristics, operationalised as organisational climate and barriers, inhibited transfer of training but only marginally. Heavy caseloads and management’s attitudes towards the concept of holistic rehabilitation, lack of support and lack of on-going supervision of the trainees emerged as the main obstacles to transfer.

The final chapter, Chapter 8, follows with a discussion of the results of the analyses and reflectively examines the evaluation research and makes suggestions for future research.

Chapter 8

Discussion

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In this final chapter the conclusions of the evaluation research are drawn. The results of the analyses are discussed and the chapter considers the evaluation process. Specifically, Chapter 8 addresses the nine research questions of the evaluation research. Then to satisfy the requirements of “an appropriate critical self-analysis of the weaknesses and strengths of the study as related to the limitations of the null results” and “an appropriate critical self-analysis of the weaknesses and strengths of the design and implementation of the study as related to the limitations of the findings in the context of organisational learning” (C. Sharp, personal communication, 25 June, 1999), the chapter contains some reflections on the design and its implementation. Thus, this process of reflection provides a retrospective evaluation of the research and the researcher’s role in it. It is a ‘reflection on action’ which Boud, Keogh and Walker (1985) define as “those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciation” (p.11). The chapter then discusses the limitations of the research, makes explicit its contribution to organisational learning, makes suggestions for future research and offers final remarks.

8.1 The Research Questions

8.1.1 Question 1. Did the trainee characteristics influence the effectiveness of the training programme?

The trainees’ pre-training perceptions of their personal wellbeing, feelings about life in general (life satisfaction), their current skill level and their occupational self-efficacy were found to be unrelated to their perceptions of the degree and the variety of ways in which they were able to effect change in the workplace once they had been back in full time employment for three months after the training programme. The results of the statistical analysis failed to concur with the Noe’s (1986) suggestion that individual trainee characteristics such as attitudes, abilities and motivation are critical factors that can have direct impact on the effectiveness of a training programme. They did not support the findings of Ford et al., (1992); Gist et al., (1991); Tannenbaum et al., (1992); Tziner et al., (1991); and Warr & Bunce, (1995) who reported that ability and self efficacy are relevant factors in learning and transfer of training.

The trainee characteristics of psychological wellbeing and life satisfaction were investigated as it was thought that trainees would be more likely to learn and then use the training more effectively if they were feeling positive about themselves and life in general. Psychological wellbeing and life satisfaction were therefore included in the analysis to see if there was a link between the constructs and learning and transfer. In the present study, the trainee characteristics of psychological wellbeing, life satisfaction current skills level and occupational self-efficacy were not related to the perceptions of the degree and the variety of ways in which the trainees were able to make changes in the workplace after training.

Although self-efficacy has been found to be important in other studies (e.g., Ford et al., 1992; Tannenbaum et al., 1992) it was not correlated with transfer in the present study. However, the finding is in line with that of Axtell et al., (1997) who found that self-efficacy was not correlated with transfer at either one month or one year after training. Transfer was measured by trainees ratings of the degree to which they perceived they had transferred course skills to the workplace (e.g., “use of assertive behaviour”, appropriate use of questioning techniques (open, closed, funnelling)”, effective problem solving in teams...” (Axtell et al., 1997, p.207). The authors found that self-efficacy was related to motivation and speculated that self-efficacy might influence transfer via motivation.

Studies that report a lack of relationship between self-efficacy and performance often suffer from a lack of specificity in the self-efficacy measure according to Pajares (1996). This would not appear to be the case in the present study, however, because the self-efficacy measure was derived from the organisation’s expected competencies but clearly further validation of this measure is necessary

In the light of past research the non-relationship between ‘trainee characteristics’ and ‘post-training change in the workplace’ may be somewhat surprising but this might suggest that factors in the workplace other than the training (e.g., work pressures, high caseloads, limited time, staff turnover) overwhelmed the trainees in their efforts to transfer training. These factors may have mitigated against any attempts to transfer. Another possible explanation is that the training programme was not sufficiently geared

to the work environment and this notion is discussed more fully in relation to question 6,7 below.

Even though the investigation of the psychological variables of wellbeing, life satisfaction and self-efficacy failed to establish a link with training effectiveness, the results of the qualitative data (Table 18) showed the trainees considered that they themselves were the single most important factor influencing the effectiveness of the training programme in the workplace. The trainees attributed any success in effecting change to motivation, determination, persistence, confidence, and ambition. These constructs were considered by the trainees to be the primary determinants in helping in the transfer process and may be worth further investigation in studies of training transfer.

Although the results of the quantitative and qualitative analyses do not converge, as noted in 7.4.1, the non-convergence may be a measurement issue and a reflection of the way the open-ended question was framed. In asking the trainees their opinion about the most important factor in the facilitation of training transfer it was suggested that they consider their personal characteristics and environmental factors. Although it was not an either / or question, the suggestion of the two factors may have led them in responding as if it was a choice.

8.1.2 Question 2. Were there differences in the trainees' reported workplace self-efficacy over time?

Although the trainees' workplace self-efficacy, based on the competencies expected by the organisation in performing the duties of a case manager, did not significantly influence the effectiveness of the training programme, as discussed above, self-efficacy increased as time went on. Writers, e.g., Mathieu et al., (1993); Saks (1995) note the importance of self-efficacy in training achievement and suggest that high self-efficacy is related to high motivation to achieve. Saks (1997) goes further when he says that any training that reduces self-efficacy is most unlikely to encourage transfer of training.

The results of the present study suggest that as the trainees increased their knowledge and understanding over the course of the training programme (see question 6,7 below) that increase was associated with a gain in self-efficacy. Maintaining self-efficacy or

increasing it augurs well for transfer as self-efficacy is a major predictor of transfer (Saks, 1995) and mediates the effects of training on training outcomes (Gist et al., 1991; Mathieu et al., 1993).

The results of the study showed that the three demographic factors (formal education, time in the organisation and time in role of case manager) had no significant main effects on self-efficacy. There was however a difference between the cohorts' levels of self-efficacy. Cohort 2 felt more efficacious in aspects of case management such as assessing and interviewing claimants; facilitating strategies set out in case management plans and rehabilitation plans developed for claimants within ACC's legal and ethical constraints; and managing and evaluating the progress of rehabilitation, than Cohort 3.

A possible explanation for the difference between the cohorts may have been a selection and training order effect. The selection criteria for the training programme (see 2.3.2) was interpreted differently by the training provider and ACC and it appears that it was not clearly articulated between head office and the branches, nor the branch managers and the case managers. There was confusion about who was eligible and who was not. As discussed earlier (2.3.2) this caused tension between those case managers who had put themselves through university at their own expense and were degree holders and those who were not graduates but were eligible for post-graduate study.

Because the sample was selected by management for participation in training from a large pool of applicants, it may be conceivable that motivation to succeed, work performance and experiences of the earlier cohort were different from those who were subsequently available for training. Certainly the educational profiles were different. For example, Cohort 2 was less qualified than Cohort 3 in that the majority of them did not hold a university degree though many had some tertiary training in areas such as nursing and occupational therapy. It may be feasible that those selected for the second cohort may have perceived that they were prioritised and selected for training because they lacked the appropriate skills and qualifications of rehabilitation practitioners. If that was the case, these skill and qualification deficits may have contributed to the lower sense of occupational self-efficacy at pre-training. Thus, selection and order effects may account for the difference in Cohort 2's self-efficacy.

Another issue concerns the appropriateness of the chosen strategy for measuring self-efficacy. The measure was designed to specifically reflect the tasks of a case manager and the individuals' perceptions of their own abilities in those areas. Whether this was the most effective strategy or whether a more generic measure of general self-efficacy (e.g., Bandura's (1989) Multidimensional Scales of Perceived Self-Efficacy; Sherer et al's (1982) General Self Efficacy Scale) or occupational self-efficacy (e.g., Osipow & Temple's (1996) Task Specific Occupational Self-Efficacy Scale) should have been included, remains an empirical question. The importance of self-efficacy in a more general career sense is well documented (e.g., Giles & Rea, 1999) and more recent research suggests that self-efficacy may variously function as a mediator and moderator of other occupational perceptions (e.g., Speier & Frese, 1997). Clearly future research in the area of self-efficacy needs to pay attention to issues of measurement and to more sophisticated modelling of efficacy effects.

8.1.3 Question 3. Did the training alter the trainees' pre-training perceptions of the skills required for the job of case manager and their perceptions of their personal skill level?

Rehabilitation practitioners are required to possess a wide range of skills and abilities to carry out their duties in an effective and efficient way (Biggs et al., 1995; Shapson et al., 1987; Wheaton & Berven, 1994). In the present study, both the trainees' perceptions of skills required and their personal skill level showed that, generally, as time went on, the trainees' perceptions changed incrementally (Table 19). Included in the generic measure of skills required for the job of case manager and skills possessed by the trainees were (1) communication skills (verbal comprehension, speech and written fluency); (2) dynamism (persuasion, quick thinking, decision making, originality, entrepreneurial initiative and rapport); (3) cognitive skills (memory, perception, methodical, reasoning, logical, numeracy and finance); and, (4) practicality (manual dexterity).

Table 19 shows that as Cohort 2, on average, went from pre-training to three months post-training there was a significant increase in their perceptions of the skills required in the job. The results suggest that it was the early part of training programme that alerted the cohort to a need for higher level of skills than they had first thought. Providing the

trainees with a baseline of information in a training programme may have alerted them to the skills that they need to develop to be effective in their job.

However, time did not influence Cohort 3 and 4's pre-training ratings of the skills needed. The results for the cohorts show a similar pattern with slight differences in the mean scores and the changes tended to be in a positive direction.

A possible explanation for the difference between Cohort 2 and the others may be attributed to their differing levels of formal education. It may be that with lower educational levels pre-training, Cohort 2, on average, perceived that they needed to gain more basic knowledge, skills and abilities to be effective in case management. With more advanced levels of formal education the trainees in Cohort 3, on average, may have been operating at more conceptual levels of synthesis and evaluation (cf. Bloom's taxonomy, cited in Eggan & Kauchak, 1992; Sprinthall, Sprinthall & Oja, 1994) and possibly had more insight into the complexities and demands of the job. In other words, at pre-training, they may have been more able to bring together all the information they needed to rehabilitate and compensate their clients, and more able to judge the effectiveness of their rehabilitation plans. For them it was not so much that the job required the lower skill levels that were measured, but with their prior education and knowledge they may have recognised that their job required the higher-level cognitive skills of evaluation and synthesis, not tapped in the generic measure. The cognitive skills tapped in the measure were lower-order of "knowledge and comprehension" within the Bloom taxonomy.

Thus, there may have been differences in the cohorts' understanding of the skills needed which was some function of differing prior education levels. A number of authors (e.g., Biggs & Flett, 1995; Flett et al., 1994; Leahy et al., 1987; Wheaton & Berven, 1994) suggest that an important issue in rehabilitation practice is education level. Notably, the authors suggest that for effective and efficient practice, education should be specific to rehabilitation and at a minimum, bachelor's level. In the present study, many of the trainees had a background in nursing, not rehabilitation per se. This has possible implications for training and transfer of training in that there may be differences in training people who have lower levels of academic experience, versus those who have

higher levels of qualifications. Additionally, there may be differences in training people who have a background in rehabilitation versus those who have not.

When the trainees were asked about their personal skill level, the three cohorts, on average, reported a significant increase. They incrementally improved their skills throughout the training and continued to increase these up until three months. Certainly, the trainees need a range of skills that were measured but, if they are looked at in the light of Bloom's taxonomy (cf. Eggen & Kauchak, 1992; Sprinthall et al., 1994), they appear to tap the lower levels of knowledge, comprehension and application. In hindsight, a measure specifically targeted to rehabilitation practitioner skills may have been more appropriate (e.g., the *Rehabilitation Skills Inventory* (RSI) (Wright et al., 1987). In their study of rehabilitation practitioners Biggs and colleagues (1995) utilised the RSI and reported four important skill or competency areas were frequently performed by case managers: vocational counselling, personal adjustment counselling, case management and job placement. More recent research by Biggs (1996) presents Australasian normative data for this measure. There are a number of other measurement tools for considering rehabilitation practitioner skills and competencies such as the Rehabilitation Counsellor Task Inventory (Morsh, Madden & Cristal, 1961), Vocational Evaluation Competency Questionnaire (Coffey, 1978), Rehabilitation Profession Job Task Inventory and the Rehabilitation Knowledge Competency Inventory (Beardsley & Rubin, 1988), and the Rehabilitation Task Performance Evaluation Scale (Wright & Fraser, 1975).

The investigation of these more relevant and targeted skills might have provided better insight into the trainees' perceptions of skills needed for work and the skills and competencies they possessed. On the other hand there is some debate in the rehabilitation literature about the merits of a continued research emphasis on the development of competencies measurement tools. Thomas (1987) argues that since the landmark study of Muthard and Salomone (1969), the measurement research in this area has generated findings that "...are interesting but certainly not earth shattering" (p.76). He suggests that a more productive research focus in rehabilitation would be on how to promote persons with disabilities into the wider society, how to better facilitate adjustment to disability, how to effectively use technology in the rehabilitation process, and how to facilitate more positive attitudes to persons with disabilities. Similar comments are

echoed elsewhere (Thomas, 1993; Emener, 1993) although Emener (1993) argues that the identification of relevant competencies is an important aspect of any accreditation or credentialing process. While these might establish a benchmark or a standard for the profession, they are only there to ensure that the consumers of the service get the service they need.

Notwithstanding the problems in the measurement and conceptualisation of 'skills' in the research reported herein, a case can nevertheless be made for a continuing emphasis on practitioner competency research in rehabilitation. Chinnery (1991) argues that the 'newer' occupational positions in rehabilitation such as 'case manager' are symptomatic of the "...birth of the 'rehabilitation generalist' or 'rehabilitationist' who has an elementary understanding of everything..." (p.446) which actually amounts to a process of deskilling. She argues that the process of role definition and identification of relevant competencies is critical if the profession is to avoid problems of role conflict and role strain. In this way, rehabilitation agencies and educators can ensure that professional competencies are matched to local and changing environments.

Biggs et al., (1995) also emphasise that the identification of key competencies for rehabilitation service provision can serve as a useful guide for the development of future training initiatives to ensure that relevant competencies are targeted. More recent research (Atkinson, 1997; Edwards, 1999; Ford, 1997) has focussed on identifying professional competencies among persons involved in rehabilitation organisations at a managerial level. The importance of systematically identifying and classifying career relevant competencies has also been acknowledged in contexts other than rehabilitation (e.g., Defillipi & Arthur, 1994; Hackett, Betz & Doty 1985).

8.1.4 Question 4. Were organisational and personal changes brought about by the training?

The purpose for any training programme is to bring about changes in individuals by developing their knowledge, skills and abilities which, when applied in the workplace will improve their job performance and ultimately, organisational performance. The results of the question regarding organisational and personal changes suggest that the training was unsuccessful in meeting its purpose.

Prior to training, trainees had expectations that the training would bring about changes in themselves and in the organisation. Areas of personal changes included job satisfaction; job commitment; attitude to change; quality of managerial performance; interpersonal skill development and, time management. Over time Cohort 2 and 4 reported that personal changes were not affected by the training though there were changes for Cohort 3. The results of the analysis show that the training brought about less personal change than was initially anticipated.

Similarly, in the area of organisational change, (understanding of the organisation's regulations, legal and ethical requirements; awareness and acceptance of organisational policies; and staff turnover), pre-training expectations were not fulfilled. As time elapsed the trainees in Cohort 3 were less assured that the training was contributing to organisational changes in the areas surveyed.

The majority of the trainees were relatively long serving employees (see Table 15) having been employed by the organisation for more than two years. As such they possibly would have formed opinions about their place in the organisation and the organisation itself. It may have been that the trainees were motivated to attend the training with expectations that there would be broad personal and organisational outcomes as a result of the training. Certainly, as discussed in Chapter 2, ACC senior management had expectations that the training programme would bring about a myriad of benefits and that the newly trained case managers would be the driving force behind the organisational changes. A closer examination of the perceived benefits (see 2.1) show that they may have been unrealistic.

It appears the trainees' expectations for personal and organisational changes were unmet and they also may have been unrealistic. Once the trainees were had been back at work for three months they viewed the features of the organisation in a different, less optimistic light. Perhaps with an increased awareness of rehabilitation and their new knowledge, skills attitudes and abilities, the trainees became more critical and less able to accept certain workplace features such as the relentless processing of claims and the lack of opportunity to continually apply their rehabilitation practitioner skills.

The trainees expressed disappointment, frustration and dissatisfaction at not being able to practice rehabilitation effectively (p.186). As Table 21 shows they reported that they had tried to make changes in the way they practised case management. Their responses indicated that these attempts at change were directed towards comprehensive, holistic rehabilitation of their clients taking into account their medical, social, vocational and financial needs. Further, they reported trying to manage their time more efficiently although the workload and environment made this difficult. It seems from their self-reports that the trainees had tried to make changes in the workplace but the impact on the organisational and themselves was not to their satisfaction.

The lack of perceived organisational change observed in this study has a number of potential implications. A recurring theme in the limited research in this context is the perception by rehabilitation professionals that the communication and administration processes within the employing agency are major 'agency created' problems which contribute significantly to feelings of stress and dissatisfaction (Katz, Geckle, Goldstein, & Eichenmuller, 1990; Maslach & Florian, 1988). This theme is echoed in New Zealand research on rehabilitation workers (Flett & Biggs, 1992). Flett, Biggs & Alpass (1995) noted that some 35% of their sample of rehabilitation professionals reported intra-agency difficulties (including problems dealing with committees, dealing with intra-agency politics and personality clashes, a lack of organisation, management and direction within the employing agency) as major sources of job stress and dissatisfaction.

Similar findings of stress and dissatisfaction have emerged from other studies (e.g., Handy, 1991; Jones, Fletcher & Ibbetson, 1991; O'Driscoll & Schubert, 1988). This appears to reflect a more general trend. Inkson and Patterson (1993), in a review of research on organisational behaviour in New Zealand, indicated that "...the frequency with which interpersonal relations and communication, two sources of stress, were cited as important problems within New Zealand organisations which suggests that researchers could pay more attention to these and other problem areas" (p.62). So it would seem that more attention needs to be given to issues of communication and interpersonal relationships in the organisational environment within which any training efforts might be embedded in order to maximise at least the potential for learning and transfer.

8.1.5 Question 5. To what extent did behaviour change, as a result of training, impact on the trainees' workplace at the individual and organisational levels?

The trainees reported some behavioural changes such as taking time to complete initial assessments, building rapport with clients, listening more and involving clients' whanau, developing relationships with employers, treatment and service providers, and explaining relevant legislation to clients. These new ways of working impacted on the trainees' workplace in that they affected clients, colleagues, stakeholders and the way in which they managed their caseload. The trainees reported the most frequent changes, at three months post-training, were that they were more client focused rather than 'case' or 'file' focused. They reported that they were more aware of the implications and the significance of injury on the clients' lives and more empathetic towards their clients.

However, it is difficult to judge if this awareness and the changes impacted on the clients to any degree. Clearly, for an alternative viewpoint and validation of the trainees' data, the perceptions of a client group of participants in the research would have been beneficial. As discussed in section 1.2, the Privacy Act (1993) prevented the participation of this group. Other researchers have noted the importance of the service consumers' perspective (e.g., Lysack & Kaufert, 1999) in the development of appropriate rehabilitation services. Comtois et al., (1998) note that client vs. service provider consensus may not always be necessary here but the service provider needs to be aware of the differing relational expectations and the need to listen to the client's point of view more carefully.

Kenny (1998) reports some Australian data looking at "...key stakeholder perceptions of the role of rehabilitation providers..." (p.111). Around two-thirds of these workers were satisfied with the service they had received from the rehabilitation provider. The main concerns of injured workers were the rehabilitation providers' lack of knowledge of the demands of particular workplaces, the problems associated with particular injuries and the pressure on rehabilitation providers from employers and insurers to return the injured person to work. Employers has a reasonably positive view of the effectiveness of rehabilitation providers but treating doctors were generally hostile to rehabilitation providers as a group, claiming they were unprofessional, inexperienced and poorly trained.

Clearly, there is an issue about service providers having to serve multiple masters (injured worker, employer, insurer, medical service provider). Kenny argues "...the current practice arrangements for rehabilitation providers are problematic and need to be addressed at the pre-practice training, systemic and policy levels. Clear guidelines for each stakeholder, and clear definition of roles and responsibilities must also be formulated and / or negotiated on an individual basis to mitigate the competing forces that appear to be operating within the current system, that serve to undermine the common goals [of rehabilitation]" (p.121).

As well as the reporting that their clients were affected by the training, the trainees perceived that their colleagues too were affected both positively and negatively. On the positive note, the trainees perceived that the training had engendered a collegial spirit between the trainees and those who had not undertaken the course. The trainees reported that they had assumed a more active, co-operative, collaborative profile in the workplace and were willing to assist their colleagues. Some trainees suggested that they had become resource people who were able to provide advice and show new ways of practice.

On a negative note, the trainees also reported that the training had caused tension between those who had gone to training and those who remained in the branches. During the training period the trainees' absence from the branches meant reduction in staff and an increase in work for those who remained. This caused some resentment and disruption to the colleagues who were inconvenienced by having to carry an additional workload yet were not recompensed.

Greater effectiveness of the training appears to have been stymied by time constraints and the negative and sometimes cavalier attitude of management. With the reported high workload and negativity of some middle management, the trainees were unable to effect changes as often as they had expected.

8.1.6 Questions 6 and 7. Over time, to what extent were the training modules understood by the trainees and to what extent were the training modules useful?

As Table 26 shows, there were increases in their understanding of the course content over time from the time the trainees began training to six months after training. Baldwin and

Ford (1988) contend that for training to transfer learning has to take place: the training content must be learned and retained. Therefore, retention may be a hallmark of training. The present thesis research adopted a relatively simplistic approach to quantifying these notions of 'learning' and 'retention' by simply asking about increases in 'understanding' of course content. Clearly there are more effective strategies for testing job knowledge. Felker and Rose (1997) emphasise that these sorts of tests can be developed to cover a representative and generalisable sample of work tasks and are generally of two types: work sample tests and performance-based job knowledge tests. However, other writers have noted some of the difficulties inherent in defining case manager 'performance' in the context of rehabilitation (e.g., Collinson, Flett, Handy, Brook, & Alpass, in press; Cook & Bolton, 1992; Dunn, 1990; Thomas, 1990) where indices of performance are often narrow and circumscribed (e.g., case closure rates, case service costs) and do not adequately reflect the range of job activities that constitute the role of case manager.

For Cohorts 2 and 4, on average, there were increases in understanding of the modules during the training but the post-training levels were not sustained. At six months after the training was completed, understanding was not as high as it had been when the training finished. However, understanding of the modules was significantly higher than it was at pre-training.

For Cohort 3, on average, there were increments in understanding from pre-training to six months and the significance in understanding was during the training programme. These pre-training to post-training results are unsurprising given that the training was designed to bring about changes in individuals' understanding. Furthermore, with relatively small groups of trainees, a "dedicated" team of tutors, and adequate resourcing the conditions for training appeared to be optimal.

The downward trend of module understanding from the end of training to six months later is of concern. The decay in understanding the modules may be attributed to the content of the course (see 2.3.1.) which was designed ostensibly to meet the organisation's needs and those of the university. The entire programme, designed specifically for ACC, was also required to meet the demands of a post-graduate university course of study. It was

designed by the training provider in consultation with senior members of ACC head office and seems unlikely that case managers or PCMs were consulted.

Studies by Axtell et al., (1997), Goldstein (1986); Mathieu et al., (1992) found that trainees' perception of the relevance of training content is a key variable in determining the level of transfer of training. In the present case, this was not so. Two modules, in particular, developing a practicum learning contract and research design and methodology may be seen as more relevant to the academic programme and not part of the day-to-day work of a case manager. Because of the relevance of these two modules for an academic course of instruction and a scientist-practitioner model of professional practice, there was possibly no opportunity for implementation of the modules once the trainees were settled back into their roles as case managers. Opportunity to perform trained tasks on the job is important for reinforcement of learning and is also highly relevant to transfer (Baldwin & Ford, 1988; Ford et al., 1992; Goldstein, 1986; Wexley & Latham, 1991). Therefore, without opportunity to implement those modules in the work context there would not have been any reinforcement of the understanding in those areas.

The trainees supposedly acquired new skills, knowledge abilities and attitudes as a result of the training programme, one that was credited as a post-graduate qualification. As the educational qualifications for the majority of the trainees, prior to the training, were below under-graduate level (see Table 14) and contrary to the stated pre-requisite for course attendance, the learning acquisition is creditable to the trainees and the training provider. Given that the course was at post-graduate level, the ability component of trainability was an important trainee characteristic.

Roe (1997) points out there are no strong links between training and learning neither are there strong links between training and job performance. However, to strengthen the link, the course content needs to be understood and applicable in the workplace. In other words, not only must the training material be understood, but as Goldstein (1991) suggests it must be relevant to the job. In the present case the link between the understanding and relevancy of the training were tenuous. For all cohorts the ratings of module relevancy increased during training. While the trainees were away from the workplace and in the training environment they perceived that the training content would

be useful once they were had returned to full-time work. However, this was not the case. At six-months post-training the three cohorts reported the modules to have less relevancy to their work than they reported at the end of training. With such decay in their perceptions of relevancy, one conclusion might be that the modules were not fully germane to the job of a case manager or case management as it is practised in ACC.

It may be, nonetheless, that the training modules were linked to more distal organisational goals of fewer case files and reduced workloads. But, in the current work environment with high numbers of case files to manage and staff shortages, an ideal approach to case management, as taught in the training programme, could not be fully implemented. It is unclear if a training needs analysis (cf. McGehee & Thayer, 1961) was undertaken prior to development of a training programme. The importance of conducting a thorough training needs analysis, incorporating an organisational, task and person analysis, is well documented in the training literature (e.g., Goldstein, 1993; Latham, 1988; O'Driscoll & Taylor, 1992; Saari, Johnson, McLaughlin & Zimmerle, 1988; Tannenbaum & Yukl, 1992). Saari et al., found that less than 65% of the 611 organisations in their sample conducted any form of needs assessment prior to training. Some New Zealand data (O'Driscoll & Taylor, 1992) showed that 69% of their sample of human resource directors indicated that needs assessment for managerial training occurred within their organisations. However, 51% of those suggested that the assessment was ad hoc and informal. Clearly, many organisations do not undertake a systematic approach to training needs analysis. Yet, by conducting a thorough needs analysis before the training programme, the relevance of the course content would be increased. Management could signal the organisation's expectations for the trainees to use their training and ratify the importance and the relevancy of the training content.

That the training content was understood and became increasingly irrelevant over time may be attributed to the actual and ideal conditions of the workplace. Whereas the training focused on teaching the trainees case management strategies for medical, social and vocational rehabilitation, the realities of the workplace do not appear to accommodate such practice to the trainees' satisfaction. Mathieu et al., (1993) suggest that an organisational analysis should examine the constraints such as the availability of resources so that they can be minimised or eliminated. High caseloads and staff

shortages, middle management's indifferent attitudes and limited resources obstructed the implementation of holistic rehabilitation to a high degree in the present case.

A further explanation might be focused on the location of the training. Analoui (1993) argues that for maximum learning and transfer to occur, training for socially complex jobs should occur on the job and as was noted in 2.2 the job of a rehabilitation practitioner is complex and demanding. In the present case, the training of rehabilitation concepts and case management practices was carried out, in part, away from the workplace. The training consisted of a combination of social skills learning (e.g., interpersonal skill development) and technical learning (e.g., vocational, medical knowledge, legal and ethical requirements) processes. The training was located off-the-job for 13 weeks and during the practicum component, a 14 week period of supervised practice, on-the-job.

According to the US Department of Labor (1997) the most effective training is that which takes place on the job or in a job-like setting. An analysis of case studies pointed to consistent factors regarding the effectiveness of training. Their research showed that training is most effective when it takes place on the job or in a job-like setting and that the more training is linked to work, the better the result for transfer. They further indicated that training received from an employer was also considerably more likely to be used on the job than was training obtained at a college, university etc. They suggest that skills are often easier to learn when they are integrated into a training program that is specific to the context of a particular job. Other writers have developed similar themes. Ostenk (1995) argues for the notion of on-the-job learning (as an alternative to training) and points out that jobs themselves can be designed and managed so that employees learn and develop competence as they work, which then reduces the frequency and imposition of training. On-the-job learning is structured by the work activity itself so the work venue becomes the learning environment.

As the above discussion illustrates, learning may have occurred during the training, therefore there was the probability of improved work performance (Landy, 1989) and transfer of training was feasible. Nevertheless, as Goldstein (1994) succinctly remarked,

learning may be a necessary but not a sufficient condition for transfer. One of the other conditions for transfer is relevance: the training material needs to be useful and, in the present case, it seems that overall as time went on the trainees perceived the course content to be less relevant to their day-to-day work as case managers.

8.1.7 Question 8. What, if any, workplace characteristics facilitated transfer of training in the organisation?

In previous studies, organisational support (e.g., Ford et al., 1992; Huczynski & Lewis, 1980; McSherry & Taylor, 1994; Xiao, 1996) and organisational transfer climate (Rouiller & Goldstein, 1993; Tracey et al., 1995) have been found to be related to the application of training to performance in the workplace to at least some degree. Hutchison and Garstka (1996) conceptualise organisational support as “any action taken by the organisation or its representatives that indicates a concern for the wellbeing of its employees would result in a perception of support from the organisation” (p.1351). Organisational support for training and transfer therefore may originate from a number of sources, e.g., senior management, supervisors, colleagues. Xiao (1995) found that supervisory and peer support were influential in post-training behaviour. The supervisors helped by setting goals and criteria for applying the training to the job, providing assistance and giving feedback. Peer support was by way of help and care.

Rouiller and Goldstein (1993) defined organisational transfer climate as “situations and consequences that either inhibit or help to facilitate the transfer of what has been learned in training into the job” (p.379). The two dimensions of transfer climate, situational cues (goal, social, task and self-control cues) and consequences (positive feedback, negative feedback, punishment, no feedback) were found to be significantly related to transfer behaviour.

These studies show that various training related cues such as reminders to use the training, goal setting, feedback and attention from others in the workplace, through their presence or absence, can facilitate or hinder trainees in their efforts to transfer the newly acquired knowledge and skills.

However, the results of the present study show that support, organisational climate and the usefulness of the modules, did not facilitate the transfer of training. This result is similar to that of Fleishman (1953) and Axtell et al., (1996). In one of the earliest studies Fleishman found through interviews with a sample of manufacturing foremen that the effects of a leadership training programme had decayed because supervisors were not supportive of the goals of the training programme

It may be that it is more difficult for supervisors to support training in areas relating to human relationships than it is for them to support the training of physical, technical processes e.g., Xiao (1995). Ensuring that a technical skill is carried out correctly may be much easier to supervise and support because the skill becomes a consistent and routine procedure. However, supervisors attempting to reinforce training in interpersonal and managerial strategies are faced with issues not only concerning the training but their relationship with the trainee and consequently the trainees' relationships with their clients.

It becomes clear that the supervisory relationship and the ways in which trainees learn how to exhibit the transfer of training involve complex issues about how the trainees relate to the supervisor and vice versa. This may impact on how the trainees relate to their clients and how their clients relate to them. Where the supervisor is not familiar with the training it seems unlikely that they would have the skills and knowledge to support the newly trained. Without the necessary supervisory skills and knowledge to support their new role, trainee supervision and support would be difficult and transfer is likely to be compromised.

Haccoun (1997) provides an interesting perspective when he talks about training for transfer in organisations. He observes a tension between organisational stability and harmony that is maintained by a predictable environment and the need for adaptive training to meet future changes. These changes require new behaviours which themselves create dis-ease in an organisation which relies on its workers to behave in a predictable manner. Training challenges employee comfort zones and may be "counter-cultural" (Haccoun, 1997, p.341). That is, the training and its transfer may be seen to disrupt the familiar environment and be seen as an antithesis of accepted workplace practice.

Furthermore, it may be that in an organisation in which there is transition in only one section or department, others within that same organisations may react negatively. This negativity may manifest itself through lack of support or even overt hostility. This may occur primarily because of a lack of understanding of the change and its significance. Any change that is not fully understood may be perceived as an abhorrence, threat or challenge to the stability of the organisation by those who are unaware or ill informed of the purpose of the training. Haccoun (1997) goes further to state "Transfer may have to occur in spite of the organisation!" (p.341). With that in mind, it may be that trainees need to be inoculated against transfer failure by the trainers.

According to Yelon's MASS model (see 4.3.3) the responsibility for training transfer rests with the trainers who are required to create a supportive environment for the trainees once they are back in the workplace, as well as motivating and teaching the relevant skills etc. In becoming "performance technologists" (Yelon, 1992), the trainers are required to give trainees both psychological and physical support on the job. The trainees in the present evaluation indicated that there was a lack of support for them once they were back in the workplace. However, there are several factors that might have mitigated against further trainer involvement. For example, the cyclical scheduling of the training programmes for the four cohorts suggests that the trainers were fully engaged in teaching the programme and would not have been available to those who had completed their 'cycle'. The trainees were spread throughout the country so the logistics (and expense) of further supervised practice after training by the trainers might have deterred further trainer involvement. Therefore, the feasibility of such psychological and physical support that Yelon advocates was unlikely in this case.

Notwithstanding the non-significance of the workplace characteristics in the present study, it may be useful in future for organisations to prepare, not only trainees, but the supervisors and colleagues to accommodate and integrate the trainees and their training. Much has been written elsewhere about the provision of support from within an organisational framework. Senge (1992) states that best and most capable learners / trainees need to be the leaders in the organisation and be responsible for the learning of others. Kelley and Satcher (1992) suggest strategies such as: attending to 'belonging needs' of personnel (via regular staff meetings and social activity), providing appraisal

support (recognition, opportunities for professional development and growth, regular supervision), providing self esteem support (via participation in decision-making) and, simply asking staff about their support needs. Other research (e.g., Patterson & Fabian, 1992) suggests that the provision of mentoring relationships that focus on personal and career development within the organisation can be seen as an important form of support. A study by Olivero, Bane and Kopelman (1997) looked at a form of one-on-one coaching as a means of increasing gains associated with training. A group of managers underwent a managerial training programme followed of eight weeks of one-on-one executive coaching. Coaching included a range of activities such as supervisory involvement, goal setting, problem solving, practice, feedback and the coaching group showed a significantly greater gain compared to training alone.

8.1.8 Question 9. What, if any, workplace characteristics inhibited transfer of training in the organisation?

At the time of the present evaluation research the organisation was facing repeated restructuring, (e.g., restructuring of client base systems, merging of offices, disestablishment of regional offices) and head office personnel, as well as driving these changes, were distracted with other matters (e.g., changes in Minister, litigation brought against the current and previous managing directors in separate fraud cases). There was high turnover throughout the organisation and in one branch the principal case manager told the researcher that they had experienced an 80% turnover in 1985. Thus, there were many factors in the work environment, which, either through their presence or absence, presented strong forces that might have inhibited effective transfer of training.

The results show that the trainees' perceptions of the organisational climate, their perceptions of the relevancy of the training modules and the perceived barriers were at best weakly related to transfer of training into the organisation. The workplace characteristics therefore impacted on the transfer of training in a less than favourable way although, given the overall size of the effect, one must be cautious about over-interpreting this result

Given that other writers have emphasised the pivotal role of climate in facilitating transfer of training (e.g., Tracey et al., 1995; Warr, Allan & Birdi, 1999) then this raises the

question of why such an effect was not demonstrated in the present study. One possible explanation centres round issues of measurement. The present study utilised a generic measure of organisational climate which may have lacked the precision necessary to show the effect. A number of authors have described the development of more specific transfer climate measurement strategies (e.g., Holton, Bates, Seyler & Carvalho 1997; Rouiller & Goldstein, 1993) which may be a more effective approach in future research in the area.

A second explanation centres round the relatively simplistic modelling of climate effects in the present study. Clark, Dobbins and Ladd (1993) showed, via a structural equation modelling approach, that transfer climate affected the anticipated job utility of training (a conceptually similar measure to the module usefulness - relevance measure employed in the present study). Bennet, Lehman and Frost (1999) report findings from a training evaluation that showed that both the transfer climate (and the change / stress climate) predicted training outcome. As noted earlier in this section, the stress / change climate of restructuring and reorganisation was arguably a significant factor impacting on the present research and its ability to show training transfer effects.

An institution faced with multiple external challenges coupled with its existing hierarchical structure is perhaps not the best environment to introduce change without putting systems and structures in place to protect the investment of training. It is easy to understand a situation where the introduction of new concepts, disseminated in a training programme, may be perceived by others as being just another adjustment to be accommodated. This may lead to colleagues downplaying or ignoring transfer efforts that trainees may attempt.

Brinkerhoff and Montesino (1995) found that the trainees whose managers provided pre and post-training interventions showed significantly higher transfer of training. They also found that the trainees held more positive perceptions than those who did not receive management support. Those trainees denied management support reported lower training usage and perceived that there were more environmental forces mitigating against their attempts to transfer.

In sum, the results discussed above show that there are complex relationships between trainee characteristics, training and workplace characteristics and not the relatively simplistic lineal approach as Baldwin and Ford (1988) portray. Notwithstanding a diverse range of conceptual and methodological problems associated with this research, explored later in this discussion, the general picture that emerges thus far is of a training programme that appeared to make relatively little substantive long term difference to the individuals who participated, or to the workplace to which they returned after training.

This failure to maintain training effects is not an uncommon outcome in the research literature on training of human service providers – positive pre-test-post-test training effects often occur (e.g., Corrigan, McCracken, Edwards, Kommana & Simpatico, 1997; Fish, Izzo, Vreeburg & Growick, 1997; Schonfeld et al., 1999). However, there is less consistency in the extent to which these sorts of positive training effects are maintained at follow-up (e.g., Baker, 1998; Moniz-Cook et al., 1998).

In an attempt to further unpack and understand these findings the following sections present a reflective account of the evaluation research process and the researchers role in that process. Some of the limitations of the research are highlighted and are anchored in a broader context of empirical research and theorising in the area. The aim here is to provide some insights into how research in the area might best move forward.

8.2 Some Researcher Reflections on General Research Design and Data Collection Problems

The present study was comprehensive in the range of data collected, was relatively longitudinal in nature and was extensive in the analyses undertaken. The number of participants available for the study was small (which raises issues of statistical power) and it was not possible to obtain a larger sample. Four cohorts of trainees attended the training programme before it was dis-established.

Nevertheless there were other factors over which the researcher did have control. One factor may have been the number of surveys the trainees were asked to complete and the timing of the measures. Instead of administering five surveys (pre-training, mid-training,

immediately post-training, three months post-training, and six months post-training) it may have been prudent to survey the trainees at three points in time (pre-training, post-training and six months post training). Other researchers have pointed out difficulties associated with assessing trainees' during training. Ghodsian, Bjork and Benjamin (1997) suggest that performance during training is often a less than reliable index of post-training performance and there is often considerable variability in the relation between mid-training and post-training performance.

The timing and choices of measures used in the present evaluation were less than ideal in terms of traditional pre-vs. post-test design. The following variations occurred in the data collection: (1) some measures were collected pre-training and were never collected again; (2) some measures were collected at post-training that had not been collected at pre-training; and (3) there was variability in the extent to which measures collected at follow-up, had been measured at any point during the training process. In retrospect, it is evident that these variabilities created limitations in the evaluation research that could have been overcome through more systematic research design. It was problematic, however, given the design and the demands of the training evaluation to achieve a balanced experiment in the usual sense.

The decision to measure at five points in time was somewhat distracting and perhaps obfuscated the most salient of measures and the timing of them. The evaluation research was a multi-demand process. It encompassed (1) five points of data collection for each of the four cohorts (pilot study and main study), (2) data collection from the supervisors for each cohort, (3) data collection from a control group (twice), albeit unsatisfactorily (4) interviews with some principal case managers and (5) the writing of three monthly formative reports and (6) a summative report.

Clearly, the extent of the data collection was very demanding and perhaps too ambitious as it turned out. In hindsight it would have been better to restrict the number of data collection points to three instead of five.

This following section presents a critical self-analysis related to the limitations of the findings in the context of organisational learning.

8.3 Some Researcher Reflections on Research Design and Implementation Problems and their Implications within the Organisational Learning Context

8.3.1 The evaluation research

Evaluation research does not occur in a vacuum; it is highly contextualised occurring within a framework of social, political, contractual and intellectual processes. Each of these processes can present opportunities or threats for the various parties involved. It is not just features of those processes that can stymie the research's effectiveness: the researcher too can play an inhibiting role. In presenting a critical self-analysis, the writer acknowledges her role and this is discussed below. From the outset, the development and progression of the present evaluation research called for decision-making and value judgements - just as evaluation itself involves making judgements. Sharp (1994) notes decision-making involves choosing from competing values and purposes and the researcher's approach is influenced by their theoretical understandings and preferences.

One of the early considerations in the evaluation research was the feasibility of a potentially difficult evaluation study. The tight timeframes, resource constraints and political issues gave cause for consideration. The nature of the constraints and issues, outlined in Chapters 1 and 2, may typify the tightrope of rigor, relevance and ethics that organisational researchers tread or alternatively, regard as impassable or counterproductive to the process and outcome. Buchan, Boddy and McCalman (1988) note that trepidation about theoretical and methodological concerns is "disabling; the researcher who strives to tie up loose theoretical ends and firmly tighten the nuts and bolts of the methodology is more likely never to begin research" (p.54). With such counsel and with the support and encouragement of senior academics, the evaluation research was advanced.

The face-to-face questionnaire administrations at each data collection point provided a chance for the trainees and the researcher to engage in dialogue, develop a research rapport and for the evaluator to provide feedback to the trainees. Notwithstanding, frequent dialogue between a researcher and participants does not in itself guarantee that participants will be open and honest in their discourse. In Dixon's terms they would not necessarily make their private meaning structures accessible. In this case, because their

employer funded the research and because it was carried out in work time, albeit training time, the trainees may have perceived themselves to be in a power-based situation. Argyris (1999) cautions that research in a field setting tends to place the participant-researcher relationship in one similar to the superior-subordinate relationship. Sieber and Stanley (1988) discuss the ethical dimensions of research in organisational settings and, in a similar vein to Argyris, note that some aspects of the research process may "...cause harm as a result of the power of the institution in which it occurs and the relative powerlessness of the person(s) affected" (p.52). They point out research in corporate settings is often done by an academic who is more attuned to "...the scientific norms of academia than to the values of the corporation" (p.18) and suggest that this may create a number of points of potential conflict between researcher and researched. For example, release of the findings of the research may have commercial and financial implications for the corporation; and the publication of the findings may impact negatively on the standing of the organisation with its customers, clients or employees. The organisation may make recruitment and personnel decisions based on data obtained from research respondents with a well-intentioned promise of confidentiality. Therefore, with that in mind, it became very important to the researcher to create an environment that valued interpersonal openness and honesty in order to overcome any anxiety and that the environment would support meaningful dialogue.

At a more general level, issues of politics and power have a number of implications in terms of training effectiveness and transfer that were not empirically addressed in this thesis research. In complex organisations there are multiple competing constituencies and in an attempt to deal with such diverse constituencies, the design, implementation and evaluation of training may often stray from what is ideal or rational (Dipboye, 1997). Kerr (1975) notes "the last thing many desire is a formal, systematic and revealing evaluation. Although members of top management may hope for such systematic evaluation, their reward systems continue to reward ignorance in this area" (p.84).

At another level training programmes can have a certain symbolic function that both communicates aspects of the organisational culture to the employees and manages impressions that outsiders may have of the organisation. Dipboye (1997) elaborates on these themes and suggests that the sorts of images that the organisation seeks to convey

via training can include the idea that 'quality and customer service are our primary goals', 'the employee is our most important asset, and 'management is in control and taking rational steps to solve our problems'. The net result can be training that succeeds in "...binding together the organisation, firing the imagination, and deepening the beliefs of the participants.... [but becomes] a substitute for real action and effectively blocks innovation and change" (Dipboye, 1997, p.51-52). Training programmes are an important expression of organisational (and cultural) values but sometimes that may be all that they are and the relevant knowledge, skills and abilities may become lost in the symbolism.

Just as training programmes can have a certain symbolic function so too can evaluation research (e.g., Pollit, 1997) and the under-utilisation of evaluation results is a well-known phenomenon (Chemlinski, 1985; Cousins & Leithwood, 1986; Scriven, 1993; Weiss, 1972).

The evaluation research incorporated regular written and oral reporting in an attempt to counter the potential under-utilisation and symbolism of the evaluation research. Cousins and Leithwood's (1986) suggest special efforts need to be made so that the various parties might read, understand the findings of the commissioned evaluation studies and act upon them. As noted earlier in this thesis (4.1.2), their argument is that many evaluations generate evaluation reports that are seldom read or acted upon. This highlights the importance of both formative evaluation (progress report that informs the commissioning agents of the research as it happens and thus generates data that can be more immediately fed back into the organisation or the programme) and summative evaluation (final report). To this end, eight three-monthly formative evaluation reports and the summative evaluation (Collinson & Brook 1997) were designed to generate information for groups of stakeholders (viz., management of ACC, trainees and the training provider). They were made available to the branches via the regional offices.

So that any ambiguity and misunderstandings arising from the reports could be clarified, meetings were held with the ACC project managers. This effort gives acknowledgement to Leeuw and Sonnichsen's (1994) suggestion that to optimise organisational learning, an environment should be created that advocates the expedient performance of evaluations

and the potential utilisation of the results. This type of multifaceted feedback was designed to engage the key stakeholders in the process and the outcome of the research. Whether this actually happened is unclear – the individual reports of post training changes in the organisation and workplace would suggest that the environment was not one that would “optimise organisational learning”.

8.3.2.Limited stakeholder involvement

From its earliest beginnings, the design of the evaluation was accepted by ACC as appropriate. However, the only stakeholders involved in the initial discussions were the core of senior managers at ACC Head Office who commissioned and funded the project and the present researcher and supervisor. Ideally, agreement between the various interest groups (organisation members including human resource managers, project managers involved in the training programme, branch supervisors, case managers, support staff, clients, training providers and evaluators) would have been desirable. A broader-based stakeholder involvement in the research from its conception might have more effectively created the environment that Leeuw and Sonninchen argued would maximise learning and change.

Meeting with the project managers and discussing issues with them was the extent of communication with the ACC senior management during the implementation phase of the study. Within Dixon’s paradigm of organisational learning, the evaluation research falls short. In her definition of organisational learning and in the implementation of the organisational learning cycle, Dixon (1994, 1999) advocates that all stakeholders become involved in the inquiry. From the design through to the implementation, there was limited stakeholder involvement, which weakens and restricts the present evaluation for its use in organisational learning. The evaluation becomes ‘weaker’ in the sense that there may be limited consensus about the importance and significance of various aspects of the training. The evaluation also becomes weaker in the sense that if people are not engaged in the process from the beginning then it may become less relevant when embedded within the daily realities of the workplace.

For all parties to have been collaborative partners throughout the planning stages of the study, the method and the concluding stages of the evaluation including a meta-evaluation, more widespread organisational dialogue would have been necessary. Thus, organisational learning could have been optimised had a clear set of mutually held understandings about the need for the evaluation and the processes involved in the evaluation been determined and agreed upon. Knowing how the evaluation findings might have been utilised may have promoted an environment of trust and collegiality and allowed all stakeholder groups to understand their role in the evaluation. This, possibly, may have led to feelings of security about any change processes that might have eventuated as a result of the findings. Caulley (1993) suggests that management engagement in the evaluation has considerable influence on the outcomes and in the ACC environment management at branch level was of particular importance.

As the training programme was in process the branch managers were particularly affected, as they were responsible for the day-to-day running of the branches. With case managers away from their branch during training this meant that those not in training had to compensate for their colleagues' absence and take on additional workload as allocated by their superiors. The additional workload was not recompensed in any way but it was reported by some principal case managers to create stress to an already stressed group of employees. This caused tension and conflict, in some instances, between the branch managers and the case managers and conflict, in some instances, between the trainees and the non-trainees. The training programme directly impacted on the branches' budgets as, in some cases, the branches had to employ substitute workers who required on-the-job training and salaries.

Prior to the commencement of the evaluation research there appeared to be a lack of understanding of the training and the implications of the training, at different levels of ACC (see Chapter 1). Some of the qualitative findings of this research suggested that, post-training, there was a situation where "...the organisation neither understands disability nor rehabilitation...(it) fails to make any real changes to facilitate practical application of this training" (7.4.5). Another trainee suggested that "...the organisation likes to think that training will lead to service improvement – until it changes organisational and management culture and structure this will not happen".

This issue of 'stakeholder involvement' is clearly important. Quiñones (1997) notes that trainees may be sensitive to the process by which training decisions are arrived at (procedural fairness) and the actual training decisions themselves (distributive fairness). These fairness perceptions have wide ranging implications for job-related performance and attitudes.

From a distributive perspective, fairness is judged in terms of how outcomes are distributed and a number of rules are applied to inform this fairness judgment. (e.g., equity, equality and need) (Dipboye, 1997). When equity norms are dominant, training is seen as an outcome allocated on the basis of qualifications or past experience. This means that training would be seen as unfair if places on the training course were allocated on, for example, some type of affirmative action procedure. When equality norms are dominant then everyone is seen as deserving training regardless of input. When need norms are dominant then fairness of training allocations are judged in terms of the needs of individual employees. Dipboye emphasises that training evaluations can become problematic "...when training is perceived as an outcome and one or more of these distribution norms is salient" (p.44). A predominance of equality and need norms may mean that the organisation is less interested in evaluating training. The salience of equity (or inequity) issues may compromise training evaluations due to differential treatment of the control group back in the workplace (to make up for the lack of training), rivalry between control and training groups, and resentment and irritation in the control group. As indicated in Chapter 2, there did appear to be some equity concerns among members of the organisation centred round the way the training criteria were applied and the inequitable workloads that non trainees had to absorb during the training period.

The major component of procedural justice is "voice" – decisions are seen as fair if employees are able to express their opinion and if rules and procedures are applied consistently. Dipboye (1997) notes that there is a tension between the principle of giving employees a voice and the scientific objectivity that is necessary for an evaluation of training. Often an evaluation needs to be tightly linked to job specifications and performance criteria but in attempting to give voice to participants a situation can arise, colourfully described by Dipboye, where "The use of happy sheets rather than hard data can lead to inaccurate conclusions but allow trainees a voice in the training process"

(p.46). The inclusion of open-ended qualitative responses in this thesis research was a recognition of the importance of allowing 'voice' to trainees and was seen as an adjunct rather than a replacement for 'hard' data collection. In that sense it appeared to be the best methodological compromise.

8.3.3 Potential reactivity to researcher and evaluation project

As discussed above, Argyris cautions of the possibility of the perceptions of a power-based relationship between the researcher and participants. In the present case, the evaluation project was driven 'top-down' not 'bottom-up', commissioned by senior members of the organisation. For this reason the evaluator may have been perceived as representing the interests of higher level management. At a meeting with Cohort 1, for example, a trainee raised the issue of supervisors' involvement in the evaluation research and expressed surprise and anger that the researcher was contacting them for reports on their work behaviour. A number of trainees appeared to share the sentiment by way of applause and mutterings. The researcher drew attention to the Information Sheet (Appendix C2) that had been sent to all the trainees along with the Consent Form. In the event that a participant did not want the supervisor to report on the trainees' behavioural changes post-training, consent could be withdrawn.

Writers have noted that evaluation advisors are usually seen as agents of the managers who hire or supervise them (Sharp, 1994) and need to be aware of their role. There can be reactivity to the researcher and their evaluation project. The literature is less clear on what strategies evaluation advisors might employ to reduce the negative effects of such perceptions.

Given that there was collaboration with a limited section of interested parties and that the evaluation research was driven top down, a research rapport with the trainees and the training provider was essential. This was particularly so in an environment initially averse to the study. Areas of difficulty concerned the researcher's affiliation to another tertiary institution that was separate from the tertiary institution in which the training was provided. Both institutions offer competing rehabilitation training programmes, and as discussed in 2.4, the training provider was overtly resistant to the involvement of the

researcher in the evaluation and to the idea of an independent evaluation. This created an initial climate of tension and mistrust between the researcher and the researched that made initial rapport difficult to establish. During the pilot study members of Cohort 1 queried “Massey University’s right” to their “details” such as names, workplace addresses, performance reviews and academic qualifications. (A list of names and place of work was provided by the ACC project manager but no other data was given.) With such perceptions, it is possible that the trainees in Cohort 1 particularly were resistant to the evaluation project. The evaluation research may have “reinforced the bureaucratic nature of the organisation” in which those with the least power are frequently not consulted and are advised or directed towards certain projects. In this case, there was resistance to the researcher / evaluation which resulted in potential participants being opposed to co-operating in the evaluation project. On this occasion, the trainees (and the control group) could exert their “power” – they could refuse to participate in the evaluation research.

Another area of difficulty concerned the high level of attrition that occurred in the study. The meaning of this was unclear but it may, in part, have been a function of the trainees’ loyalty to the training provider and the trainers’ institution. Unbeknownst to ACC and the researcher, an evaluation in to the “transfer of learnings” was being carried out by a course lecturer and involved Cohort 1 in a qualitative study. The trainees may have chosen to cooperate with those with whom they were familiar.

A third area of difficulty concerned the “mythology” attached to the role of a psychologist in a work setting. Some respondents had a limited understanding of a psychologist in a research (rather than a clinical) role. Consequently they revealed, via informal conversation, some anxieties about the possibility of some implicit mental health assessments occurring as part of the training evaluation.

To develop research rapport the following strategies were adopted by the researcher:

- familiarisation of the work conditions and culture of the organisation through the process of the job analysis. The researcher visited a branch selected by ACC and observed the employees at work and interviewed the principal case managers, and a number of case managers. This was an attempt to gain some first-hand insights

into the day-to-day realities of the role of case manager and an understanding of the practical implications of the background history and development of the organisation.

- usage of language appropriate to case managers. As in most organisations there is a technical vocabulary associated with rehabilitation service delivery that is often tacit knowledge for members of the organisation. To enhance the credibility of the researcher it was clearly, necessary to have an understanding of this “professional language”.
- provision of an appropriate environment for interaction with the trainees that excluded training staff and the organisation’s project managers. Training staff and project managers initially wanted to be present during data collection but the researcher argued that this was inappropriate.
- making the formative evaluation reports accessible.

It is difficult to know the extent to which the above strategies were successful in creating the desired rapport. Nor is it clear whether the hypothesised rapport that was created had any significant implications for the quality of the data that was collected. The importance of establishing ‘trust’ within the research relationship has been noted on other settings (e.g., Baker, Homan, Schonoff, & Kreuter, 1999; Lindsay, 1999). MacGillivray and Nelson (1998) describe a partnership model in mental health research and service delivery that highlights the importance of mutual respect, self-disclosure and trust within the research relationship. How to best go about establishing such rapport is unclear.

Ransdell (1996) offers some relatively simplistic and pragmatic suggestions concerning questionnaire aesthetics, use of return postage, university sponsorship of research (supposedly as a means of inspiring trust in the capabilities of the researcher) and other similar sorts of strategies. Given the uncertainty that exists in the field the strategies described above which were employed in this research for establishing rapport seem reasonable. Future research might consider how best to operationalise the concept of ‘rapport’ within a research setting and how ‘rapport’ might differentially affect data quality, respondent recruitment and retention.

8.3.4 Pilot study

Inherent in the first step of Dixon's learning cycle is the development of a learning culture so that any activity can be a learning experience with the educational implications of self-evaluation and self-correction. To that end, the pilot study arguably contributed to organisational learning in a variety of ways. It was a learning experience that provided the opportunity for ACC management and the training provider to reflect on the content and delivery of the training programme, and to alter, either by exclusion or inclusion, aspects of the programme. This is perhaps illustrated by the fact that the training provider did alter aspects of the training programme as a result of the pilot study but the researcher was not able to access the details of these programme changes.

Information provided by the results of the pilot study indicated some difficulties in the implementation of the training programme that the organisation was able to act upon. For example, as a result of discovering that there were difficulties for some trainees during the practicum period, ACC was able to intervene at branch level to ensure that the trainees had adequate time to pursue their studies. The fact that ACC had discovered as a result of the pilot study that there was this problem in the training, and then intervened to lessen the problem is arguably an example of what Argyris terms single-loop learning. However, as subsequent cohorts reported there continued to be discrepancies between the branches in the ways they accommodated the trainees' study leave.

In the context of evaluation research, where there is often limited opportunity to actually conduct pilot studies because of time and cost constraints the pilot study was successful to a degree. It provided the opportunity for the researcher to similarly reflect on both the content and delivery of the training and the process, the logistics of evaluation. For the evaluator the pilot study allowed some insights into the difficulties (both practical and political) of managing a complex evaluation research project. Notwithstanding, the pilot study should have alerted the researcher to the methodological and measurement issues discussed elsewhere.

8.3.5 Control group

The non-training case managers, potentially a valuable data source, were also stakeholders in the training programme in the sense that they formed the majority of ACC case managers. They were affected by the training programme to a considerable degree by compensating at branch level for the trainees' absence and carrying extra workloads. The comparative and additional information a control group might have provided, could have contributed to the first step of Dixon's learning cycle, the widespread generation of information. The non-training case managers' information could not be integrated into the organisational context. This inevitably limits the comprehensiveness of the training evaluation information. In Dixon's sometimes opaque terminology, the non-training case managers' meaning structures remain private, individually held and inadmissible.

Problems associated with the construction of an appropriate control group for this research have been discussed earlier (7.1.2). Tannenbaum and Woods (1992) suggest that most organisations are unwilling for non-trainees to be available for a control group and data collection. Brinkerhoff (1989) notes that randomly assigning people to a control group can create resentment and be de-moralising for those who requested or need training but were disallowed. The difficulties encountered by the researcher in accessing the control group and the non-response of the majority of case managers selected for the control group were discussed by the researcher with the ACC training and evaluation project manager. The project manager discussed the very slow and low response rate with senior members of the organisation and inquiries were made at regional level then filtered down to branch level. This necessitated internal inquiries within branches. One reason for the non-response was that case managers had not been recipients of the information sheets, consent forms and questionnaires despite the personal address, albeit at the workplace.

Standard and acceptable practice for ACC office staff was to open, prioritise or cull all incoming mail. Seemingly, at some branches the evaluation documentation was trashed. Where admission to this practice was made, a copy of the documentation was re-sent with a "Private and Confidential" stamp on the envelope. The investigation took time (i.e., weeks), important to the evaluation and affected the synchronicity of data collection and reporting. Because participation was not directly work-related it was regarded by non-

trainees as a low priority and an add-on to an already heavy workload for which they would not receive any personal acknowledgement from ACC.

Managing and prioritising incoming mail by office staff can be seen to be instrumental in creating a breakdown in communication threatening, in this case, organisational learning. In a bureaucratic system, chains of communication are only as good as the weakest link and, perhaps ironically, on this occasion those with the least power in the organisation held the control of information dissemination. Information was commandeered at the earliest point of entry. One can only speculate on what other information does not trickle upwards.

8.3.6 Lack of observational data

What was learned through informal discussions with organisation members about the training programme's impact on the organisation and the potential problems in implementation, was attendant to the research but it is not embodied in the present thesis in a systematic fashion. The ethical issues associated with publication of informal conversational data in the thesis are difficult to assess. "Informed consent" was obtained from the participants in the evaluation with the explicit considerations of anonymity and confidentiality with regard to the data obtained in the surveys. However, the valuable information gathered more informally from the participants raises issues about the limits of 'informed consent'. For example: Can this sort of information be reported with appropriate identifiers removed without seeking further approval from the respondents? Should additional informed consents be gained prior to the reporting of informal data?

The ethics of this type of 'fieldwork' have been considered in detail elsewhere (e.g. Simons, 1984; Smith, 1980). Simons (1984) suggests "Confidentiality is necessary to protect individuals from inappropriate use of information which is private to them. Rules of access and consultation give individuals opportunities to decide what to share, to reflect on what they have shared, to edit or comment upon their information in context; to control in other words, the use of their own information" (p.88). The present thesis research had clearly defined guarantees of confidentiality, and certainly in using informally gathered sources of information these confidentiality guarantees, at least in

theory, can be maintained. The basic issue concerns the extent to which this is a reasonable thing to do without seeking permission of participants. Thompson (1992) suggests that as an evaluator one must "...walk the fine line between what is public and what is private".

The evaluator is often in a position of being able to report controversial and sometimes intimate data to an audience who has considerable investment in what is being evaluated. The removal of names and other identifiers from informally collected data may not always guarantee anonymity and confidentiality because, as Thompson notes, "...the audience's knowledge of the scene would lead, just by inference, to their recognition of people and places no matter how they were disguised. Thus, the evaluator is faced with a number of problems...[including] reporting in such a way that the private lives of participants are not exposed to public scrutiny and judged as part of the evaluation".

Notwithstanding the issues raised above, it seems reasonable to point out that the most common themes in the informal feedback to the researcher centred round issues of resentment and frustration. Respondents reported resentment at the poorly specified and inconsistently applied criteria used for training selection (a procedural justice issue noted earlier) and at having to carry extra workloads with no recognition or reward in an already understaffed context. They also reported frustration at the general lack of managerial support consistency, and understanding.

So, at a more general level, the availability of this sort of informal data or "privileged communication" (Matheson, Bruce & Beauchamp, 1974, p.198) meant that what Dixon (1994, 1999) refers to as "private meaning structures" had effectively become "accessible meaning structures" to the researcher. Or, in Argyris' terms, the "undiscussable discussable". In both practical and ethical terms the ways in which this sort of information might be incorporated into the "collective meaning structures" of the organisation, is not clear. Dixon suggests that this transition of information and knowledge from 'individual' to 'accessible' to 'collective' is part of the process of organisational learning. This relatively abstract conceptualisation of organisational learning tends to view 'the organisation' in homogenous terms and fails to recognise the diverse realities and multiple competing constituencies that exist within the organisation.

In the same vein, this approach does not recognise that these groupings may seldom be 'going in the same direction at the same time' in an organisational sense, or indeed, any other sense. This issue was noted earlier as being one of the overarching concerns faced by training programme evaluators.

8.3.6.1 Further ethical considerations

Every effort was taken to uphold the major ethical principles of informed consent, confidentiality, minimising of harm, truthfulness and social sensitivity. The present evaluation was carried out with regard to the 1986 Codes of Ethics published by the New Zealand Psychological Society Inc. and the Code of Ethical Conduct for Research and Teaching Involving Human Subjects, Massey University and upheld the Australasian Evaluation Society Inc., Guidelines for the Ethical Conduct of Evaluations (A.E.S., 1998). However, the issue of voluntary participation provided a difficulty.

A guiding ethical principle of the Guidelines (A.E.S, 1998) states that in conducting an evaluation, "The evaluation should be designed, conducted and reported in a manner that respects the rights, privacy, dignity and entitlements of those affected by and contributing to the evaluation" (p.4). Obtaining informed consent, with its inherent right to decline to participate in research and right to withdraw from the study at any time, is one guideline conducive to upholding the principle, which proved difficult in the present evaluation.

During the pilot study, of the 40 trainees enrolled in the training programme, 27 participants consented to being part of the evaluation research. At six months after training, nine remained in the study. Clearly, at the outset, some of the trainees had exercised their right not to participate in the research while those who did participate exercised their right to withdraw at any stage. This withdrawal and attrition was of major concern to the organisation and the researcher. The organisation's response was to inform subsequent trainee applicants that the evaluation research and the training programme were linked and that the organisation expected that members of the cohorts would complete their training and the evaluation of that training.

Participation in organisation commissioned research is carried out in-work time and may be part of employees' duties. In such circumstances, it may be harmful, not beneficial,

for employees to refuse to participate. Paradoxically, in adhering to the ethical guideline (emphasising that participants have the right to withdraw from the a study at any time), a researcher may, in fact, encourage an employee in professional misconduct that can result in negative consequences such as restricting training and promotion opportunities. It may be that voluntary participation in organisation commissioned research that involves employees contradicts the safeguard of minimising harm to participants and that non-participation in research is not a 'safe' option.

8.4 Limitations of the Present Study

The following section discusses the research method and further limitations of the present evaluation research. It covers the use of self-report questionnaires, the investigation of the control group, the exclusion of potentially valuable groups of participants and the lack of generalisability of the findings.

8.4.1 The use of self-report questionnaires

The measurement of knowledge, skills, attitudes and work behaviour by self-rating is open to self-serving bias and was a criticism of the early research reviewed by Baldwin and Ford (1988). Flett (1986) notes the common criticisms of self-report measures include claims that people lie, deceive themselves or present in socially desirable ways. In the present study, trainees were aware of the researcher's complete independence from management, the training institution and the assessment systems in both the organisation and the training provider. This anonymity arguably reduces the incentives for lying but obviously does not preclude the fact that there may be some capricious liars in a particular sample. Flett suggests that the notion of self-deceit is a difficult one to clarify in relation to self-report data, "...In what sense can one say that a person is both the agent of deception and the victim of that deceit? How can one show that a persons sincere report of recent [perceptions, feelings or experiences] is not a true report given that it is not consciously a lie?" (p.26).

Another way in which distortion can supposedly occur is through a social desirability bias. Some researchers (e.g., Crowne & Marlowe, 1964) have proposed that people vary

on a trait of social desirability responding, a tendency to present with only desirable qualities. To demonstrate this, it is necessary to show that a person regularly claims to have certain positive qualities or behave in positive ways that are demonstrably false. Such a direct demonstration has never been done. The substitute method has been to ask people a series of questions assumed to represent rare levels of positive behaviour and conduct and to assume further that people who answer yes to many such questions are more likely to be demonstrating social desirability responding than be genuine 'saints'. It remains very difficult to distinguish between these two sources of high scores on a social desirability test. Notwithstanding these conceptual debates, it was assumed in the present study that the confidential nature of the study might also reduce the incentives for supposed social desirability responding.

Ghodsian et al., (1997) note that subjective measures of training performance can have an important impact on the quality of training. They argue that the use of subjective data is a reasonable strategy – a trainee's subjective account of the level of learning achieved is as important as the 'objective' or 'actual' learning achieved. The present thesis research took the view that an individual's assessment of their own skills and knowledge is worth knowing about in the sense that it has potential implications for further training participation, practice and general skill development. Ghodsian et al., review a number of laboratory based studies which highlight the sorts of errors of memory and prediction to which such assessments may be prone. They suggest that such errors can be reduced by having trainees more educated about the process of learning and associated issues of recall, recognition, familiarity and so on.

8.4.2 The investigation of the control group

Problems associated with the construction of a control group have been mentioned earlier in this discussion. The maintenance of a control group is difficult, if not impossible, in organisational settings according to Tannenbaum and Woods (1992). The authors suggest that a control group is useful only if the trainees do not communicate with the people in the control group. When trainees do communicate with the control group there is "diffusion of treatment" (Campbell & Stanley, 1966) which causes difficulty in the interpretation of results of evaluation research. In the present case, the trainees were

expected to introduce and demonstrate the aspects of their training to their colleagues so there was a high probability that there would have been diffusion of treatment.

When the evaluation research was designed it was not apparent that the trainees were expected to introduce and demonstrate aspects of their training to colleagues and so a control group was planned. Unlike most organisations which are unwilling to allow the formation of a control group and the collecting of data from non-trainees (Tannenbaum & Woods, 1992), ACC was cooperative and facilitated establishment by providing a list of case managers.

Unlike the trainees in the study who constituted a purposive sample, the control group was randomly selected for the evaluation. In programme evaluation it can be common for an evaluator not to have a hand in choosing who is to take part in a programme and in the present evaluation this was the case. The sample was not a random selection of participants. The training provider and ACC intentionally selected the trainees for the training on a composite of factors which varied from region to region and branch-to-branch. Factors included level of performance in the organisation, motivation, ethnicity, relationships with the community, family and personal circumstances. These factors were impossible to match on a sample of controls and, therefore, matching a sample of controls with the trainees was ruled out and a random selection procedure (see 7.1.3) was chosen.

As discussed in Chapter 7, the final response rate of 12% for the control group was considered to be unacceptably low and although the control group had been randomly selected, it was a rather self-selected group of individuals. The demographics showed that a higher percentage of them held a post-graduate qualification, generally they were less experienced as case managers, and were relatively newer employees.

In an attempt to compensate for the fact that an appropriate control group was effectively unavailable, a variant of the recurrent institutional cycle design (Campbell & Stanley, 1979) was applied to the available data as a type of proxy assessment of experimental and 'control' group differences (see 7.5).

While acknowledging the fact that the analysis was, at best, an approximation to the cycle design approach, the overall pattern of results is inconsistent. The Cohort 2 vs. Cohort 3 comparison suggests that training may have had an impact on individual perceptions of personal skills as a rehabilitation practitioner. One possible interpretation of this finding is that the effect worked through some non-specific process such as demand characteristics or a group support effect rather than the effects of training per se. As Flett et al., (1994) note "...participation in any type of training program is an interpersonal as well as a learning exercise' (p.42). A second possible interpretation is that the effect was partly a function of the different levels of educational qualification in the two cohorts. Cohort 2 reported significantly lower levels of qualifications than Cohort 3 and the higher levels of post-training skill reported by Cohort 2 might have been exaggerated by the initial differences in education level. However, taken as a whole the data suggest that the two cohorts were relatively comparable in a demographic sense at pre-test and it seems unlikely that the findings can be explained as being simply a function of pre-existing differences in educational profiles. A third interpretation is that the effect was in fact a function of participation in the training course. A fourth possible interpretation is that the effect was partly a function of history. Clearly, future research efforts will need to concentrate on isolating the critical factors that contribute to the effects of training on the development of practitioner skills.

The meaning of the Cohort 3 vs. Cohort 4 comparison is difficult to judge on the available data. The amount of organisational commitment, organisational and personal changes were less for Cohort 3 at three months post-training compared with Cohort 4's pre-training levels. Within Cohort 3, the three-month post-training levels of organisational change and personal change were significantly less than their pre-training levels i.e., Cohort 3 had high levels of expectation that organisational and personal change would occur subsequent to training, but these expectations were not realised. The levels of organisational commitment within Cohort 3 did not change significantly over this time period.

One explanation of the findings is that the respondents may have had an unrealistically high expectation of the training and the change in ratings may have been a regression effect. Alternatively, the university-based training programme may not have been

sufficiently aligned to the realities of rehabilitation service delivery 'at the coal face' so the end result was a mismatch between what the trainees had learnt and what could be realistically applied back in the workplace. Informal data suggests that this may have been the case. Other research in rehabilitation settings (e.g., Baker, 1998; Moniz-Cook et al., 1998) have noted the difficulties of maintaining positive training effects at follow-up.

A partial control for history could not be provided as the comparisons showed that the training was not effective at the two different times: Cohort 2 (three months post-training) did not do better than Cohort 3 (pre-training) and although Cohort 3 (three months post-training) exceeded Cohort 4 (pre-training), in the present design configuration that should have been reversed. Cohort 4 at pre-training rated the same variables significantly higher than Cohort 3 had rated them three months after the training was completed.

At the time of the training programme, there were a number of unsettling changes in ACC both at national and branch levels (e.g., the shelving of a major computer project (ACCtion Project), restructuring of client base systems, the amalgamation of some branches, the dis-establishment of regional offices, litigation brought against the then-current and previous managing directors in separate fraud cases). Factors other than the training might have affected the training outcomes.

A deficiency in the recurrent institutional cycle design is the lack of control for the effects of maturation (Cascio, 1991). Maturation, a threat when the presumed relationships between variables might be attributable to trainees becoming "older, wiser, stronger" (Cook et al., 1990) between pre-testing and post-testing, is a possibility in a training programme. In terms of the organisational and educational goals, maturation is frequently a considered and targeted factor in training. The programme's designers and the training provider capitalise on trainees' maturation, which may compromise internal validity.

Although maturation is not regarded as a serious concern when the aim of a training programme is to bring about changes in skills or competencies, it is more problematic when the training programme aims to effect change in trainees' attitudes. It is these changes that may possibly be explained by maturational processes such as changes in job circumstances, life experiences and ageing (Cascio, 1991). To reduce this effect Cascio

suggests a comparable group of employees be given a “post-test only” measure. He argues that the extent to which there are differences between the training group and the “post-test only” group is a reflection of training effects rather than maturational effects.

Clearly, organisational settings do not always provide for “elegant research designs” (Psanthas & Plapp, 1968, p.337). The recurrent institutional cycle design can be seen to be a pragmatic design which is potentially useful in organisational and educational training programme research. Campbell and Stanley (1963) succinctly point out, “one starts out with an inadequate design and then adds specific features to control for one or another of the recurrent sources of invalidity. The result is often an inelegant accumulation of precautionary checks, which lacks the intrinsic symmetry of the ‘true’ experimental designs, but nonetheless approaches experimentation” (p.57).

8.4.3 The exclusion of potentially valuable groups of participants

The perspectives offered in the present study were by necessity two-dimensional: the opinions of the trainees and the supervisors. Ideally, the evaluation might have included other stakeholders such as the trainers (cf. Warr & Bunce, 1995) and a sample of the organisation’s clients. Other researchers (e.g., Parle, Maguire & Heaven, 1997) have emphasised the importance of this type of multidimensional evaluation of training outcomes. While there is some debate about the efficacy of, for example, client satisfaction as a useful indicator here (e.g., Pejkarik & Wolff, 1996), most researchers and practitioners in rehabilitation would agree that the ultimate goal is to meet, and even exceed, the expectations of consumers of rehabilitation services (e.g., Patterson & Marks, 1992). Therefore, some form of client input into the evaluation process seems reasonable. This was discussed at length earlier in the discussion (see 8.3.2).

Trainers and supervisors also have a key role in the professional development of case managers. Several authors (e.g., Herbert & Ward, 1989, 1990; Yeun, 1990) noted that supervisors often have little formal training in supervision. In the present thesis research, it became apparent that a number of supervisors had limited knowledge about or input into the training programme. The supervisors also had no opportunity to attend specialised training. This is an important issue in the sense that supervisors often serve as

role models who have a significant influence on case manager achievement and enthusiasm for the profession (Mitchell & Kampfe, 1990). Supervisors also have an important influence on levels of stress (e.g., Kampfe & Mitchell, 1992; Mitchell & Kampfe, 1990; Yuen, 1990).

However, the evaluation did not take into account the perceptions' of the trainers or the clients of the organisation for pragmatic reasons. As discussed in Chapter 2, the relationship between the training provider and the evaluator was strained. Given the initial problems and the need to maintain a truly independent evaluation, it was decided not to include the trainers in the study. Moreover, the trainers were carrying out their own evaluations that included a study of the training programme and the transfer of the learnings. The other potentially rich source of information was the client group and accordingly an effort was made to include the clients in the study. But, because of the Privacy Act (1993), the organisation would not authorise contact with a client group.

Further, the study did not seek the opinions of those who left the organisation after completion of the training. In the study of transfer, it would have been helpful to obtain information from trainees who had discontinued employment in the organisation but who had transferred their recently acquired skills into new environments. Again, it was not possible to locate these people once they were no longer employees of the organisation because of New Zealand's privacy laws.

The problem of turnover in the rehabilitation profession is well documented (e.g., Marini, Pell & Black, 1992). Biggs (1996) notes that around 25-35% of case managers in ACC leave the profession annually. While a comparison of the pre-training vs. post-training turnover rates within the organisation may have provided some additional insight into training effectiveness, the validity of this comparison would assume that the organisation was a relatively stable entity. But during the 90s the rehabilitation profession has been described as being in a state of "...unremitting flux" (Parker, 1990, p.165). Rehabilitation professionals are required to: focus on community based planning and service delivery (Owen, 1992), to acknowledge the rights and responsibilities of consumers (Curl & Sheldon, 1992), to maintain high standards of service quality and customer satisfaction (Patterson & Marks, 1992) and generally function in an

environment where "...there are too many clients, not enough time, and not enough resources" (Flett et al., 1995, p.124). In this context the links between training effectiveness and turnover are likely to be difficult to empirically demonstrate.

8.4.4 Lack of generalisability of the findings

Whether or not the present findings are replicable in other contexts and with other groups of rehabilitation professionals is unclear. The findings do highlight the somewhat unpredictable nature of research on rehabilitation training effectiveness. Some studies show positive training effects which persist at follow-up (e.g., Baker, 1998; Schonfeld et al., 1999) while others, like the present thesis research, may show positive training effects which are not maintained at follow-up (e.g., Moniz-Cook et al., 1998). The heterogeneity of these sorts of studies in terms of type of training, method of delivery, context, respondents, and measurement strategies make it difficult to draw firm conclusions.

8.5 Contribution to Organisational Learning

Writers, e.g., Argyris (1999); Argyris & Schön, (1978); Schön, (1983); and Dixon, (1994; 1999) have suggested that learning is organisational to the extent that: (1) it is done in order to achieve an organisation's purposes; (2) it is shared or transmitted by people throughout the organisation; and (3) learning outcomes are institutionalised in the processes, systems, and structures of the organization. When these criteria are met organisational learning occurs.

With reference to the above and in spite of the conceptual and methodological difficulties outlined in the previous section, a number of tentative speculations are nevertheless possible here. As discussed in Chapter 3 evaluation research can be a tool to assist organisational learning (Leuw & Sonnichsen, 1994; Sharp, 1994). In the simplest sense, that by providing information arising from an evaluation, policy and decision makers can potentially act upon that information and make informed decisions. It was as this type of tool that the evaluation data generated in this thesis research may have found its use.

Although evaluation research does not guarantee organisation learning will occur it is a useful method used in collecting and providing data to decision makers. The present study aimed to contribute to ACC's organisational learning by providing the organisation with formative evaluations throughout the research and a summative evaluation at its conclusion.

Dixon (1994, 1999) asserts that organisational learning is deliberately undertaken by an organisation and that all members are engaged in the process. As was noted earlier in this thesis, this assumption of organisational "homogeneity" may be a difficult one to justify. Clearly, the evaluator was not a member of the organisation and the contribution to organisational learning was by way of generating information for ACC to incorporate with other data about the training programme. The independence of the evaluator precluded any other involvement in the organisational learning cycle. Evaluators from 'inside' the organisation who are the primary stakeholders and relevant decision-makers are perhaps better placed to use the information, to effect change.

Nevertheless, contributing information can play a useful role. Senge (1990) emphasised that generative learning is the most important part of organisational learning because it is through presenting new ways of viewing a phenomena that achievements can be made. So in that sense, the evaluation data can be viewed as information that can act as a catalyst for generative learning. One possible reason why an evaluation may not be useful or act as a catalyst is because findings are sometimes unpalatable and not regarded as actionable. Another reason is the timing of an evaluation may preclude its usefulness, sometimes evaluations have a "small window of utility". As discussed above, evaluations can be largely symbolic and a prerequisite for funding for programme delivery.

In addition to dissemination of the findings of the evaluation, the process of the evaluation research was also put to use in a subsequent training programme sponsored by the organisation. "Process use" (Patton, 1998) refers to using the evaluation process to assist organisations and the people in programmes to learn to think in an evaluative manner. As Patton (1998) observes, "specific findings have a small window of relevance" (p.226) whereas learning to think and act in an evaluative way can have a longer lasting effect.

As a down-line result of the present independent evaluation, ACC were keen to incorporate evaluative processes used in the present evaluation research in a subsequent training programme. This training programme was undertaken in a geographically different setting and focused on aspects of medical knowledge required by rehabilitation practitioners. On this occasion an internal evaluation was undertaken and incorporated features of the present evaluation research. This included the design and incorporated the self-efficacy measure.

However it becomes clear that the organisation made a transition from employing an external evaluator to undertaking an internal evaluation. In that sense, members of ACC acted in an evaluative manner and their role in evaluation may have had a more potent effect on organisational learning than in the present case. The organisational members would be in a position to be fully involved in generating data, integrating that data into the organisational context and bringing about any change that was recommended. While this may be seen as a small effect or outcome of the evaluation research, it is possible that an internal evaluation could have a much larger effect.

8.6 Future Research

8.6.1. Refinements in the measurement of current study variables

As has been noted earlier in this discussion, a number of improvements are possible in the conceptualisation and measurement of rehabilitation practitioner competencies (e.g., Biggs et al., 1995) self-efficacy, and organisational transfer climate. The trainee's perception of the transfer climate is clearly important (i.e., does my branch, manager, supervisor see the value in this training? will I get a change to put some of this training into practice?). Baldwin and Magjuka (1997) and others (e.g., Quiñones, 1997) argue that a general 'feel' for this sort of climate is likely to be communicated to trainees before the training begins and this type of climate can be conceptualised along two broad dimensions – management support and organisational support. The notion of management support is widespread in the organisational psychology literature and its importance has been emphasised earlier in this discussion.

Given the state of 'flux' that the ACC was in at the time of this thesis research, it would seem likely that the ability of the organisation to deliver such support in meaningful ways was probably limited. This thesis managed to emphasise the importance of supervisory support (at least conceptually) but the organisational context within which supervisors were located and their diverse responsibilities for a range of trainees made it very difficult to demonstrate the importance of supervisory support at an empirical level. The notion of organisational support has a less extensive research literature base but reflects issues such as promotion or other reward systems, congruence between training activity and company strategy, and peer influences (Baldwin & Magjurka, 1997).

The research did not attempt to assess these issues in any substantive manner. The lack of systematic evaluation of these sorts of factors emphasises the symbolic function of training alluded to earlier in this discussion. Organisations may be saying, at least implicitly, that training is vital to their mission and future but, as Baldwin and Magjurka point out, "...given that research has shown that neither management pronouncements nor resources expended are among the most salient signals of the organizational importance of training and development, it seems plausible that trainees have often not perceived that their learning and development were as important as the pronouncements would suggest..."(p.120).

Strategies are being developed for the assessment of transfer climate (e.g., Holton et al., 1997) and Baldwin and Magjurka offer a number of propositions for future empirical testing in the area e.g., a favourable transfer climate will be related to trainee self-efficacy and outcome expectations; explicit supervisor expectations and participation in the training process will impact on trainee motivation; peer reports of training will impact on trainee self-efficacy and outcome expectations; the linking of trainee performance to organisational reward will increase motivation; behaviourally specific supervisor support (cf. announcements of training importance and relevance to the organisation) will impact on training outcome expectations.

8.6.2. New and additional constructs and relationships to consider

a) Training as a socially constructed episode

This evaluation research adopted a relatively unidimensional and linear approach to examining the antecedents and consequences of training. Baldwin and Magjuka (1997) refer to training as a socially constructed episode in which the significance thereof depends on the meaning trainees attach to the episode. Any training event takes place in a context of people going to work, doing their job, interacting with colleagues, clients, subordinates and superiors, going to meetings, and attending to a multiplicity of tasks that may be relatively unrelated to the training in question. Individuals 'know how the organisation works' and 'what the rules are' and these are the sorts of accumulated experience-based schemas and frameworks that they bring to a training episode.

To illustrate the point of meaning that trainees attach to an episode of training, consider the process of ACC setting training-related goals (i.e., "We need a training course where case managers can learn to do X, Y and Z"). Baldwin and Magjuka note that the communicated signal attached to the setting of goals may be positive or negative. One signal might be that management has a clear and well-specified idea of what the outcomes should be and is taking some responsibility for the achievement of that outcome. Another possibility is that, given a group of employees experience in a particular branch of ACC, goal setting may be interpreted in a negative fashion. They may be simply, "... 'wishes', with no accountability and no consequences for not attaining goals....the motivating influence of any training element is partially contingent on the trainees' accumulated experience with that design element in other organisational settings..." (Baldwin & Magjuka, 1997, p.102).

From this perspective, which heavily emphasises the effects of the organisational context on training, a host of relatively unexplored research questions can be derived for future consideration. For example:

- Which parts of training are significant and get the attention of trainees?
- Do different groups (or subgroups within a major grouping) interpret the meaning of aspects of training in similar ways?
- Do different training cohorts affect trainee motivations and expectations?

These sorts of questions require a more detailed psychological understanding of the work settings and the various identities and agendas that trainees bring to that setting.

b) The voluntary / mandatory distinction

An important training question concerns the voluntary / mandatory nature of the training (i.e., Do I have a choice in attending the training? Do I have to go?). In the present research, the training was voluntary – case managers selected for training could choose to take part (or not). Other research in the area is mixed with regard to the effects of the varying levels of compulsion. There is some suggestion that voluntary participation increases motivation and positive reactions to training (e.g., Baldwin et al., 1991; Cohen, 1990, Hicks & Klimoski, 1987; Mathieu, Tannenbaum, & Salas, 1990) while other researchers suggest that making training mandatory is a clear and explicit signal of the organisational importance attributed to training (Baldwin & Magjuka, 1991). The mandatory status of training means that the programme is important to the organisation (otherwise it would not be compulsory) whereas voluntary training signals that the training is relatively unimportant compared to the other organisational activities and requirements. While there was no opportunity to make mandatory / voluntary comparisons in the present thesis, future research might consider attempting to unpack the meaning ascribed by trainees to the status of the training.

c) The effects of the composition and internal dynamics of training groups

Key factors to consider here appear to be similarity of skill level at entry into training, small group size, and high levels of interaction among group members (Baldwin & Magjuka, 1997). Cooperation (vs. competition, individualism) appears to be the most effective strategy for enhancing learning (Peklaj & Vodopivec, 1999; Potthast, 1999; Saxe, 1988; Susman, 1998) and training performance (Latham & Crandall, 1991). The extent to which cooperative learning occurs is a function of the type of training group norms that develops during training. Baldwin and Magjuka (1997) note that there is relatively little research on the relationships between group dynamics and organisational training programmes. There is a vast social psychology literature that can inform such research efforts and Baldwin and Magjuka suggest a number of research propositions here to guide and focus future research e.g., trainees in cooperative learning settings will be more motivated and more positive than those in individual learning conditions; trainees in

cooperative contexts will perform better only when group rewards and individual accountability are present; cooperative learning settings with group rewards will enhance the learning of lower performing members.

d) Assessment and theorising of the notion of training motivation

The concept of training motivation was not considered in detail in this thesis but a number of other authors (e.g., Mathieu et al., 1992; Mathieu & Martineau, 1997) have emphasised that individuals enter training with different levels of motivation that derive from a range of sources. Individuals with higher levels of motivation are more likely to learn and more likely to want to apply what they have learned back in the job. There is a range of individual difference variables that may impact on training motivation. Mathieu and Martineau (1997) suggest that the impact of demographic characteristics (e.g., age, gender and so on) are likely to depend on the nature of the training programme. There is likely to be a curvilinear relationship between skills and motivation such that people with low skills but high self-efficacy will have highest levels of training motivation (cf. people with high skill levels or low self-efficacy).

Personality variables may impact with type of training programme to influence motivation e.g., high need for achievement individuals may show high motivation in leadership training programmes while high need for affiliation individuals may show high motivation in social skills training programmes. A range of work related attitudes seem to have an impact on training motivation if the focus of the training content and the focus of the particular work attitude being assessed are congruent.

These sorts of individual variables seem most influential in pre-training and 'during-training' motivation processes. Mathieu and Martineau argue that "...if researchers and practitioners attend to these potential effects initially, they can harness the positive effects and minimize the negative effects of individual differences by properly designing and executing training programmes" (p.207).

Mathieu and Martineau (1997) also draw attention to the influence on motivation of situational factors. Situational constraints may be both resource-based and time and workload based and the authors suggest that their influence is likely to be twofold. They

may inhibit pre-training motivation in the sense that trainees believe that they will be unlikely to be able to use what they are about to be taught. These constraints are also likely to moderate the extent of transfer of training related skills back to the workplace.

Mathieu and Martineau, along with other authors (e.g., Kozlowski & Salas, 1997), emphasise the importance of adopting a multilevel perspective when trying to consider the potential influence of situational constraints on training effectiveness. The present thesis research acknowledged this multi-level issue (in the sense that it recognised that the impact of training may occur at individual, client, branch, and organisational levels) but did relatively little to theorise the integration of multi-level linkages at more than a simplistic level. This issue is developed further in the following section.

e) Consideration of multilevel organisational systems and their impact on training and transfer

The focus of the present thesis research was largely at an individual level – the effects of training on the individual were considered although the constraints of the organisational environment were at least conceptually noted (e.g., the Baldwin & Ford, (1988) approach). Kozlowski and Salas (1997) argue that a more elaborate perspective is necessary which “...integrate[s] traditional training concerns with concepts derived from organizational theory. This approach must incorporate more explicit recognition of the individual, team/unit, and organizational levels inherent in the organization system.” (p.249). Other writers (e.g., Warr, Allan & Birdi, 1999) have echoed similar concerns. Kozlowski and Salas outline a number of different approaches to individual and organisational change and suggest that they can be united by three common themes: ‘levels of analysis’, ‘content focus’, and ‘congruence’.

The ‘levels of analysis’ idea provides the basis for specification of the target level for training within the organisation and the processes whereby other levels might link to this level in the change process. Simply put, who in the organisation gets trained and how will the training effects move ‘up’ in the sense of accomplishing higher-level objectives (e.g., “improved ACC credibility”) from training targeted at lower level aggregates. The ‘content focus’ idea (as the name implies) provides the rationale for specifying training content and is identified by the particular ‘problem’ being addressed and the unique

characteristics of the particular organisation being considered. The content focus may be technical (requisite knowledge and skills) and 'enabling' (relevant interpersonal skills and abilities that allow the technical skills to be applied in the workplace). The 'congruence' idea is concerned with establishing consistency across levels and content areas. Depending on the training target and the content focus of training, consistency may be required: 1) within content and within level, 2) across content, within level; 3) across content and across level.

Kozlowski and Salas elaborate on this model in extensive detail and suggest that it has a particular use in "...the identification of processes and factors at higher levels of analysis that are likely to set constraints on the effective implementation and transfer of training interventions" (p.251). Within this model training transfer is conceptualised as the congruence between the trained skills and knowledge and the organisational context in which these are to be expressed. Kozlowski and Salas provide a number of propositions to guide future research efforts in this area which emphasise the integration of the individual / team training target, skills / enabling content focus, and the alignment of levels and content of training.

f) Refinements in the statistical modelling and analysis of training effects

The present thesis research took a relatively within-subjects approach to analysing training effects and occasionally a between-groups type of approach. Clearly a more elaborate approach is possible, with appropriate data, that acknowledges mediating / moderating effects and the likely reciprocal feedback loops that might exist between some of the pivotal variables of interest (e.g., skills, self-efficacy).

While a common approach in training evaluation is the assessment of mean group differences, Alliger and Katzman (1997) argue that there are at least two other strategies for considering the effectiveness of training. One involves the modelling of individual "growth" curves which is usually appropriate to long term training initiatives. The second approach, which is more relevant to typical organisational training evaluations, is a consideration of the effects of training on between-person variability, rather than mean differences. Alliger and Katzman argue that there are many instances where the post-training variability might be either smaller or larger in the trained group and this change

of variance during training has a number of implications for the examination of changes in means.

While Alliger and Katzman (1997) make a compelling case for this approach, they also acknowledge that the power to detect variance differences in training studies is often low. There is some debate about the best statistical methods to test for variance differences, and how between-person variability should best be operationalised. Nevertheless, future research on if and how training might affect variability would seem warranted.

8.7 Final Remarks

Transfer of training has been an area of concern for more than 35 years yet studies show that only about 15 percent of organisations measure transfer of training (Garavaglia, 1993). Broad and Newstrom (1992) estimate that 40 percent of skills learned in training are transferred immediately, of those 25 percent remain after six months and only 15 percent remain a year later. Overall, the results of the present evaluation research uncovered areas of transfer and failure to transfer and suggest that the training did not transfer to the workplace to any significant degree. However, through a reflective critical self-analysis the thesis has identified conceptual, methodological and measurement issues which contributed to the lack of clear-cut outcomes. Clearly, the evaluation research into the transfer of training could have been strengthened by more focus on these issues prior to and during the process.

This approach to reflective evaluation is in accord with Butler (1996) who stresses the importance of reflection as a process and the systematic study of personal progress from novice to expert in professional development. The evaluation research was carried out by a 'novice' defined by Butler as one who has "no experience of the situation in which they are to perform" one for whom reflection-in-action (Schön, 1983) is unlikely because they typically exhibit rule-governed behaviour which is extremely limited. Accordingly, Bishop recognises that learning for the novice usually occurs by reflecting on action after the experience has been completed. The thesis provides evidence of this whilst acknowledging the complexities of evaluation research in an organisation laden with contradictions and ambiguities.

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Appendix A: Job Analysis

Job Analysis

In his now classic work on job analysis, McCormick (1976) defines job analysis as the collection of data on [a] “job-oriented” behaviours, such as tasks and work procedures; [b] more abstract “worker-oriented” behaviours, such as decision making, supervision, and information processing; [c] behaviours involved in interactions with machines, materials and tools; [d] methods of evaluating performance, such as productivity and error rates; [e] job context, such as working conditions and type of compensation system; and [f] personnel requirements, such as skills, physical abilities, and personality traits (Harvey, 1991).

Job analysis is the systematic process of defining a job by specifying the duties, behaviours, tasks, and activities that jobholders perform and the knowledge, skills and abilities necessary to carry out the job effectively (Hodgetts & Kroeck, 1992).

A more recent definition of job analysis and one that has implications for Industrial and Organisational psychologists is that of Harvey (1991). His definition parallels that of McCormick in emphasising the description of work behaviours, work products, and job context, including the informational and social context in which the work is performed. However, it differs by excluding the process of hypothetical worker traits or abilities presumed to be necessary for job performance (Harvey, 1991).

The shift in thinking, renders “worker” variables redundant, the focus clearly on the behaviours which are observable and replicable. Harvey (1991) proposes three criteria that he believes should characterise a job analysis method:

“First, job analysis methods should have as their goal the description of *observables*..... Second, a job analysis should involve the description of work behaviour *independent of the personal characteristics or attributes of the employees who perform the job*.....Third, and of critical importance, job analysis data must be *verifiable and replicable*....” (pp. 74-75):

The present author, however, accepts the older definition (cf.. McCormick, 1976) and the following job analysis takes cognisance of “worker-oriented” and “job-oriented” behaviours. To reduce a job analysis to solely job orientation, ignores valuable information which influences the degree to which the job is done properly.

A preliminary training needs analysis was carried out at the head office and a branch of the organisation to identify the role of a case managers; the duties they have within the organisation; how the work is performed; the results of the work; worker characteristics and the context of the work in terms of the socio-political environment; the organisational factors and the scope of the workers’ discretion, responsibility and accountability. The identifications were to assist in research decisions and to establish criteria for assessment measures for the study of the transfer of training. The method used to perform the job analysis and results of the are reported below.

Method

Initial talks about the role of case managers and the case management process were held with a small group representing the organisation’s senior management team and a search of relevant literature was carried out in the organisation’s library.

Subsequently, a regional manager was approached by a head office representative with a request that a job analysis be conducted within a northern regional branch of the organisation. The purpose of the exercise was explained to the regional manager (to familiarise the researcher with the work of case managers and to facilitate the development of questionnaires for the research) and upon agreement a branch was selected for the job analysis to be carried out. The branch manager was contacted firstly by the regional manager and then by the researcher who explained the purpose of the analysis, the method which was proposed, and the issues of consent and anonymity.

Two methodological approaches were employed by the researcher to collect information on the job of case managers. These methods were observation and interviews (unstructured and structured). The structured interviews followed the procedure Method 3 (Shouksmith, 1975).

Nine job incumbents and one supervisor took part in the hour long interviews and the participants were interviewed individually in a quiet room. All participated voluntarily. The interview questions are listed below. In addition to the interviews, observations of the case managers at work were made over five hours.

Interview questions:

Job title: How do you identify yourself in the organisation?

Duties: When you think of your job as a Case Manager, what knowledge, skills and abilities are needed - technical, legal, manual, organisational and judgmental skills?

Will you tell me what your job actually entails? How do you do it?

What sort of physical demand is made on you to perform your job?

What sort of mental demand is made on you to perform your job?

What responsibilities do you have?

Are you responsible for any material or equipment?

Job Conditions: Can you tell me about the physical working conditions in which you work?

Are there any particular dangers or adverse conditions?

Qualifications Required: Is there a minimum age for entry?

What are the educational qualifications required for the job?

Is there any specialist training required of a new employee, either on-the-job or through part or full-time study?

What previous experience is a junior position or related job required?

What level of intelligence must a person have to cope with this job?

Do you think there is an upper limit?

Are there any special aptitudes related to success in the job, which it is advisable for the person concerned to possess?

Which occupational interest area is related to this job?

What personality traits or characteristics enable a person to fit into this occupational area and cope with the problems and human factors inherent in the job?

Does the job require a particular life style or set patterns of social behaviour (e.g., Minister of Religion)?

Position and Prospects: Are there regular job vacancies locally or on a national level?

How do you go about obtaining your first position?

What are average earnings at entry and at later times?

Is there a scale?

Does experience count?

Do educational qualifications count?

Are there channels for promotion?

If so, what is regarded as the normal career grade?

How many in the occupation rise higher to senior positions?

What are the satisfactions offered through work in this job?

What frustrations and limitations are there?

Results

A set of competencies in the form of knowledge, skills and abilities (KSAs) and the job components of the actual job performance, the behaviours, tasks and activities (BTAs) were derived from the qualitative data. The information gathered at the interviews was collated and is displayed in the following section.

A Job title

Case Manager

B. Duties

The duties of a case manager are unique to title holders employed by the organisation, a Crown Agency of the New Zealand Government. Case managers work with people with accidental injuries; develop individualised case management plans that assist with the claimants in rehabilitation; and, are governed by legislation and regulations in determining the claimants' entitlements under acts of parliament.

The actual job performance entails the following behaviours, tasks and activities:

- prepares for initial contact with claimant
- makes initial contact with claimant
- conducts interviews
- collaborates with claimants to write their case management and an individualised rehabilitation plan
- develops medical, social and vocational objectives and strategies which contribute to the overall outcome
- implements the case management and the individualised rehabilitation plan
- assists the claimants to access financial support available to them
- evaluates own management of caseload
- manages caseload
- performs all duties in a professional ethical manner
- develops and maintains networks with service providers

- applies the organisation's legal requirements, regulations, policies and procedures to case management.

(Source : *Case Management Competencies 1995*)

To perform the job with competence the following knowledge, skills and abilities are needed:

- planning and organising
- oral and written skills
- interviewing skills
- interpersonal skills
- legal, medical and vocational knowledge
- cultural knowledge
- networking skills
- computer skills
- analytical skills
- computational skills
- driving ability
- stamina and physical demands

In addition to the above skills, a case manager is simultaneously involved in maintaining a physical and socio-emotional work environment which facilitates the flow of casework, consulting with other case managers, support and administration staff, and responding to telephone inquiries.

Effort required

Mental concentration matters very much in case management. The application of legislation and the organisation's policy and procedures demand that case managers focus on each claim with accuracy and acumen. Each case is individualised and demands careful strategising and implementation.

The organisation of casework, scheduling of visits to employers, interruptions to work by telephone inquiries, claimants' unscheduled visits, assistance to other case managers and responding to the organisation's administrative duties call for effort.

Each facet of case management demands that a case manager focuses on the individualised claim. Each claimant is unique with need requirements which may or may not be able to be provided for within the organisation's regulations and policies.

Maintenance of the job incumbent's mental health requires effort. Strong mental health is required to deal with injured and often emotional claimants and the high caseloading per case manager.

Stamina is a prerequisite. Sitting at a work-station for long periods demands correct posture. Prevention of Occupational Overuse Syndrome (OOS) calls for effort.

Digital dexterity is of importance for computer keyboard skills and manual form filling. Within the office, a case manager is restricted mainly to movements within the work-station. A little walking is done to use photocopiers, consult with colleagues and attend a claimant in an interview. Searching for files requires bending and stretching. Case managers are required to attend meetings with service providers, employers and claimants which may be held outside the office. Driving a car is necessary to fulfil this requirement.

Responsibilities

Claimants - every case delegated by the team leader is the responsibility of an individual case manager. A realistic and responsible outcome of services provided to the claimant is the responsibility of the case manager.

The case manager is the claimant's sole point of contact with the organisation. Case managers have the responsibility to make regular contact with claimants to provide information about their entitlements, clarify queries, and ensure appropriate liaison between the claimant, employer and a health provider. The case manager develops, implements and assesses a case management plan and an individualised rehabilitation plan in collaboration with the claimant and others such as health and / or service

providers involved in the claimant's recovery. Additionally, case managers are responsible for their adherence to the Privacy Act (1993) in protection of their claimants' rights.

Team members - as a member of an intra-branch team, a case manager has the responsibility of maintaining working relationships by monitoring others' work, checking payments allocated by peers, responding to colleagues' inquiries, giving solicited and sometimes unsolicited advice, and collaborating on difficult cases.

Branch and Corporation - a case manager is responsible for achieving value for money for both the claimant and the organisation. A case manager is responsible for representing the corporation professionally.

Personal - the nature of the work prescribes that case managers are involved with others' injuries and stressors. Psychological well-being must be maintained to prevent a pessimistic view of living, an overcautious response to daily living and to overcome the effects of physical and verbal abuse by some claimants. To prevent OOS, case managers need to take responsibility for their physical posture.

C. Job conditions

Physical conditions - the physical conditions, such as operational space, light and heat in which case managers work vary according to the branch office in which they are employed. Noise, a common element in all offices, is determined by the level of case managers' interactions, the telephone ringing and the sound of technology such as computers, printers and photocopiers.

Other space common to branch offices include a reception area, waiting space for visitors, an interview room, a board room and a staff room.

D. Qualifications required

1. Sex - under the Human Rights Commission Act (1977) it is unlawful to deny or restrict access to people on the grounds of sex, marital status, race, religion and ethical

belief. The organisation respects that legality. However, the job of case manager is filled predominantly by women.

As at February, 1995 the total of case managers positions throughout New Zealand was 553. Of the total there were 473 full time / permanent positions, 28 part-time permanent positions and 32 temporary (M. Rose, personal communication, 2 March, 1995).

2. Age - there is no minimum age for entry into case management.

3. Physical requirements - the main physical demand of the job is that of sitting for long periods at a desk. Physical stress is placed on the back and lower body by bending forward to examine and work on files and stretching to retrieve files; there is stress on fingers and wrists in word processing.

An ability to drive a car and a current driver's licence is desirable.

A tidy, well-groomed appearance is a physical requirement.

4. Attainments - a qualification in nursing, paramedical, rehabilitation or other relevant disciplines is required for entry into the position.

Experience of at least two years in rehabilitation, health or other relevant settings is recommended. Other work experience is also desirable. Case management experience is acquired in the position. There appears to be no job equivalence in the community or corporate world.

Technical training is provided on-the-job, through an informal buddy system.

5. Abilities - general intelligence and special aptitudes

To cope with the job of case manager, a person requires average to above intelligence especially in problem solving and literacy. It is not recommended for highly intelligent people.

An awareness of ethnic differences, cultural variances and disability issues is essential in the job. An ability to be empathetic, an excellent listener and communicator are important and an even and calm temperament to deal with upset claimants is an advantage. A commitment to the philosophy of case management, a strategic model of practice, is required.

6. Interests related to the job - clerical, insurance, compensation, rehabilitation and health are interests related to case management.

7. Personality requirements - personality traits that would help meet the job criteria are: judicious, tactful, empathetic, methodical, hard working, pleasant, courteous, tolerant, even-tempered, responsible, confident, motivated, task-oriented and diligent.

8. Social requirements - the social requirements include an ability to maintain courteous and friendly communications with claimants, service providers, case managers and other employees of the organisation. A case manager assists injured people from all cultures, socio-economic groups, and all ages sometimes in difficult, desperate and grave circumstances.

E. Position and Prospects

1. Employment opportunities - there has been a problem with turnover and recruitment of case managers. Therefore, there are regular job vacancies. There is minimal opportunity to become a principal case manager (PCM).

2. Entry - entry is dependent on vacancies. Positions are advertised in the daily papers.

3. Wages, scale, experience, qualifications - the salary scale ranges from NZ \$32,000 to NZ \$40,000 per annum. There are no automatic grading steps.

4. Promotion - with the exception of PCM, there is no hierarchy.

5. Satisfaction and problems - being able to help people by providing liaison between the claimant, general practitioner, medical specialists, employer etc. Problem solving especially for confused or ignorant claimants provides satisfaction.

Case managers expressed satisfaction with their work when it is recognised by themselves and / or others that they have provided a quality service, having a claimant rehabilitated to their maximum potential.

A major satisfaction is felt when a case manager provides a good service and “shocks people who don’t expect it” from the organisation (personal communication from a case manager). Because of high caseloading for each case manager, the volume of work is a frustration. There is a dilemma for case managers to perform ‘quantity work’ versus ‘quality work’.

The Accident Rehabilitation and Compensation Insurance Act (1992) causes a frustration when a case manager perceives a problem could be solved logically and simply but the provisions of the Act do not allow that.

The continual need for statistical reporting is a frustration and some of the paper work is perceived as menial.

Other frustrations include insufficient resources (e.g., one telephone line for two case managers, inadequate stationery funding), constant rate of change within the organisation, high expectations by head office, poor standard of office furniture, lack of privacy in the office, inappropriate office behaviour (e.g., others’ laughter when someone else is dealing with critical issues or talking on the telephone to a distressed claimant) and remuneration.

The job description has been a cause of dissatisfaction for some new recruits who have expressed their dissatisfaction by resigning.

Discussion

One of the most critical decisions made in the course of conducting job analysis is identifying the people who will describe the job (Harvey, 1991). The present job analysis sought the job information from a supervisor and job incumbents. Because of client confidentiality, access to clients was declined. The job analysis focused on an extensive list of BTAs. Included were all behaviours performed routinely and tasks performed infrequently but important to the job. The infrequent occurrence was attributed to the high number of clients and amount of processing. The data obtained was important in understanding the job of a case manager and establishing criteria on which to develop questionnaires for the transfer of training study.

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Appendix B: Pilot Study

Pilot Study

Aims of the Pilot Study

A pilot study was carried out with the inaugural group of trainees, Cohort 1, who were enrolled in the targeted course of study specifically for case managers. The pilot study had certain aims:

1. to test the acceptability and usefulness of the questionnaires;
2. to test the measures;
3. to develop the questionnaires;
4. to develop the sequence of the questionnaires in a longitudinal design where repeated measures would be necessary and appropriate;
5. to determine when to introduce new measures for different levels of analysis;
6. to check for flaws in the questionnaires' design;
7. to test the methods of statistical analysis; and,
8. to allow the training programme time to settle.

Method

Participants

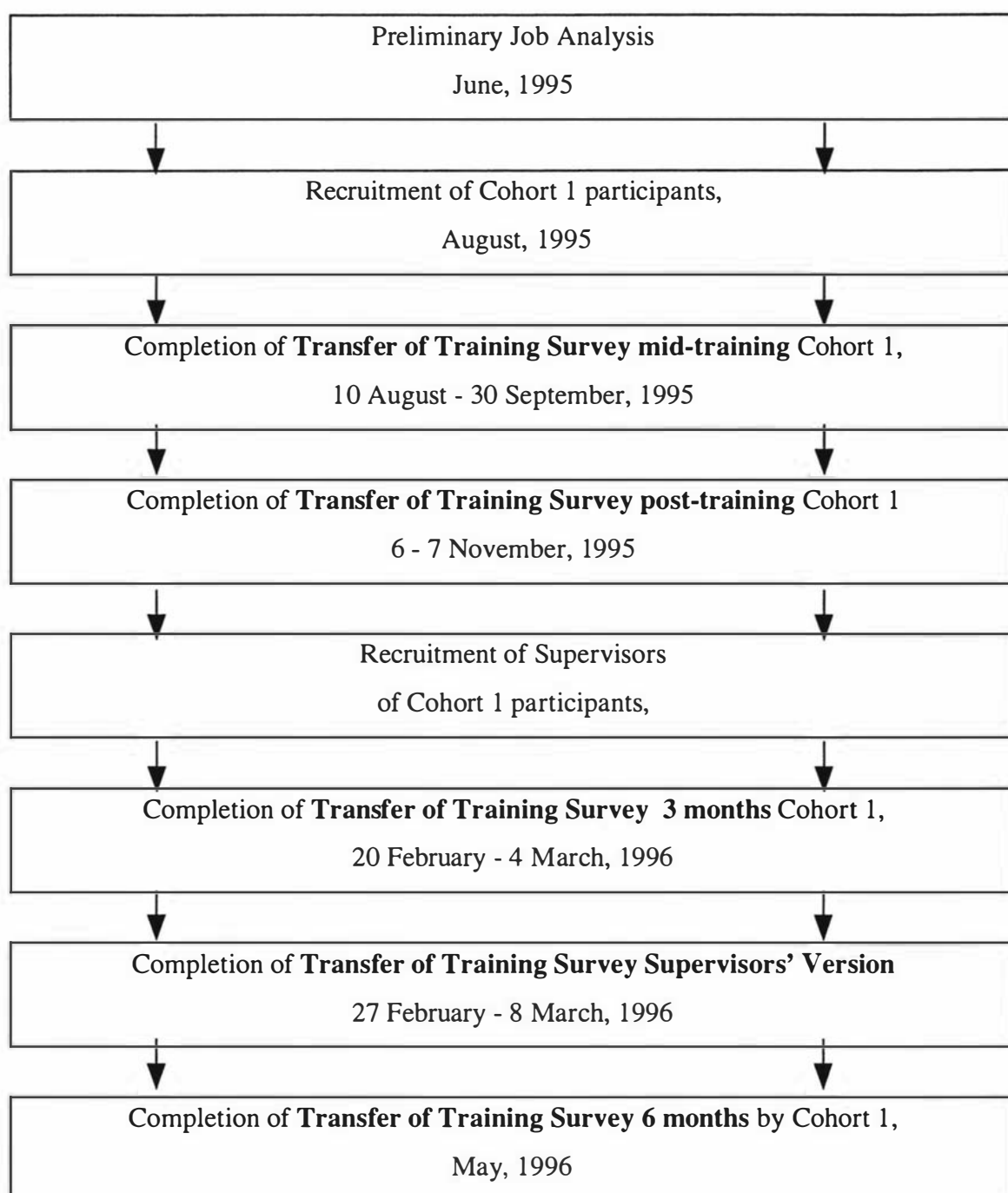
Participants were 27 case managers, public sector employees, who had voluntarily enrolled in the training programme, a post-graduate diploma at a tertiary institution. Ten workplace supervisors of the trainees participated in the pilot study.

Design

Data was collected in a longitudinal design in which the surveys changed over time. The study design for the pilot study is represented diagrammatically below.

Measures

Survey materials were sourced from several areas including industrial and organisational psychology literature, and managerial psychology literature. A preliminary Job Analysis was carried out within the organisation to assist in research decisions and to establish criteria for assessment measures. A literature search was also carried out in the



organisation's library. The questionnaires contained both forced-choice and open-ended questions to obtain both quantitative and qualitative data.

The questionnaire **Transfer of Training Survey Mid-training** included measures designed to assess the trainees' expectations, organisational climate, psychological well-

being, life satisfaction, perceptions of skill requirements, self-assessment of skills and abilities, organisational commitment, self-efficacy, and demographics.

Transfer of Training Survey Post-training, administered at the end of the 27-week course, consisted of measures designed to assess the understanding and perceived relevance of the training modules, reaction to the training programme, behaviour change, anticipated difficulties in the workplace, problems, obstacles, support required for transference of training, effort, discussion about the training with others and the impact of the training on the organisation, branch, colleagues, clients and the trainees themselves.

The **Transfer of Training Survey 3 Months**, administered at 3-months post-training, incorporated a mixture of measures designed from data elicited from **Transfer of Training Survey Post-training** and repeat measures (perceptions of skill requirements, expectations, and organisational commitment). The new measures included perceptions of changes in work behaviour and perceptions of facilitators and inhibitors to the transfer of training.

The final questionnaire, **Transfer of Training Survey 6 Months**, administered at 6-months post-training, incorporated measures used in previous surveys (organisational climate, modules, changes in work behaviour, perceptions of facilitators and inhibitors to the transfer of training) and additional measures which included job satisfaction, the effects of training, and intention to further training.

Procedure

Cohort 1 (n=40) were contacted by post at their respective branches after they had finished the 12 week residential component of their training. Because of difficulties in accessing the trainees, (described in *.* and below), it was not possible to administer a pre-test to Cohort 1. Therefore, the first questionnaire administered to the trainees was sent to them after they had completed the first part of their training programme. The mail-out contained a letter, the Information Sheet for Transfer of Training Survey, a Consent Form and the questionnaire, the Transfer of Training Survey Mid-training. The letter was an invitation to the trainees to participate in the study (see Appendix C1).

The information sheet explained the purpose and the procedure of the study: the types of measures to be taken, the duration of the study, the time involved at data collections and the types of questions that were to be asked in the questionnaires. The participants were advised that their supervisors and others would also be surveyed to investigate their supervisors' perceptions of observable work behaviour changes that may or may not occur following the training programme. Participants were informed that data would be collected from individuals but that the research was concerned with group changes. Issues of confidentiality and anonymity, knowledge of results and use of data were explained. In accordance with the ethical principles of Massey University and the New Zealand Psychological Society, participants were told that they did not have to participate in the study or answer any questions that they did not wish to, and, that they had the right to withdraw at any stage without penalty and that their participation or otherwise would not, in any way, effect their academic or work records. Finally, the information sheet gave the names of the research team, address, telephone and facsimile numbers and e-mail address of the researchers for any contact solicited by the trainees (see Appendix C2). Consent was sought and participants were asked to read and sign the attached Consent Form (see Appendix C3). Once consent was signed, the letter gave participants instructions on how to work through the questionnaire and asked them to return the Consent Form and the questionnaire to the researcher in the pre-paid envelope.

Because of the unexpectedly low return rate (32.5%), reminder letters were sent two weeks following the first mail-out. During the following month, another 11 questionnaires were returned, giving a return rate of 60% (27 participants). Prospective participants were then telephoned and further reminded of the invitation to join the study. These efforts raised the final return rate to 67.5%.

The cohort was met face-to-face on the next occasion, at 27 weeks. This was during the final week of training when the participants had returned to the tertiary institution having completed a practicum back in their workplace. **Transfer of Training Survey Post-training** was not administered face-to-face as planned but, as suggested by the trainees, was left for them to complete and return to the researcher by post. The return rate of this administration was 37.5% of the original sample.

The fourth and fifth questionnaires to members of Cohort 1 were postal administrations necessitated by the geographical locations of the trainees. A letter accompanied these postal administrations. The **Transfer of Training Survey 3 Months** was administered to the 15 participants who were still in the study following the previous survey. Eleven of the 15 remaining participants returned this survey. Of the 11 returned questionnaires there was missing data from one participant, and another participant who had resigned from the organisation, which resulted in analysis of data for 9 participants. **Transfer of Training Survey 6 Months** return rate was 22.5%. Overall, the participants in the pilot study represented 22.5% of the total cohort who began their training.

The recruitment of workplace supervisors and the subsequent administration of the “Transfer of Training Survey - Supervisors’ Version” were by post. The mail-out contained a letter inviting participation in the study, the Information Sheet for Transfer of Training Survey and a Consent Form. The letter advised the supervisors of the study and specified their role in the study. They were informed that they would be asked to provide information about a trainee’s knowledge, skills and abilities as they pertain to the job title and possible behavioural changes since training. They were also advised that they would be asked to provide the information *only* when the trainee had agreed to participate in the study. Consequently, their involvement in the study was dependent upon their consent and that of the trainee for whom they were responsible. Twenty-eight supervisors were invited to participate in the study; 10 completed the questionnaire which represents a return rate of 35.7%.

Results

Characteristics of the sample

There were 7 men and 20 women in Cohort 1, (n=27) whose ages ranged from 49 years to 22 years with a median of 34 years. Participants were mainly Pakeha (New Zealanders of European descent). There were 15 Pakeha (55.6%); 6 Maori (indigenous New Zealanders) (22.2%); 3 Pacific Islanders (11.1%) and a further 3 (11.1%) who classified themselves as “other”.

The largest percentage of participants had attained a certificate or diploma below Bachelor level (33.3%) whilst the next two groups had achieved Sixth Form Certificate

in one or more subjects (18.5%) and University Entrance (18.5%). These last two qualification categories represent New Zealand secondary school qualifications. At the tertiary level, one participant attained Bachelor's level (3.7%), and two participants (7.4%), a post-graduate degree, certificate or diploma. One participant had achieved a hard-to-place qualification labelled "other". Missing data accounted for 7.4% of the total.

The time that participants had worked for the organisation ranged from between seven months to more than five years (see Table A). Thirty-seven percent had spent more than five years in the organisation and a further 37% had been employees for between two and five years. The next group, 22%, had spent less than two years and more than 12 months whilst 4% had worked between seven and 12 months for the corporation.

Table A

Time spent in working in the organisation and in the role of case manager cohort 1 (n=27)

Time	organisation	role of case manager*
0 - 6 months		7%
7 - 12 months	4%	7%
< 12 months and > 2 years	22%	78%
2 - 5 years	37%	
< 5 years	37%	

* 8% did not identify as case manager

The majority of participants had been in the role of case manager since March, 1994, when the organisation changed its operation to a model of case management. Of Cohort 1, 77.8% had been case managers for more than 12 months and less than two years and 14.8% less than 12 months. Additionally, 7.4% did not identify their job role as that of case manager.

Discussion

The pilot study was successful in achieving its aims and useful information was gained on certain aspects of administration and is discussed below.

The introduction of new measures for different levels of analysis were determined during the course of the pilot study. In the immediate phase of the study, measures of the trainees' attitudes, skills and knowledge were introduced; at the intermediate phase, results, organisational factors and behaviour changes were measured; and in the concluding phase, the effectiveness of the transfer of training and organisational effectiveness measures were presented. Thus, the questionnaires and the sequence of questionnaires were developed in a longitudinal design where repeated measures would be necessary and appropriate.

The issue of acceptability and usefulness of the trainees' questionnaires was raised at a meeting with the cohort prior to a survey administration. One point concerned the sample under investigation. One participant, not a case manager, asked if the questionnaires were developed specifically for case managers since it was difficult to respond unless one was a case manager. Because the training content booklet was entitled "Diploma in Rehabilitation Studies for ACC's Case Managers" it was assumed that course members would be case managers. This assumption guided the design and preparation of the questionnaires. The majority of participants in the pilot study were, in fact, case managers. Furthermore, the majority of the case managers were relatively long-serving members of organisation although many did not hold a first degree (see Chapter 2 for discussion on entry criteria).

There were two areas of concern in the surveying of supervisors: firstly, one participant was surprised that supervisors were to be included in the research. In response to this query, attention was drawn to the "Information Sheet for Transfer of Training Survey" which alerted possible participants to the inclusion of supervisors and to the "Informed Consent" statement which included this issue. In the event that a participant did not want the supervisor to report on behavioural changes post-training, consent could be withdrawn.

Secondly, there were perceived differences in case management supervision between rural and urban branches. For some case managers the best informed supervisor could be their branch managers because in rural branches it was a branch manager who had knowledge of the case managers' work not an assigned supervisor for the duration of the

training programme. Consequently, it was decided that both branch managers and principal case managers would be prospective participants in the main study.

The results of the pilot study led to minor changes in the questionnaires. Firstly, there was difficulty with Arnold's psychological well-being -life-satisfaction scale and skills and abilities scale. It appeared several participants had difficulty interpreting the measure in its original state because the paired semantic differences were on a continuum with the order of positive and negative descriptors inconsistent in their positive / negative polarity. A modification was made to overcome this problem by aligning both bipolar descriptors for each scale to the left side of the rating scale and with the positive descriptor in first position (e.g., interesting vs. boring; enjoyable vs. miserable).

The relevance of "manual dexterity" in the Arnold skills and abilities measure was questioned by a participant. The measure lists a range of *possible* skills and abilities and respondents are asked to endorse the degree to which they consider the skills or abilities are needed for their job. From the job analysis it was assumed that in case management, a degree of manual dexterity would be required for filling in forms, keyboard skills and driving a car and that the skill would have a degree of relevancy. Secondly, the length of the self-efficacy scale was challenged. The self-efficacy scale consists of 52 items which reflect the competencies documented in the booklet "Case Management Competencies 1995" published by the organisation. To give a comprehensive coverage of the competencies expected and required of case managers all were included in the measure and it was decided that no modifications were required.

Thirdly, the rating scale of the Organisational Climate questionnaire proved difficult to interpret. The rating scale was altered from : : : : : : to solid separators.

The difficulties of applied research were features of the pilot study. One of the main issues that had to be resolved was access to participants (discussed in Chapter 2). Access to Cohort 1 pre-training was prevented by the training programme director who claimed that he had not been informed of the research. This point was disputed by

ACC's project manager. Administration of the mid-training questionnaire was in jeopardy as ethical approval had to be gained. Participants were concerned also that "a third party", specifically, the present researcher, had biographical details (viz., name, work address and student status) of course members without their consent. In terms of the research, it appeared that there was confusion about the ethical requirements of "informed consent" and "confidentiality." It was suggested that for trainees in future studies, a letter should be sent from the organisation advising trainee case managers of the present research.

Nevertheless, there was unwillingness of the cohort to respond to the "Transfer of Training Survey - post-training" during a meeting thus, the administration of the questionnaire was problematic. Some members of the cohort stated that they were tired and would not cooperate in responding to the questionnaire at that time. They suggested that if the researchers wanted cooperation and quality data they should leave the questionnaires with the participants who would complete them in their own time during the evening.

Hence, it was agreed that the coded surveys be handed to the participants who were asked to remove the identification labels, complete the questionnaire as honestly as possible, return it the next day in a sealed envelope which would be returned to the researcher by the organisation's project manager. To preclude non-participation in the main study because of fatigue, a change in time for questionnaire administration was sought.

The issue of acceptability and usefulness of the supervisors' questionnaires was problematic. The return rate of 35.7% (n=9) by the supervisors of Cohort 1 for "Transfer of Training Survey Supervisors' Version" was disappointing. One of the difficulties in researching the supervisors and asking supervisors to report on the observable changes in the trainees' work-related behaviours was that the supervision, in some instances, was performed by a practicum support co-ordinator / principal case manager who did not work in the same office as the trainee. Their involvement with the trainee focused specifically on the practicum and course projects and consequently, they did not have insight into the trainee's work-behaviours either pre-training or post-

training. To capture information from superiors, branch managers were included in the supervisors' group in the main study.

Work supervisors' reports on the trainees were needed rather than the training course supervisors' assessments as the concern was with the effects of training on the case managers on-the-job performance. To encourage supervisors' support in the main study and to further inform them of the project, a letter was sent to all branch supervisors in the organisation.

The very low response rate for the pilot study may be attributable to difficulties between the training institution and the independent research and, as discussed in Chapter 2, possible conflict of research interest. Initially access to participants was difficult and delayed until ethics approval had been obtained from the Human Ethics Committee of the training provider. Subsequently, there appeared to be deep resistance to the study by Cohort 1. In the first questionnaire the return rate was 67.5% which dropped to 37.5% with the second questionnaire. The return rate for the 3-month and 6-month questionnaires was 22.5%.

As well as deep resistance to the study, staff changes also accounted for the poor return rate. For example, in one branch, the practicum support co-ordinator / principal case manager of the Cohort 1 trainee resigned from the organisation. In another branch, the trainee resigned from the organisation to attend full-time at university in order to complete a further degree qualification. In the main study, every effort was made to track participants but this was possible only when staff changes were internal. Because of the Privacy Act (1993), resignations from the organisation meant that the participants could not be traced and therefore were no longer available for the present research.

This attrition rate was alarming, especially in light of the study being longitudinal and involving three further cohorts of trainees. Although attrition is expected in longitudinal studies both the rate and the timing of the attrition in the pilot study was of serious concern. This was a useful learning experience for the researcher who was then able to make appropriate adjustments for administrations of the main study questionnaires. As a result, the organisation further ratified the study by both written and verbal

communication, to counter possible defections from the study by subsequent trainees. Unfortunately, this presented an ethical dilemma which is discussed below. Furthermore, the training institution allocated morning appointments for the administration of questionnaires to maximise participation in the present study and optimise the collection of quality data.

Appendix C: Correspondence

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C1

**MASSEY
UNIVERSITY**Private Bag 11222
Palmerston North
New Zealand
Telephone +64-6-356 9099
Facsimile +64-6-350 5673**COLLEGE OF HUMANITIES
AND SOCIAL SCIENCES**

1956

**SCHOOL OF
PSYCHOLOGY**

18 August, 1995.

Dear

Re: Transfer of Training Research

Congratulations on your acceptance into the Diploma of Rehabilitation Studies at Victoria University of Wellington.

I am writing to invite you to participate in a study evaluating the Transfer of Training which is being undertaken by Massey University at the request of the Accident Rehabilitation & Compensation Insurance Corporation (ACC). The purpose of the study is outlined in the attached Information Sheet.

The questionnaires entitled "Transfer of Training survey" contain items which we are investigating and perceive as relevant to the transfer of training. You may find thinking about elements of your position of Case Manager and your personal attributes challenging, sometimes difficult and interesting. There is also a set of demographic questions for you to answer.

If you agree to participate in the study, you can be assured of confidentiality. All the information you provide is confidential; only group analyses will be reported; qualitative data will be reported anonymously and neither you nor your Branch will be identified by name.

The questionnaire is a survey, not a test and as such there are no right or wrong answers. You are requested to answer as honestly as possible.

You do not have to participate in the study or to answer any questions you do not wish to and you have the right to withdraw at any stage. There is no penalty; your participation or otherwise does not, in any way, affect your academic or work records.

We would very much appreciate your participation in this study which will allow us to see the extent to which training transfers into the ACC work environment.

If you consent to participate, please read and sign the attached Consent Form and return it to me at Massey University.

If you have any questions or would like to discuss the study with me, please contact me. Thank you for your attention and we look forward to meeting with you personally in the future.

Yours sincerely

Cathie Collinson
Postgraduate Researcher / PhD Candidate



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UNIVERSITY**Private Bag 11222
Palmerston North
New Zealand
Telephone +64-6-356 9099
Facsimile +64-6-350 5673**COLLEGE OF HUMANITIES
AND SOCIAL SCIENCES****PSYCHOLOGY****SCHOOL OF
PSYCHOLOGY**

Information Sheet for Transfer of Training Survey

INFORMATION SHEET FOR TRANSFER OF TRAINING SURVEY

This Information Sheet is to introduce you to a study evaluating the transfer of training of the Diploma in Rehabilitation Studies to the corporate environment. The study is being conducted by Massey University at the request of the Accident Rehabilitation and Compensation Insurance Corporation (ACC).

The research team consists of Associate Professor Judith Brook who is directing the study and Ms Catherine Collinson, Research Officer and PhD candidate. Our addresses and contact numbers are provided below.

The purpose of this study is to evaluate the transfer of skill, attitudes and behaviour acquired during the Diploma in Rehabilitation Studies programme to the corporate environment. Whenever employees of an organisation take part in a training programme it is anticipated that it will result in changes in their work behaviour and that these changes, in turn, will impact on their work performance and organisational effectiveness.

ACC requested that the transfer of training study be carried out by an organisation external to the corporation and a small group of researchers from Massey University accepted the invitation to conduct the research. This project has been reviewed and approved by the Massey University Human Ethics Committee.

In order to develop a comprehensive understanding of the changes that have occurred in the Case Managers who participate in the Diploma in Rehabilitation Studies programme, we have undertaken to study all four cohorts that complete the programme. Both quantitative and qualitative measures will be used at regular intervals following the Diploma course, during the months after trainees return to their work setting. A 'control' group of Case Managers who have not taken part in the programme will be studied as well. In this way it is possible to make valid comparisons between similar groups of trainees and non-trainees at several points in time and form a more accurate picture of the effects of training on subsequent work and organisational performance.

In this study, you will be asked to respond to up to five questionnaires over the next 10-12 months. Each one will take approximately 45 minutes to complete and the questionnaire will consist of both open-ended and closed-end questions.

Questionnaires will also be administered to your supervisors and others who are in a position to observe any changes that occur following the training programme.

Although we must collect the data from you individually, we are interested in group changes only and all responses will be aggregated and reported as averages over the entire cohort or the total group consisting of the combined cohorts.

You will remain entirely anonymous in reported results and individual responses will be known only to the researchers. All questionnaires will be kept confidential to the research team and will be destroyed when analysis of results and report writing is complete. You will have access to summary results of the study as it progresses and when it is finished but if you have any questions at any time about this research, please contact either of us at the following address:

Associate Professor Judith Brook
Department of Psychology
Massey University
P.B.11-222
Palmerston North

Ms Catherine Collinson
Department of Psychology
Massey University
P.B.11-222
Palmerston North

Phone: (06) 350 4121
Fax: (06) 350 5673

Phone: (06) 350 4136
Fax: (06) 350 5673

Email: j.brook@massey.ac.nz

Email: c.a.collinson@massey.ac.nz

**MASSEY
UNIVERSITY**Private Bag 11222
Palmerston North
New Zealand
Telephone +64-6-356 9099
Facsimile +64-6-350 5673**COLLEGE OF HUMANITIES
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Consent Form

CONSENT FORM

RESEARCHERS: Dr Judith A. Brook
Associate ProfessorCatherine A. Collinson
Postgraduate Researcher

I, _____, am interested in collaborating in this research, the purpose of which, is to study the transference of training.

If I agree to participate, I will complete a Transfer of Training questionnaire and some demographic characteristics. This will take approximately 45 minutes.

I am aware that I will be contacted by the researchers on several future occasions for the purpose of on-going evaluation.

I understand that I am free to withdraw from the study at any time without penalty.

I have received assurance from the researcher that the responses I give will remain strictly confidential and anonymous. Moreover, the results will be aggregated to examine group transfer effects, not individual effects.

PARTICIPANT'S SIGNATURE:

DATE:



C4

Letters to Participants

**MASSEY
UNIVERSITY**

Private Bag 11222
Palmerston North
New Zealand
Telephone +64-6-356 9099
Facsimile +64-6-350 5673

**COLLEGE OF HUMANITIES
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**SCHOOL OF
PSYCHOLOGY**

6 March, 1997.

Dear

RE: TRANSFER OF TRAINING RESEARCH

Thank you for your continuing support of our project. The information you have provided has been very informational and valuable.

It is now three months since you completed your training programme and we are entering another phase of our research with your Cohort. As part of this phase, I am now enclosing the "Transfer of Training Survey Part 3" to which I ask you to respond.

The survey questionnaire has been developed using data from the "Transfer of Training Survey Part 2" and you will find in it some measures which are repeats of ones you have previously endorsed. We hope you will respond as honestly as you can in terms of your current opinions and attitudes. Please feel free to provide any information that you feel may be relevant to our research project.

Copies of our reports have been forwarded to ACC Head Office. There are six phases to date and the reports are entitled "A Study of the Transfer of Training from the Tertiary Setting to the Corporate Environment". They may be of interest to you.

We look forward to hearing from you and would appreciate the return of the questionnaire by 25 March, 1997 in the Freepost envelope.

Thank you once again for your time and co-operation.

Yours sincerely

C. A. Collinson
Research Officer /PhD Candidate



**MASSEY
UNIVERSITY**

Private Bag 11 222
Palmerston North
New Zealand
Telephone +64-6-356 9099
Facsimile +64-6-350 5673

**COLLEGE OF HUMANITIES
AND SOCIAL SCIENCES**

6 June, 1997.

Dear

RE: TRANSFER OF TRAINING RESEARCH

Thank you for your continuing support of our project. The data you have provided in the surveys to date has been very informational and valuable.

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It is now six months since you completed your training programme and we are entering the final phase of our research with your Cohort. As part of this phase, I am now enclosing the "Transfer of Training Survey Part 4" to which I ask you to respond as honestly as you can in terms of your current opinions and attitudes. Please feel free to provide any information that you feel may be relevant to our research project.

Copies of our reports have been forwarded to the ACC and are available to you either through your Branch Manager, Principal Case Manager or you could contact Kirsty Ethynes, Staff Development Advisor, at Head Office. There are seven phases to date and the final report is due for submission 31 July, 1997. The reports are entitled "*A Study of the Transfer of Training from the Tertiary Setting to the Corporate Environment*" and are co-authored by Associate Professor J. Brook and myself. They may be of interest to you.

We look forward to hearing from you and would appreciate the return of the questionnaire by 20 June, 1997 in the Freepost envelope.

Thank you once again for your time and co-operation.

Yours sincerely

C. A. Collinson
Research Officer / PhD Candidate

Memorandum to Participants

MASSEY UNIVERSITY

MEMORANDUM FOR:

FROM: Cathie Collinson
DATE: 27 June, 1997
SUBJECT: TRANSFER OF TRAINING RESEARCH

Recently, (name), you would have received another questionnaire entitled "Transfer of Training Survey Part 4" from me. To date, I have not had a response from you and, therefore, I am sending this reminder.

As you know, the research is of importance to the Corporation and we are keen to get a complete set of data from each of the Cohorts.

As a member of Cohort 4, your participation is a significant contribution to the project. With your data we can get an overview of what is really happening in the workplace post-training and not just the opinions of a few trainees which may present a bias in analysis and reporting. We need as much information as possible to produce valid results. Therefore, the return of your questionnaire is very important.

I would very much appreciate the return of your completed questionnaire to me at Massey University as soon as possible. Please be assured that you will not be identified or identifiable in reporting.

If you require a copy of the questionnaire please let me know. I can be contacted either by:

Fax: (06) 350 5673
Phone: (06) 356 9099 ext. 4136
Direct phone: (06) 350 4136
Email: C.A.Collinson@massey.ac.nz

I look forward to hearing from you.

C.A.Collinson
Research Officer / PhD Candidate



C6

Letter to Control Group Participants

**MASSEY
UNIVERSITY**

Private Bag 11222
Palmerston North
New Zealand
Telephone +64-6-356 9099
Facsimile +64-6-350 5673

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SCHOOL OF
PSYCHOLOGY

22 March, 1996

Dear Case Manager,

RE: TRANSFER OF TRAINING RESEARCH

As you may be aware, the Accident Rehabilitation & Compensation Insurance Corporation (ACC) established a university course of training and education which would rapidly up-skill Case Managers. A group of Case Managers have already completed the training and other groups are currently taking part in the training programme. As part of that training initiative, ACC also requested that a small team of researchers at Massey University undertake a project to study the transference of that training back into the corporate environment.

I am writing to you to invite you to participate in our study evaluating the Transfer of Training. As a professional Case Manager, you will have information which will be very valuable to our study.

To help you understand what the study is about I have enclosed the Information Sheet for Transfer of Training Survey. The purpose of our study is outlined in the Information Sheet and a copy has been sent to all those participating in the study.

If you agree to take part in our study, you will be asked to respond to two surveys; the first is enclosed with this letter and the second will be posted to you at a later date.

The questionnaires entitled "Transfer of Training Survey" contain items which Associate Professor Brook and I are investigating and are perceived as relevant to the transfer of training. Your questionnaire is concerned with work attitudes, knowledge and behaviour that are relevant to the job of Case Manager. Some of the items are similar to those answered by members of the training programme while others are not. These questionnaires are surveys, not tests, and as such there are no right and wrong answers. You are requested to answer as honestly as possible.

As mentioned on the Information Sheet, we will be administering a questionnaire to your supervisors (Branch Manager and Principal Case Manager) should you and they consent to participating in our study.

If you do agree, you can be assured of confidentiality. All the information you provide is confidential; only group analyses will be reported. Qualitative data will be reported anonymously and neither you nor your Branch will be identified by name or identifiable.

We would very much appreciate your participation in this study which will allow us to see the extent to which training transfers into the ACC work environment. Filling in the enclosed questionnaire implies your consent. I look forward to hearing from

you and would appreciate the return of the completed questionnaire by 15 April, 1996 in the Freepost envelope.

If you have any questions or would like to discuss the study with me, please contact me.

Thank you for your time and consideration.

Yours sincerely

Cathie Collinson
Research Officer / PhD. Candidate

Phone: (06) 350 4136

Fax: (06) 350 5673

E.mail: c.a.collinson@massey.ac.nz



C7

**MASSEY
UNIVERSITY**Private Bag 11222
Palmerston North
New Zealand
Telephone +64-6-356 9099
Facsimile +64-6-350 5673**COLLEGE OF HUMANITIES
AND SOCIAL SCIENCES**

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Letter to Supervisors

22 March, 1996

Dear Supervisor,

RE: TRANSFER OF TRAINING RESEARCH

As you may be aware, a project entitled "A Study of the Transfer of Training: From the Tertiary Setting to the Corporate Environment" is being undertaken at Massey University, as requested by the Accident Rehabilitation and Compensation Insurance Corporation. For your information, I have enclosed the Information Sheet for Transfer of Training Survey which provides an outline of the study and is sent to all participants.

The study is well underway and we are looking forward to meeting with Cohort 2, in Wellington, as they complete their Diploma in Rehabilitation Studies in the next few weeks. Currently, we are surveying participating members of Cohort 1 who completed their training three months ago and their Supervisors. You may be involved in this aspect of the project.

Another important stage of our project is imminent: the selection and recruitment of a group of Case Managers who, to date, are not involved in the Diploma in Rehabilitation Studies programme at Victoria University. This group is referred to as a "Control" group and we will be surveying them at two different times. As the Information Sheet explains, we need to be able to make comparisons between groups of Case Managers: those who train and those who do not, to observe the impact of the training on work-related behaviours, attitudes and skills.

There may be Case Managers under your supervision who receive an invitation to join the study. These Case Managers have been randomly selected to enable us to get a representative sample across the country.

As the Supervisor of Cohorts and Controls, we will be seeking your co-operation in the project.

We believe you have unique information that will help in the study of training transference which, in turn, will help ACC in future decision making. Information you provide is confidential to the researchers at Massey University and our reporting to the Corporation is done anonymously. For examples of our reporting, you have access to our first two Reports which are obtainable through your Regional Office. The Reports are entitled "A Study of the Transfer of Training: From the Tertiary setting to the Corporate Environment" and co-authored by Judith Brook and me.

The third report, which covers the time period January to March, 1996, will be available in April.

Thank you for your time.

Yours sincerely

Cathie Collinson
Research Officer / PhD. Candidate

Phone: (06) 350 4136

Fax : (06) 350 5673

Email: c.a.collinson@massey.ac.nz

Appendix D: The Measures

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D1
Understanding of training modules
Relevancy of training modules

**What do you expect to get out of the modules covered in your course?
 Rate each module according to the following scales:**

**How useful (relevant) do you think
 this module will be for your work?**

1 2 3 4 5 6

: : : : : : :

**How do you rate your present
 understanding of this module?**

1 2 3 4 5 6

: : : : : : :

**Minimally
 useful
 in practice**

**Highly
 relevant
 to daily work**

**Vague
 understanding
 only**

**Excellent
 understanding**

Module 1 Rehabilitation policy in practice _____

Rehabilitation policy in practice _____

--	--

**Module 2 Personal & professional skills
 development** _____

**Personal & professional skills
 development** _____

--	--

**Module 3 Principles & practices of
 rehabilitation** _____

**Principles & practices of
 rehabilitation** _____

--	--

**Module 4 Culture, gender, class, age
 & ability issues** _____

**Culture, gender, class, age
 & ability issues** _____

--	--

**Module 5 Research design &
 methodology** _____

**Research design &
 methodology** _____

--	--

**Module 6 Legislation, regulation, ACC
 policy & implications
 for case management** _____

**Legislation, regulation, ACC
 policy & implications
 for case management** _____

--	--

**Module 7 Developing a Practicum
 Learning Contract** _____

**Developing a Practicum
 Learning Contract** _____

--	--

**Module 8 Review of Learning &
 Presentation of project
 findings** _____

**Review of Learning &
 Presentation of project
 findings** _____

--	--

D2
Organisational changes
Personal changes

What types of organisational and personal changes, if any, do you consider have been brought about by your training? Please circle **YES** or **NO**.

1. Areas of organisational change:

- | | | | |
|------------|-----------|--|-------------------------------------|
| YES | NO | Internal communication | <input type="checkbox"/> |
| YES | NO | Staff turnover | <input type="checkbox"/> |
| YES | NO | Awareness and acceptance of organisational policies | <input type="checkbox"/> |
| YES | NO | Understanding of ACC's regulations, legal and ethical requirements | <input type="checkbox"/> |
| YES | NO | Understanding between Case Managers and Claimants | <input type="checkbox"/> |
| YES | NO | Understanding between Case Managers and Supervisors | <input type="checkbox"/> |
| YES | NO | Other (please specify) | <input checked="" type="checkbox"/> |

2. Areas of personal change:

- | | | | |
|------------|-----------|-----------------------------------|--------------------------|
| YES | NO | Job satisfaction | <input type="checkbox"/> |
| YES | NO | Job commitment | <input type="checkbox"/> |
| YES | NO | Attitude to change | <input type="checkbox"/> |
| YES | NO | Quality of managerial performance | <input type="checkbox"/> |
| YES | NO | Interpersonal skills development | <input type="checkbox"/> |
| YES | NO | Time management | <input type="checkbox"/> |
| YES | NO | Other (please specify) | <input type="checkbox"/> |

Each of the following scales are defined by two statements, one at each end. We are interested in how you rate ACC, the organisation you work for?

Please indicate your judgement by placing a cross over the appropriate space on the scale, to show how the whereabouts on the scale the organisation fits.

EXAMPLE

This is a good
organisation

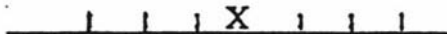


This is a poor
organisation

This would indicate that you rate the organisation as a reasonably good one, but not an entirely good one.

EXAMPLE

This is a good
organisation



This is a poor
organisation

This would indicate that you judge the organisation to be neither good nor poor, but neutral; or, that your judgement to these qualities are good and poor in equal amounts. Try not to use this middle category, but make a definite decision about the organisation's position on the scale as often as you can.

Notes

- Place your cross in the middle of the space.
- Be sure to check every scale and do not miss any out.
- Only put one cross on each scale.

Conformity is not characteristic of this organisation



Conformity is very characteristic of this organisation

No responsibility is given in the organisation



There is a great emphasis on personal responsibility in the organisation

High challenging standards are set in the organisation



Standards are very low or non-existent in the organisation

Members are recognised and rewarded positively



Members are ignored, punished or criticised

The organisation is disorderly, confused, or chaotic



The organisation is well organised with clearly defined goals

Warmth and support are very characteristic of the organisation



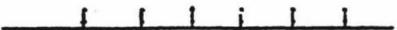
There is no warmth and support in the organisation

Leaders/Managers lack charisma, personal magnetism or appeal



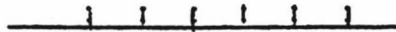
Leaders/Managers are charismatic, transmitting personal magnetism

Leaders/Managers in this organisation are considerate of individuals and seek to develop them



Leaders/Managers do not treat staff as "people", but simply as a work force

Leaders/Managers encourage individuals to reason and make their own decisions before acting



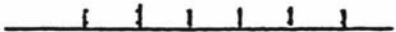
Leaders/Managers demand that staff follow out orders without thinking

Downward communication is accepted with a great deal of suspicion



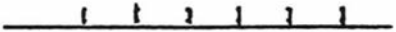
Downward communication is accepted with an open mind

Organisational goal are established by group action (except in crisis)



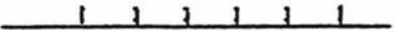
Organisational goals are issued by orders from the top

Complete confidence is shown by managers and supervisors in their subordinates



No confidence is shown by managers and supervisors in their subordinates

Subordinates' ideas are seldom if ever sought and used, even if worthy



Subordinates' ideas are always sought and used if worthy

No co-operative team work exists



A great deal of co-operative team work exists

Supervisors know very well the problems faced by their subordinates



Supervisors know little of the problems faced by their subordinates

Decisions are made mostly at the top



Decisions are made throughout and are mostly well integrated

Subordinates are fully involved in decisions related to their work



Subordinates are not included at all in decisions related to their work

There is little or no resistance to the formal goals which are established



There is a strong resistance present to the formal goals which are established

D3
Organisational climate –ideal*

Below are the organisation scales you previously rated. Please do not turn back to view your responses. In this part we are interested in what you consider to be an ideal organisation.

For each of the organisation scales described elow, please place an (I) over the appropriate space on the scale to indicate your choice of where the organisation should ideally be

***NB. Instructions only. The Organisational climate – ideal scale is identical to the Organisational climate – actual scale except for the instuctions.**

D4
Organisational commitment

We are interested in the way people feel about the organisation for which they work. Below is a series of statements that represent possible feelings individuals might have.

For each of the following items, please circle the one number which best describes the extent of your agreement or disagreement with each statement.

- 1 = No, I strongly disagree
 2 = No, I disagree alot
 3 = No, I disagree just a little
 4 = I'm not sure
 5 = Yes, I agree just a little
 6 = Yes, I agree quite alot
 7 = Yes, I strongly agree

I am quite proud to be able to tell people who it is I work for	1	2	3	4	5	6	7	<input type="checkbox"/>
I sometimes feel like leaving this employment for good	1	2	3	4	5	6	7	<input type="checkbox"/>
I'm not willing to put myself out just to help the organisation	1	2	3	4	5	6	7	<input type="checkbox"/>
Even if the organisation were not doing too well financially, I would be reluctant to change to another employer	1	2	3	4	5	6	7	<input type="checkbox"/>
I feel myself to be part of the organisation	1	2	3	4	5	6	7	<input type="checkbox"/>
In my work I like to feel I am making some effort, not just for myself but for the organisation as well	1	2	3	4	5	6	7	<input type="checkbox"/>
The offer of a bit more money with another employer would not seriously make me think of changing my job	1	2	3	4	5	6	7	<input type="checkbox"/>
I would not recommend a close friend to join our staff	1	2	3	4	5	6	7	<input type="checkbox"/>
To know that my own work had made a contribution to the good of the organisation would please me	1	2	3	4	5	6	7	<input type="checkbox"/>

D5
Occupational self-efficacy

Below are a series of statements that represent components of your work.

In Column A you are asked to write either YES or NO depending on your evaluation of your ability to perform the task. (Can I do the task? YES or NO).

In Column B you are asked to assess how certain you are that you can perform the task, expressed as a percentage.

EXAMPLES

Column A (Y = yes) N = no) Can Do	Column B (0 to 100%) Certainty
--	---

I can review case notes to determine preliminary actions.

Yes 100%

(This response indicates that I feel I have complete certainty that I can perform the task.)

I can build rapport with claimants.
(Yes, I am moderately certain.)

Yes 50%

I can use language appropriate to the claimant.
(Yes, I am a little certain I can.)

Yes 10%

I can read non-verbal language.

No 0%

(This indicates that I cannot perform the task and therefore I feel no certainty that I can.)

--	--	--

Column A
(Y = yes)
(N = no)
Can Do

Column B
(0 to
100%)
Certainty

ASSESSMENT

I can prepare appropriate questions for initial interaction with claimants.

--	--	--

I can schedule interviews with claimants according to ACC's regulations and procedures.

--	--	--

I can establish working relationships with health professionals involved in cases.

--	--	--

INTERVIEWING

I can elicit required information from claimants through my questioning technique.

--	--	--

I can discuss options with claimants and explain the consequences of each option.

--	--	--

I can allow claimants to make their decisions based on suitable options.

--	--	--

I can collaborate with claimants about future actions.

--	--	--

I can close interviews effectively.

--	--	--

--	--	--

Column A
(Y = yes)
(N = no)
Can Do

Column B
(0 to
100%)
Certainty

PLANNING

I can plan to reflect agreed outcomes and case priority.

--	--	--

I can plan with specific, measurable and time bound objectives and strategies.

--	--	--

I can plan outcomes that will meet legislative requirements which are achievable and cost effective.

--	--	--

I can encourage claimants' active participation in the planning process.

--	--	--

I can integrate all knowledge and information.

--	--	--

STRATEGIES 1

I can facilitate and promote the development of medical objectives and strategies that contribute to the agreed outcome.

--	--	--

I can assist claimants in accessing, understanding and interpreting of medical reports.

--	--	--

I can identify issues to be explored when medical consultation is needed.

--	--	--

--	--	--

Column A
(Y = yes)
(N = no)
Can Do

Column B
(0 to
100%)
Certainty

STRATEGIES 2

I can explore critical issues in the social rehabilitation of claimants.

--	--	--

I can assist claimants to identify their social rehabilitation strategies.

--	--	--

I can develop social objectives and strategies that contribute to the agreed outcome.

--	--	--

I can disseminate information about a range and quality of services available to claimants.

--	--	--

STRATEGIES 3

I can negotiate early return to work with employers where possible.

--	--	--

I can develop vocational objectives and strategies that contribute to the agreed outcome.

--	--	--

I can work in partnership with service providers.

--	--	--

--	--	--

Column A (Y = yes) N = no) Can Do	Column B (0 to 100%) Certainty
--	---

I can utilise job exploration and career orientation materials with claimants.

_____	_____
-------	-------

--	--	--

I can identify needs for vocational counselling and placement services and make referrals as required.

_____	_____
-------	-------

--	--	--

I can assist the claimant in developing a self understanding of their capabilities, aptitudes and interests.

_____	_____
-------	-------

--	--	--

I can assess the relationship between claimants' ability and local labour market.

_____	_____
-------	-------

--	--	--

I can identify the need for clarification of functional work capacity assessments.

_____	_____
-------	-------

--	--	--

IMPLEMENTATION 1

I can organise and prioritise work to make the most efficient and effective use of time.

_____	_____
-------	-------

--	--	--

I can monitor and re-evaluate the progress on the agreed activities.

_____	_____
-------	-------

--	--	--

--	--	--

Column A
(Y = yes)
N = no)
Can Do

Column B
(0 to
100%)
Certainty

I can facilitate the progression of strategies set out in the Case Management Plan and/or the Individual Rehabilitation Plan.

--	--	--

I can develop contingent strategies when the initial strategies are not feasible.

--	--	--

I can involve claimants' support networks.

--	--	--

IMPLEMENTATION 2

I can inform claimants of other funding agencies which assist people with disabilities.

--	--	--

I can inform claimants of all financial entitlements under the 1992 ACC Act.

--	--	--

I can process all applications for entitlements.

--	--	--

EVALUATION

I can conduct systematic evaluation of each case at regular intervals.

--	--	--

--	--	--

Column A
(Y = yes)
(N = no)
Can Do

Column B
(0 to
100%)
Certainty

I can evaluate my own performance.

--	--	--

I can seek and accept regular feedback from others about my performance.

--	--	--

I can complete a final case assessment when the case is closed.

--	--	--

I can complete a monthly statistical analysis.

--	--	--

CASELOAD MANAGEMENT 1

I can organise my caseload to make the most efficient and effective use of time.

--	--	--

I can manage cases in their order of priority.

--	--	--

I can assess risk regularly.

--	--	--

I can delegate to other staff.

--	--	--

Below is a list of personal abilities.

Skills needed for the job

For each ability/skill please indicate the extent to which that skill/ability applies to the job of **CASE MANAGER**. Please ring the option that comes closest to your experience.

Ring "1" if the work requires **NONE** or **VERY LITTLE** of this ability.

Ring "2" if the work requires **SOME** of this ability.

Ring "3" if the work requires **A LOT** of this ability.

		None or Very Little	Some	A lot	
PERSUASION:	the ability to negotiate, sell and debate effectively	1	2	3	<input type="checkbox"/>
MEMORY:	the ability to accurately retain and recall material	1	2	3	<input type="checkbox"/>
PERCEPTION:	the ability to notice things in their detail	1	2	3	<input type="checkbox"/>
VERBAL COMPREHENSION:	the ability to obtain an accurate impression of the meaning of speech and writing	1	2	3	<input type="checkbox"/>
SPEECH FLUENCY:	ability to communicate effectively in speech	1	2	3	<input type="checkbox"/>
WRITTEN FLUENCY:	ability to communicate effectively in writing	1	2	3	<input type="checkbox"/>
QUICK THINKING:	ability to think on your feet	1	2	3	<input type="checkbox"/>
METHODICAL:	ability to work in a structured and well-ordered way	1	2	3	<input type="checkbox"/>
REASONING:	ability to draw valid conclusions from known information	1	2	3	<input type="checkbox"/>
LOGICAL:	ability to analyse and organise ideas and information	1	2	3	<input type="checkbox"/>
NUMERACY:	ability to understand and express information accurately in the form of numbers	1	2	3	<input type="checkbox"/>
FINANCE:	ability to understand money affairs	1	2	3	<input type="checkbox"/>
SPATIAL:	ability to picture descriptions of three-dimensional objects, or to understand maps/plans	1	2	3	<input type="checkbox"/>
DECISION MAKING:	ability to make effective judgements and decisions on complex and difficult questions	1	2	3	<input type="checkbox"/>
ORIGINALITY:	the ability to produce a flow of new, useful and unexpected ideas	1	2	3	<input type="checkbox"/>
ENTREPRENEURIAL INITIATIVE:	ability and willingness to take personal risks in a business context	1	2	3	<input type="checkbox"/>
RAPPORT:	ability to readily establish good relationships with people	1	2	3	<input type="checkbox"/>
MANUAL COMPETENCE:	ability to use your hands in careful, deft or skilled ways	1	2	3	<input type="checkbox"/>

Below is a list of personal abilities that may be required by work.

WHAT EXTENT DO YOU FEEL YOU POSSESS EACH OF THESE ABILITIES/SKILLS? D7
Self-rated skills

Please ring "1" if you feel you possess this ability to a **VERY LOW** degree.

Please ring "2" if you feel you possess this ability to a **RATHER LOW** degree

Please ring "3" if you feel you possess this ability to a **FAIR** degree.

Please ring "4" if you feel you possess this ability to a **RATHER HIGH** degree.

Please ring "5" if you feel you possess this ability to a **VERY HIGH** degree.

		Very Low	Rather Low	Fair	Rather High	Very High	
PERSUASION:	the ability to negotiate, sell and debate effectively	1	2	3	4	5	<input type="checkbox"/>
MEMORY:	the ability to accurately retain and recall material	1	2	3	4	5	<input type="checkbox"/>
PERCEPTION:	the ability to notice things in their detail	1	2	3	4	5	<input type="checkbox"/>
VERBAL COMPREHENSION:	the ability to obtain an accurate impression of the meaning of speech and writing	1	2	3	4	5	<input type="checkbox"/>
SPEECH FLUENCY:	ability to communicate effectively in speech	1	2	3	4	5	<input type="checkbox"/>
WRITTEN FLUENCY:	ability to communicate effectively in writing	1	2	3	4	5	<input type="checkbox"/>
QUICK THINKING:	ability to think on your feet	1	2	3	4	5	<input type="checkbox"/>
METHODICAL:	ability to work in a structured and well-ordered way	1	2	3	4	5	<input type="checkbox"/>
REASONING:	ability to draw valid conclusions from known information	1	2	3	4	5	<input type="checkbox"/>
LOGICAL:	ability to analyse and organise ideas and information	1	2	3	4	5	<input type="checkbox"/>
NUMERACY:	ability to understand and express information accurately in the form of numbers	1	2	3	4	5	<input type="checkbox"/>
FINANCE:	ability to understand money affairs	1	2	3	4	5	<input type="checkbox"/>
SPATIAL:	ability to picture descriptions of three-dimensional objects, or to understand maps/plans	1	2	3	4	5	<input type="checkbox"/>
DECISION MAKING:	ability to make effective judgements and decisions on complex and difficult questions	1	2	3	4	5	<input type="checkbox"/>
ORIGINALITY:	ability to produce a flow of new, useful and unexpected ideas	1	2	3	4	5	<input type="checkbox"/>
ENTREPRENEURIAL INITIATIVE:	ability and willingness to take personal risks in a business context	1	2	3	4	5	<input type="checkbox"/>
RAPPORT:	ability to readily establish good relationships with people	1	2	3	4	5	<input type="checkbox"/>
MANUAL COMPETENCE:	ability to use your hands in careful, deft or skilled ways	1	2	3	4	5	<input type="checkbox"/>

D8
Psychological wellbeing

Below is a question to which you are asked to respond using the five point scale:

- 1 = very
2 = quite
3 = not sure
4 = quite
5 = very

Please circle the rating that applies to you.

HOW DO YOU SEE YOURSELF IN GENERAL?

Confident

1 2 3 4 5

.....

Unsure

Timid

1 2 3 4 5

.....

Forceful

Tense

1 2 3 4 5

.....

Relaxed

Frustrated

1 2 3 4 5

.....

Fulfilled

Happy

1 2 3 4 5

.....

Sad

Pessimistic

1 2 3 4 5

.....

Optimistic

Discontented
with myself

1 2 3 4 5

.....

Contented with
myself

Below is a question to which you are asked to respond using the seven point scale:

- 1 = I'm extremely dissatisfied
 2 = I'm very dissatisfied
 3 = I'm moderately dissatisfied
 4 = I'm not sure
 5 = I'm moderately satisfied
 6 = I'm very satisfied
 7 = I'm extremely satisfied

Please circle the rating that applies to you.

HOW DO YOU FEEL ABOUT YOUR LIFE AT PRESENT?

Boring	1	2	3	4	5	6	7	Interesting	<input type="checkbox"/>
Enjoyable	1	2	3	4	5	6	7	Miserable	<input type="checkbox"/>
Useless	1	2	3	4	5	6	7	Worthwhile	<input type="checkbox"/>
Friendly	1	2	3	4	5	6	7	Lonely	<input type="checkbox"/>
Full	1	2	3	4	5	6	7	Empty	<input type="checkbox"/>
Discouraging	1	2	3	4	5	6	7	Hopeful	<input type="checkbox"/>
Disappointing	1	2	3	4	5	6	7	Rewarding	<input type="checkbox"/>
Brings out the best in me	1	2	3	4	5	6	7	Doesn't give me much of a chance	<input type="checkbox"/>

D10

Barriers to change

In implementing changes some problems were anticipated. We would like to know the extent to which these problems hindered you in implementing changes.

To what extent did the following anticipated barriers hinder you in implementing changes in the workplace? Please respond using the 5-point scale.

	1	2	3	4	5	

	Not at all		Sometimes			To a considerable extent
Staffing levels				1 2 3 4 5		<input type="checkbox"/>
Staff attitudes to change				1 2 3 4 5		<input type="checkbox"/>
Staff education				1 2 3 4 5		<input type="checkbox"/>
Staff turnover				1 2 3 4 5		<input type="checkbox"/>
Pressure from colleagues				1 2 3 4 5		<input type="checkbox"/>
Time constraints				1 2 3 4 5		<input type="checkbox"/>
Caseloading complexities				1 2 3 4 5		<input type="checkbox"/>
Number of cases to manage				1 2 3 4 5		<input type="checkbox"/>
Job stress				1 2 3 4 5		<input type="checkbox"/>
Claimants' expectations				1 2 3 4 5		<input type="checkbox"/>
Claimants' unwillingness to change				1 2 3 4 5		<input type="checkbox"/>
GP's attitudes/service providers' attitudes				1 2 3 4 5		<input type="checkbox"/>
Other (please specify)				1 2 3 4 5		<input type="checkbox"/>
.....						

Extent of effect of changes

At the end of your course, you were asked to write down changes that you proposed to make in your work as a result of your training. Now, we would like to know the extent to which you were able to implement these changes.

Please use the following scale in response to the questions below:

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

DURING THE PAST 3 MONTHS, TO WHAT EXTENT HAVE YOU BEEN ABLE TO:

Visit clients in their own homes?	1	2	3	4	5	<input type="checkbox"/>
Deliver a service more appropriate to Maori?	1	2	3	4	5	<input type="checkbox"/>
Reduce the amount of processing?	1	2	3	4	5	<input type="checkbox"/>
Promote an holistic approach to your client's rehabilitation?	1	2	3	4	5	<input type="checkbox"/>
Conduct more in-depth needs assessments?	1	2	3	4	5	<input type="checkbox"/>
Improve your interviewing techniques?	1	2	3	4	5	<input type="checkbox"/>
Improve your negotiating techniques?	1	2	3	4	5	<input type="checkbox"/>
Carry out more face-to-face contact with employers?	1	2	3	4	5	<input type="checkbox"/>
Carry out more face-to-face contact with service providers?	1	2	3	4	5	<input type="checkbox"/>
Carry out more face-to-face contact with treatment providers?	1	2	3	4	5	<input type="checkbox"/>
Demonstrate to your colleagues a different way of working?	1	2	3	4	5	<input type="checkbox"/>

(continued over page)

DURING THE PAST 3 MONTHS, TO WHAT EXTENT HAVE YOU BEEN ABLE TO:

- Encourage improved communication in your Branch? 1 2 3 4 5
- Teach other staff new skills and techniques? 1 2 3 4 5
- Reduce your caseloading? 1 2 3 4 5
- Provide intensive rehabilitation for selected clients whilst maintaining others? 1 2 3 4 5

How satisfied are you with the support you have received during the past three months? Please respond using the seven-point scale on the space provided.

- 1 = I'm extremely dissatisfied
- 2 = I'm very dissatisfied
- 3 = I'm moderately dissatisfied
- 4 = I'm not sure
- 5 = I'm moderately satisfied
- 6 = I'm very satisfied
- 7 = I'm extremely satisfied

D12
Satisfaction with support

- Support with Caseloading
- Support staff assistance
- Support from Head Office
- Recognition from Head Office
- Recognition by other superiors
- Appreciation from claimants
- Appreciation from other staff
- On-going professional supervision/education
- Other (please specify)

D13
Job satisfaction

These items relate to how satisfied you feel about different aspects of your job.

Please rate each item on this 7-point scale :

- 1. I'm extremely dissatisfied
- 2. I'm very dissatisfied
- 3. I'm moderately dissatisfied
- 4. I'm not sure
- 5. I'm moderately satisfied
- 6. I'm very satisfied
- 7. I'm extremely satisfied

Your rating

1. The physical work conditions.....	_____	<input type="checkbox"/>
2. The freedom to choose your own method of working	_____	<input type="checkbox"/>
3. Your fellow workers	_____	<input type="checkbox"/>
4. The recognition you get for good work.....	_____	<input type="checkbox"/>
5. Your immediate boss	_____	<input type="checkbox"/>
6. The amount of responsibility you are given	_____	<input type="checkbox"/>
7. Your rate of pay	_____	<input type="checkbox"/>
8. Your opportunity to use your abilities	_____	<input type="checkbox"/>
9. Industrial relations between management and workers in your organisation	_____	<input type="checkbox"/>
10. Your chance of promotion	_____	<input type="checkbox"/>
11. The way your organisation is managed	_____	<input type="checkbox"/>
12. The attention paid to suggestions you make	_____	<input type="checkbox"/>
13. Your hours of work	_____	<input type="checkbox"/>
14. The amount of variety in your job	_____	<input type="checkbox"/>
15. Your job security	_____	<input type="checkbox"/>

D14
Socio-demographics

We would like some personal background about you.

Please circle the number for the answer which is appropriate for you, or give details in the spaces provided.

1. Sex (circle):
 1. Male 2. Female
2. Year of birth:
 19_____
3. Ethnic group:
 1. Maori
 2. Pakeha
 3. Pacific Islander
 4. Asian
 5. Other
4. Level of formal education:
 What is the highest qualification gained?
 1. School Certificate
 2. University Entrance
 3. Sixth Form Certificate in one or more subjects
 4. University Bursary, Scholarship
 5. Certificate of Diploma below Bachelor level
 6. Bachelor degree
 7. Postgraduate degree, certificate or diploma
 8. Other (specify)
5. Time spent in the corporation:
 1. 0 - 6 months
 2. 7 months - 12 months
 3. more than 12 months and less than 2 years
 4. 2 years - 5 years
 5. more than 5 years

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6. Time spent in present role (viz. Case Manager):

1. 0 - 6 months
2. 7 months - 12 months
3. more than 12 months and less than 2 years

7. Prior to becoming a Case Manager, what was your job title? _____

8. In which region do you work:

1. Southern
2. Wellington
3. Waikato
4. Auckland

We appreciate the time and effort you have made in completing the questionnaire.

THANK YOU