Outcomes and Impacts of

Workplace Literacy Programmes

in New Zealand

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Abstract

Current government focus of initiatives and funding for foundation learning incorporating workplace literacy suggests that there is a link between skill investment and workplace productivity. Workbase: The New Zealand Centre for Workforce Development, claims that the link between literacy skills for participation in the workforce and increased productivity is very direct (Workbase, 2006c, p.2).

The results of the International Adult Literacy Survey (IALS) in 1996 found an estimated 40 per cent of New Zealand adults lack the literacy skills needed for everyday demands of their work role (Workbase, 2006c). These results coupled with current low unemployment rates have provided impetus to address workplace literacy needs.

Providing workplace literacy programmes requires employers to overcome a number of obstacles ranging from costs of skill investment and the practicality of implementation to philosophical questions of whether the company perceives skill investment of employees as part of their responsibility. Employers also need to be able to derive benefits for the organisation.

This research focused on how workplace literacy programme participants and management representatives were experiencing workplace literacy programmes. Sixteen programme participants and nine management representatives from five companies described their experiences and their perceptions of programme outcomes and the impacts in the organisation. The programme participants took part in individual interview sessions which incorporated a self-assessment questionnaire on

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their perceived progress. A separate interview was held with each of the management representatives. The results identified that workplace literacy programmes were having generally positive outcomes and impacts. Increased self-confidence of the programme participants was a recurring theme along with academic literacy skill gain and other non-academic outcomes such as changes in attitudes and increased participation in the workforce. Impacts in the workplace were perceived by management as more accurate documentation, increased efficiency, increased independence, an improved flow of work and increased productivity.

Programme participants were invited to also talk about prior academic learning experiences and their perceptions of effective learning. From the prior academic experiences were descriptions of students feeling alienated from the system, lacking self-confidence, falling behind and leaving school at an early age. In contrast they talked positively about their experiences on the workplace literacy programmes and identified key ingredients as a positive tutor-student relationship, a meaningful programme and an environment where they felt safe and were treated with respect.

The challenge that educators, researchers, government officials, policy makers, employers and schools currently face is the need to address low literacy levels effectively. Early detection at school, accessibility of programmes, further learning after leaving school, workplace support and encouragement, effective programmes and delivery are all implications from this research.

This research discussed the link between investing in people skills in the workplace and increased workplace productivity. It also highlighted a link between workplace

literacy programmes and a healthier and more functional society; an area recommended for further follow-up research. Two other areas of recommended follow up research were best practice for workplace literacy programmes and research at schools to identify potential low achieving students.

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Chapter 1: Introduction

1.1 Introduction

> *Government has identified workplace literacy as an issue of critical importance to New Zealand's economic and social prosperity. An estimated 40 percent of New Zealanders do not have all the literacy skills they need for the everyday demands of their work role.* (Workbase, 2006c, p.2)

What do we know about literacy in New Zealand? What research has informed our current thinking and focus of literacy? What is being done to address literacy needs in New Zealand? These questions form the basis of this chapter in introducing the New Zealand context of literacy and setting the scene for investigating workplace literacy programmes.

1.2   Views and definitions of literacy
1.3   Approaches to adult literacy
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1.2 Views and definitions of literacy

The complexity of literacy is illustrated by the changing conceptions of literacy over the years influenced by social, political and economic factors that have driven the thinking of literacy. No longer is literacy simply defined as reading and writing. The way literacy is measured is an example of changing views about literacy.

> *The measurement of literacy is ... not simply a case of classifying someone as either 'literate' or 'illiterate'. Literacy forms a continuum from those people in society who have only basic reading skills to those who possess highly-developed skills to allow them to comprehend complex information.* (Ministry of Education, 2001, p.22)

In addition to the view of literacy as a continuum rather than a simplistic notion of either illiterate or literate (Johnston, 2004), current thinking shaping our views include: 'adult literacy' as generally inclusive of adult numeracy and English as a second language (McKenna & Fitzpatrick, 2004); and literacy, numeracy and language (LNL) teaching and programme provision within the broader arena of foundation learning (Benseman, Sutton & Lander, 2005). Foundation learning has become an umbrella for adult literacy in New Zealand and is currently described as:

> *The application of a complex web of reading, writing, speaking, listening, critical thinking, problem solving, numeracy skills and communication technology so that people can achieve their own goals in meaningful social, cultural, vocational and/or learning contexts.* (New Zealand Qualifications Authority, 2006)

From the context of a new knowledge economy, Lonsdale and McCurry (2004) describe the changing conceptions of literacy from 'knowing about' to 'knowing how to', and refer to the OECD's (2002) conceptualisation of human capital which goes beyond the possession of literacy, numeracy and workplace skills to the skills which allow individuals to develop and use these skills, such as the ability to learn, be organised and plan ahead. Lankshear (cited in Lonsdale & McCurry, 2004) defines literacy into four types:

- 'lingering basics' referring to mastery of basic skills (school work);

- 'new basics', the skills needed to contribute productively to a capitalist society;

- 'elite literacies', the high order skills; and

- 'foreign language literacy' enabling participation in the operations and dealings of a global marketplace.

These views of literacy suggest that economic factors, in particular, globalisation, competition and productivity, are some of the influences shaping this thinking about literacy.

Literacy has also evolved from the notion that rather than literacy as an 'autonomous' construction of climbing a ladder with a group of illiterates on the bottom, it is instead viewed as embedded in social practices rather than as technical skills to be learned in formal education (Maclachlan & Cloonan, 2003). Scribner (cited in Demetrion, 2001) expounds a similar view in that literacy is best understood as a set of practices imbedded within the context of local culture. These views which are influenced more by social factors focus on social practices and local culture.

The National Adult Literacy Agency (NALA) emphasises the individual's ability to realise his or her own potential and the impacts that can be made.

> *Literacy involves listening and speaking, reading, writing, numeracy and using everyday technology to communicate and handle information. It includes more than the technical skills of communication: it also has personal, social and economic dimensions. Literacy increases the opportunity for individuals and communities to reflect on their situation, explore new possibilities and initiate change. (NALA, 2005, p.3)*

The emphasis on personal outcomes and impacts continues with Johnston (2004) who refers to New Zealand's Workbase: The National Centre for Workplace Literacy and Language (2000) definition as; 'literacy is not just reading and writing, but speaking, listening, critical thinking, problem solving and numeracy.' Johnston also refers to the Scottish Executive 2001 definition, as 'the ability to read, write and use numeracy, to handle information, to express ideas and opinions, to make decisions and solve problems, as family members, workers, citizens and lifelong learners.'

Within the context of the workplace, Hull et al (cited in Scholtz & Prinsloo, 2001, p.710) have suggested that literacy at work is more than using basic skills. Instead, literacy is more about being able to use literacy for varied and wide purposes so that workers are able to 'dip appropriately and as needed into a wide and deep repertoire of situated ways of using written language and other forms of representation in order to carry out a work related activity'. The use of literacy for varied and wide purposes is endorsed by the 1996 International Adult Literacy Survey (IALS) which defines literacy as 'the ability to understand and employ printed information in daily activities: at home, at work and in the community'. Workbase: National Centre for Workplace Literacy and Language, (2000) has expanded this definition to, 'Literacy is a complex web of reading, writing, speaking, listening, problem solving, critical thinking and numeracy skills.'

1.3   Approaches to adult literacy

Foundation learning and/or adult basic education is 'based on the approach that effective learning builds on the wealth of life experience which adults bring to their work on literacy development' (NALA, 2005, p.9). Key contributors to this approach are Paulo Freire and Tom Sticht whose work underpins adult literacy.

Paulo Freire's work dates from the 1970s. Freire's 'Pedagogy of the Oppressed' (1993) discussed education as liberation from oppression. His approach, known as the 'critical approach', based the content of language lessons on cultural and personal experiences (Benseman, 1996). It is learner-centred and participatory, in which adults determine the content and direction of their own education (Sticht, 2004). Spener (1992), in discussing the Freirean approach to adult literacy education, talked about

'literacy for social change' and stated that unjust conditions are the cause of illiteracy and that the purpose of adult basic education is to enable learners to participate actively in liberating themselves from the conditions that oppress them.

An alternative to the 'critical approach' is the 'functional approach' in which literacy integrates basic skills education with important content area, knowledge and skills (Sticht, 2004). It is argued that this approach makes more rapid progress in achieving sustainable development. The 'functional approach' is also contextual and Sticht (2005) has stated that a basic tenet of functional context education theory is that adult literacy education ought to be based on what is relevant to the contexts of adult lives. In a workplace literacy programme this relates to making the learning relevant to their workday and roles. The 'critical approach' on the other hand is based on learning from the discussion of themes of importance to adult learners, drawn from their real-life experiences (Spener, 1992).

1.4 Historical perspective of literacy in New Zealand

McKenna and Fitzpatrick (2004) have provided an overview of New Zealand's literacy development with the first community literacy programme through Massey University recorded in 1970. This was followed in 1976 with the National Council for Adult Education's first seminar on literacy. Seed grants from the McKenzie Education Foundation and then government funding encouraged community programmes and in the early 1980s the literacy federation, Adult Reading and Learning Assistance (ARLA) was formed with a grant of $10,000. By 1989 the grant had risen to $400,000 and ARLA has since been renamed Literacy Aotearoa (McKenna & Fitzpatrick, 2004).

As concerns about literacy became linked to rising unemployment, funding was increased, and a number of initiatives were established during International Literacy Year in 1990, one of which was a workplace literacy project. In 1996 'Workbase: National Centre for Workplace Literacy' was founded with a small grant from the Ministry of Education to set up library and information services, and offerings of adult literacy programmes in the workplace. Workbase is an independent non-profit organisation whose funding comes from government annual contracts, commercial activities and contestable funding pools (Workbase, 2006).

In the 1990s, the National Qualifications Framework (NQF) incorporated a series of communication unit standards designed for both first and second language speakers in Levels one and two on the NQF. These have subsequently been used for workplace literacy programmes although there is debate about the inclusion of unit standards in workplace programmes. Hales (2004) has criticised external qualifications and external providers for workplace learning saying that the requirement to meet external requirements has a 'dumbing down' effect on the learners and has argued for transferable skills from formal courses to be built on within the company environment through company policies.

Prior to the 1996 International Adult Literacy Survey (IALS), Moore and Benseman (2003) conducted a survey on workplace related literacy demands of employees and supervisors and concluded that there had been significant changes in demands on literacy, language and numeracy skills. The study found that significant numbers of employees currently working in New Zealand had low levels of literacy, language and

numeracy skills. It also found that effective workplace programmes need to be relevant and contextualised.

Sutton and Benseman (1996) in their findings on adult literacy and basic education in New Zealand from 1960 to 1996 reported that the perception in the early 1990s of New Zealand's reading literacy results as highly successful was, in fact, inaccurate. Furthermore, their research found that adult literacy and basic education suffered from a lack of policy and research to guide its development.

The International Adult Literacy Survey (IALS) undertaken in New Zealand in 1996 provided findings that supported both Moore and Benseman's 1993 study and Sutton and Benseman's 1996 study. IALS, which produced information from 20 countries, examined people's ability to understand and employ printed information in daily activities, across three domains of literacy skills – prose, document and quantitative literacy. Proficiency was graded along five levels. Levels 1 and 2 indicated a low literacy level and Levels 3 and above indicated 'functional literacy', that is, the literacy skills necessary to function within today's economic market. Levels 4 and 5 were considered the highest levels of literacy. For the purposes of the report, they were combined into a 'Level 3 or more' category.

New Zealand's performance in the survey was, on average, in line with results for a number of countries, including; the United Kingdom, the United States, Australia and Canada. The results from the survey were based on a random sample of 4223 New Zealand adults ranging from 16 to 65 years (Ministry of Education, 2001, p.22). The survey found that 45 percent of adult New Zealanders were in Levels 1 and 2 for

prose literacy, 50 percent for document literacy and 49 percent for quantitative literacy. In relation to workplace literacy, in 2001 the Ministry of Education estimated that there were '...fewer than 2,000 literacy learners in workplaces yet IALS estimated that nearly 100,000 people currently employed in New Zealand have very poor literacy (Ministry of Education, 2001, p.9).

Further research by Culligan, Arnold, Noble and Sligo (2005) used the New Zealand IALS data to predict adult literacy levels from certain demographics and a statistical model analysed the number and location of people at Levels 1 and 2 for 1996 to arrive at predictions for 2001 and 2004. Some of the key findings from the research follow. Those with Level 1 proficiency were most likely to be working within manufacturing and agriculture, hunting, and fishing industries and least likely to be in the business sector. Those of literacy Level 2 and below were most likely to have three years or less of secondary school education. Those with literacy Level 3 and above showed an opposite pattern, with the majority having tertiary education. People who identify as Asian, Pacific, or Māori appear to be more at risk of low English literacy than those who identify as European/Pākehā. The highest need for literacy provision in 2004 was the East Cape, parts of the Bay of Plenty, parts of Taranaki, Auckland, and the far north (Ministry of Education, 2005).

1.5 Current focus of literacy in New Zealand

The Ministry of Education has attempted to address adult literacy with its New Zealand Adult Literacy Strategy 'More Than Words', (2001) and has taken an increasingly proactive role in adult literacy. The key goals in the strategy are to: increase opportunities for adult literacy learning; develop capability in the adult

literacy teaching sector; and improve quality to ensure that adult literacy teaching and learning programmes are world class. Cooperation among government departments is becoming evident with the collaboration among the Tertiary Education Commission (TEC), Ministry of Education, Department of Labour, Ministry of Social Development and the Ministry of Economic Development (Workbase, 2006b).

The Tertiary Education Commission (TEC) established in 2003, has the responsibility for implementing the government's adult literacy strategy. From the strategy, initiatives have been developed to strengthen the capability of the adult literacy sector, develop tutor skills, and increase learning opportunities. Funding is available for workplace literacy programmes and there has been an increase in workplace literacy providers.

Current approaches to foundation skills are extensions of the 2001 New Zealand Adult Literacy Strategy with foundation learning incorporating literacy, numeracy and language (or LNL). Foundation learning has become increasingly recognised as an important component across the tertiary sector (Cain, Johnson & Benseman, cited in Benseman et al, 2005) with its inclusion in the current government policies and strategies (Ministry of Education 2001, 2002, 2003, 2003a, cited in Benseman et al, 2005). The importance of foundation learning is highlighted with almost $16 million awarded to over 90 adult literacy providers for 240 programmes through the 2007 round of the TEC Foundation Learning Pool Funding (TEC, 2006). TEC also administers the Workplace Literacy Fund and is currently offering up to 85 percent subsidy to support effective workplace literacy programmes.

The New Zealand Qualifications Authority (NZQA) is currently developing a quality system for foundation learning called Foundation Learning Quality Assurance (FLQA). Part of the FLQA's plan is to up-skill foundation programme tutors in integrated adult literacy teaching with a 40 credit Adult Literacy Education (Vocational Tutor) qualification. A specialist literacy tutor qualification, National Certificate in Adult Literacy Education (Educator) of 83 credits has also been registered on the New Zealand Qualifications Framework and TEC is administering study grants for practitioners to gain literacy qualifications. Cain et al (cited in McKenna & Fitzpatrick, 2004, p.29) note that 'the level of expertise in the field of adult literacy is quite low…those who work in the field receive low pay and have low status, and the short term and unpredictable funding streams provide little incentives for taking up work in the field.'

Comrie et al's research on employment and literacy has found that increasing compliance is one of the changes in the workplace context requiring higher levels of functional workplace literacy skills.

> *'Within New Zealand there was now a greater need for workers to engage in documentation, form filling, and reading and understanding regulations, as for example, in Health and Safety regulations. Workers in industries where they could previously have functioned with limited literacy now needed higher levels of literacy skills (Comrie et al, 2005, p.34).'*

The requirement for higher levels of functional workplace literacy skills is resulting in more industries pre-screening applicants (Comrie et al, 2005). Their research also suggests that employers are recognising that along with basic foundation skills and literacy skills that communication skills are also of importance in career advancement.

TEC, The Ministry of Education and the Department of Labour are working on a range of initiatives. TEC is developing Learning Progressions for foundation level competency. The Ministry of Education is working on Descriptive Standards for literacy, language and numeracy outcomes and Key Competencies for social, economic and individual goals. The Ministry of Education's *Learning for Living* project is providing professional development for tutors in literacy and numeracy and the Department of Labour is engaged in research and development on workforce up-skilling. Historically, provision of literacy development has been predominantly with Literacy Aotearoa and Workbase but is now expanded to include Private Training Establishments (PTEs), Tertiary Education Institutes (TEIs), adult and community education providers and Industry Training Organizations (ITOs) (McKenna & Fitzpatrick , 2004).

1.6   *Factors contributing to the current focus*

Johnson's report (2000) on recommendations for adult literacy policy in Aotearoa/New Zealand identified the following issues in relation to literacy: lack of strategic vision by government; fragmented literacy sector resulting in limited coherent advice to government; and inadequate funding. The Johnson report also listed obstacles to the development of a coherent adult literacy system as: a lack of coordinated literacy infrastructure (responsibility spread across several departments); limited quality assurance processes and accountability (no outcomes reporting system); inadequate professional development and career pathways for teachers; inadequate funding for programmes and research; marginalisation from key policy framework (NQF, industry training strategy standards) (Johnson, 2000).

These views were reflected in the Ministry of Education's literacy strategy with a summary in 2001 of adult literacy education in New Zealand.

> *Adult literacy education has never been well resourced in New Zealand and past policy has been haphazard. Current provision is heavily focussed in a community based sector dependent on volunteers. Throughout the adult literacy sector there are inadequate resources to promote provision, train tutors, develop learning resources and provide a flexible range of learning opportunities. We will need to do more to ensure the high quality teaching which will deliver good literacy outcomes for learners.*
> (Ministry of Education, 2001, p.4)

Although Freire is renowned for his work on adult literacy, Benseman (1996) has suggested that Freire has had little impact on adult literacy in New Zealand. His reasons for this include the conservative nature of adult literacy in the country, a lack of theoretical understanding in tutor training, constraints of limited funding and constraints of programme structures. The newly registered Adult Literacy Education qualifications, the substantial funding for foundation learning and the range of foundation learning programmes in 2007 anticipate addressing the limited literacy education in New Zealand.

New Zealand research, the IALS findings, the Ministry of Social Development and the Māori Adult Literacy Reference Group have made important contributions to the current status of literacy within New Zealand seen today with increasing initiatives and substantial government funding administered by TEC The International Adult Literacy Survey (1996) results and the Ministry of Social Development (2004) reported with the IALS findings that New Zealand was a below average performer in 'quantitative' and 'document' literacy levels within the OECD. Findings from IALS show that one in five New Zealanders has poor, below Level 3 on the IALS scale,

literacy skills. Findings from the Māori Adult Literacy Reference Group (2001) has reported that the majority of Māori and Pasifika people and those from other ethnic minority groups are functioning below the level of competence in literacy; a level which is required to effectively meet the demands of everyday life. It also recognises that labour force status and income are related to levels of literacy. Castleton and McDonald's (2002) study on policy research found the New Zealand approach to literacy has been similar to Australia and has argued for a whole government approach and 'the need to place adult literacy concerns within broader socio-economic agendas' (Castleton & McDonald, 2002, p.52).

Cain et al (cited in Benseman et al, 2005) found that adult literacy provision, particularly with its community focus, has not been easily located within the new post-compulsory education policies and has remained marginalised. Furthermore, according to Cain et al (cited in McKenna & Fitzpatrick, 2004) challenges facing New Zealand provision have been differences in approach to adult literacy. They point out that there have been strong divisions between the community and workplace sectors with Literacy Aotearoa preferring a Freirean type approach and Workbase favouring a functional context approach. Sutton (cited in Johnson, 2000) has also indicated there have been tensions within the competency-based criterion-referenced system implemented through the National Qualifications Framework.

1.7 Research aims

Poor literacy is strongly correlated with a greater likelihood of unemployment, lower pay when in work, poor health, less likelihood of owning a home, and poorer basic skills for children living with adults with poor literacy. On the other hand, high levels of literacy are associated with higher earnings, a greater likelihood of being in a white collar high skill occupation, greater participation in voluntary community activities, and better health. The IALS final report concludes that good literacy is a necessary ingredient for citizenship, community participation and a sense of belonging. (Ministry of Education, 2001, p.4)

The focus on foundation learning at the tertiary education level attempts to increase capability and capacity for addressing literacy needs in education. The focus on workplace literacy provides further opportunity to up-skill people with low literacy levels who have slipped through the system and to up-skill people in roles requiring increasing demands and technological skills. Since the IALS results, more recent research has claimed that workplace literacy programmes have the potential to increase company productivity which in turn leads to growth in the economy (Johnson, 2000; Balzary, 2004; Movement for Canadian Literacy, 2005; HM Treasury Report, 2006).

This study sets out to investigate what outcomes result from workplace literacy programmes and what impacts the outcomes have in the workplace. The definition of outcomes and impacts has been taken from Beder's approach (1999, p.4).Outcomes are described as 'changes in learners that occur as a result of their participation in adult literacy education'. Impacts on the other hand, are described as 'changes that occur in the family, community, and larger society as a consequence of participation (Beder, 1999, p.4).

Assessments based on outcomes and impacts, as defined by Beder, provide a different approach to assessments based on inputs and outputs. According to Beder (1999), 'many of the evaluation studies conducted in adult literacy education in the past 30 years have primarily, or exclusively, focused on inputs and outputs rather than on outcomes and impacts' (Beder, 1999, p.7). The reference to assessing inputs describes for example, the learner's characteristics in order to determine whether the teaching force is adequate and the reference to assessing outputs often entails variables such as the number of learners, how they were instructed and the programme retention rate (Beder, 1999). The current New Zealand funding policy for foundation learning and workplace literacy programmes is based on the assessment of outputs (TEC, 2007, p.13). Although these output assessments are useful, they do not determine the effectiveness of foundation learning education.

In contrast to assessing outputs of a programme is the assessment of programme outcomes and impacts. Assessing progress of an individual who as a result of a programme can seek clarification when the instructions have not been clear may demonstrate outcomes of increased self-confidence, critical thinking and improved communication skills. The subsequent impacts in the workplace may include reduced errors, increased worker independence, improved team dynamics and increased workplace efficiency.

Workplace literacy programmes are still relatively new in New Zealand. Employers require evidence that positive changes result from programme provision and participation. Assessing programme outcomes and impacts is another way to measure programme effectiveness and accountability. Not only does assessing outcomes and

impacts provide information for the employer, it can also contribute positively to government policy making particularly in relation to funding criteria. A person who leaves a foundation learning programme mid-programme because they have become employed, is an example of programme effectiveness and a positive outcome. However if the programme were to be assessed based on the output variable of programme retention rates, it would be measured as a negative outcome with subsequent reduction in funding.

My interest is in exploring the effects of programme participation in knowledge, skills, attitudes and behaviour (outcomes) and the subsequent effects of these outcomes in the workplace (impacts). The study also aims to shed some light on prior academic learning experiences of programme participants and the programme participants' perspectives on key factors contributing to effective learning.

This research aims to answer four questions:

1. To what extent do academic and non-academic outcomes result from workplace literacy programmes?

2. To what extent do workplace literacy programme outcomes impact in the workplace and in what way(s)?

3. What, if any, are common school experiences of workplace literacy programme participants that may have influenced low literacy levels?

4. From workplace literacy programme participants' perspectives, what, if any, are key factors that contribute to effective learning on workplace literacy programmes?

1.8   Overview of thesis

Chapter 1 has introduced the New Zealand context of adult literacy and has set the scene for investigating workplace literacy programmes. Foundation learning, the umbrella for adult literacy, and workplace literacy are current foci of the New Zealand Government with substantial funding available. *Chapter 2* provides a literature review of related research to adult literacy and workplace literacy. What research is available to assist an enquiry into workplace literacy programme outcomes? What is known about programme participants, about effective provision and what is known about the impacts in the workplace? In *Chapter 3*, the research design and methodology behind this study are described, as well as information on the participants and the setting for the research itself. A detailed description of the design and implementation of the study and the methods of data collection and analysis is provided with consideration of ethical issues and limitations of this study. *Chapter 4* presents the results of the data analysis in relation to the research questions: workplace literacy programme outcomes; the impacts of the programmes in the workplace; and key factors contributing to effective learning. In *Chapter 5*, the results of the study in relation to the research questions from the management and programme participants' perspectives are discussed with reference to previous research findings. In the final chapter, *Chapter 6*, conclusions drawn from the findings are discussed with some implications for government and policy making, employers, training providers and schools. Suggestions for further research are also considered.

Chapter 2: Literature Review

2.1 Introduction

Schick (2005) researched 427 New Zealand companies which she then identified in four groups from 'Phase III' to 'Pre-phase' in relation to their readiness to invest in workplace literacy programmes. The four groups were 12 percent in Phase III ('doing it'), 10 percent in Phase II ('aware'), 46 percent in Phase I ('unaware and favourable') and 32 percent in Pre-phase ('unaware and unfavourable') (Schick, 2005, p.4). The current New Zealand climate for workplace literacy programmes is highly favourable and is demonstrated by the current government focus on foundation learning, the availability of funding and the unprecedented cooperation among government departments collaborating on addressing literacy needs as explained in Chapter 1. Current low unemployment, increasingly challenging changes in workplace literacy demands and increasing global competition are factors driving the provision of workplace literacy programmes. The 12 percent of New Zealand companies which according to Schick (2005) are providing workplace literacy programmes, have recognised the link between addressing literacy needs in the workplace with workplace productivity.

The remaining 90 percent of New Zealand companies are not addressing literacy needs in the workplace. If we deduct the 32 percent in the Pre-phase which 'report that they are not interested in literacy and do not think it is their issue' (Schick, 2005, p.11), then we are left with 58 percent which are favourably predisposed towards workplace literacy programmes but have not yet managed to move into Phase III of 'doing it'. For this 58 percent group, there are a number of obstacles and disincentives preventing investment in workplace literacy identified by Schick as: lack of

information; lack of time required to plan and co-ordinate; the cost and a lack of suitable training opportunities; lack of information to make training decisions; difficulty in identifying potential providers, and evaluating course content and quality; being convinced of the business benefits of training; and getting employee buy-in (Schick, 2005, p.5).

Previous research on the benefits derived from workplace literacy programmes is mainly limited to increasing workplace productivity (HM Treasury, 2006; Movement for Canadian literacy, 2005; Balzary, 2004; Johnson, 2000). Unclear in the research are the more achievable and observable individual and organisational benefits of investment in skill development with increased productivity. Also unclear is measuring the benefits which are not easy to determine (Grugulis & Stoyanova 2006).

The purpose of this research is to provide more information on the link between literacy and workplace productivity. Convincing individual employers of the benefits that can be gained from workplace literacy provision requires accessible information that can be easily interpreted and efficiently presented to stakeholders for stakeholder buy-in and for subsequent implementation of workplace literacy programmes. While key people within organisations may be aware of the link between literacy needs and workplace productivity, obstacles and disincentives preventing full stakeholder buy-in and implementation currently weight the equation into the 'too hard basket' with employers asking for more evidence.

What are the benefits from workplace literacy programmes and what impacts do they have in the workplace? What is known about people in need of literacy up-skilling in

the workplace and what is known about effective workplace literacy programmes? This chapter provides a review of literature related to workplace programmes with the intention of filling in some of the information gaps while raising more questions pertaining to the research questions of this study. The first section focuses on the outcomes of workplace literacy programmes and their impacts in the workplace highlighting the links between literacy and workplace productivity. The second section focuses on the individual participants on the workplace literacy programmes. What prior academic learning experiences may have contributed to these people needing to address their literacy needs? The next section reviews the research available to assist in providing information on effective programmes of learning for workplace literacy.

2.2 The link between literacy and workplace productivity
    2.2.1   Individual gains
    2.2.2   Organisational gains
    2.2.3   Issues of measurement
2.3 Prior academic learning contributing to low literacy levels
2.4 Key factors contributing to effective workplace literacy programmes
2.5 Summary

2.2 *The link between literacy and workplace productivity*

Foundation learning skills, the umbrella term for literacy and numeracy skills, are linked to improved workplace productivity (Workplace Productivity Working Group, 2004; Workbase, 2006a). In particular, the key drivers of productivity related to foundation skills that can make a difference are investment in skill development; creating productive workplace cultures; organising work more efficiently; and measuring what matters. Research related to the link between these drivers of productivity and foundation skills forms the basis of this section with themes of individual gains, organisational gains and issues of measurement.

2.2.1 Individual gains

Outcomes are subdivided into academic skills (reading, writing, maths and oral communication) and non-academic for example, self-confidence, participation and decision making (Beder, 1999; Westell, 2005). The distinction between the outcomes is important because of implications for measurement of outcomes which in turn determines the success of a programme. This is of particular significance for workplaces and workplace literacy providers as the foundation learning pool funding is currently linked to the measurement of outputs. Issues relating to measurement are raised later in this section.

Increased self-confidence is a recurring theme with reference to adult literacy education outcomes. 'Development of confidence seems to be one of the keys to the successful development of literacy language and numeracy skills'(Eldred, Ward, Dutton, & Snowden, 2004, p.2). Eldred et al's adult literacy study identified increased self-confidence and self-esteem of programme participants as key programme outcomes. Self-esteem and self-confidence are described as crucial elements in education and training (Beder, 1999; Falk, 2001; NALA, 2005; NCVER, 2005; Westell, 2005).

Long's Canadian survey (1997), reported that almost without exception, participation in a basic skills programme increased participants' confidence as well as their reading, writing, and oral communication skills. Other Canadian case studies have highlighted increased pride and confidence in the work and decisions made by workers, improved self-esteem and morale, and greater employee self-confidence, as benefits from participation in a basic skills programme (The Conference Board of Canada 2002, 2005a, 2005b, 2005c).

These Canadian studies allude to the complexity of the relationship between cause and effect of outcomes which is another recurring theme in discussing workplace literacy programmes. It is not known which outcomes cause and or affect other outcomes, but it is acknowledged that a complex relationship exists (NCVER, 2005). For example, does increased self-confidence cause improved reading skills or does improved reading cause increased self-confidence? Regardless of the order of events, the previous research reports that both academic and non-academic outcomes result from literacy programmes.

The research to date provides information on expected outcomes from workplace literacy programmes. However, in discussing workplace literacy programmes where the learning is more work-related and contextualised, questions are raised about the extent to which literacy skills can be transferred from specific to generic (Sticht, as cited in Castaldi, 1991; Mikulecky & Lloyd, 1993; Barton & Tusting, 2006).

Reading skills from participation in programmes can be developed, however there is a concern over the transferability of skills. Sticht (as cited in Castaldi, 1991) found that people can enhance their ability to perform particular types of reading tasks at work, even though they may not make gains in what he terms 'general' reading. Castaldi furthered this finding by providing an example in which marginally literate adults made approximately twice the gains in performance on job-related tasks than they did on standardised reading tests measuring generalised reading ability.

Another study (Mikulecky & Lloyd, 1993) also identified that transfer of skills was limited after participation in a programme. This study took two workplace literacy programmes at different sites to develop an impact assessment model and to produce data on the impact in the areas of learner gains, workplace improvements, and literacy-related changes in learners' families. Results demonstrated positive improvements in each area of the assessment model; however, gains were limited to areas directly addressed by instructional activity. No clear carry-over or transfer to other areas was apparent in evaluation results.

Barton and Tusting (2006) note that literacy is shaped by people's identities, the way workplaces are organised, the incentives or disincentives people perceive for displaying skills all influence the literacies they engage in. They believe that the specific features of reading on site do not necessarily transfer into another; the use of literacy in any given context depends on the worker's knowledge and understandings of the social setting.

Other individual gains are associated with economic and social benefits (Beder, 1999: Johnston, 2004). Beder's (1999) research of adult literacy education identified outcomes as gains in employment; gains in earnings; positive attitudes towards continued education; increased literacy skills, positive impact on self-image; positive impact on parents' involvement with their children's education; and a perception that personal goals are achieved.

Johnston (2004) finds that New Zealanders with higher literacy skills earn more, on average, than people with lower skills and are more likely to be employed. However he also points out that,

> *Simply increasing a person's literacy skills through participation in a training course, for example, without also improving their other work habits, might have much less of an effect on their earnings than expected, or indeed have no effect at all.* (Johnston, 2004, p.28)

The possibility that workplace literacy programmes assist in increased earnings and gains in employment raises another question. If there is an expectation by programme participants of increased earnings, employers could be disinclined to consider workplace literacy. However, individual gains in economic enhancement are not necessarily an outcome of workplace literacy (Gorard, 2003; Black, 2002; Kazemek, 1991).

Gorard (2003) warns against the current economic focus of adult learning based on skill shortage resulting in lack of jobs filled, and therefore literacy education is a means towards economic enhancement. He suggests that 'skills shortage' could be due to either that no-one with appropriate skills wishes to apply for the positions offered or that the employer's reference to skill shortages could mean lack of punctuality, reliability or commitment rather than lack of measurable skills. The economic focus of increased earnings detracts from the potentially transformative nature for the individual and for society. Lifelong learning, he says, has been reduced to the simple claim: 'Education and training are good because they earn you more money', rather than, 'they are good because they are fulfilling (and could earn you more money)' (p.61).

Black's findings (2002) concur with Gorard and suggest that there may be other reasons why jobs are hard to fill. Black's study finds that although his interviewees lacked functional literacy skills, they had no trouble locating employment. He argued against placing blame upon the individual for their 'deficit' rather than looking to the wider context of why jobs may be hard to find.

Kazemek (1991) also argues against literacy programmes as economically self-enhancing. He views literacy development as having lifelong impacts and states that 'a perspective that sees literacy only or primarily in job related terms is too limiting, too mean, for a participatory democracy' (p.54). There is no evidence, according to Kazemek, that participation in literacy programmes assists in better employment or income.

Employers may be reluctant to invest in workplace literacy programmes because they fear they will not capture the returns on work-based learning because of the risk of their up-skilled employees being poached or simply moving on (Glass, Higgins & McGregor, 2002). Contrary to this view, Benseman et al (2005) report that participation in such programmes generally leads to a more stable workforce with improved staff retention. It is not clear, however, whether increased loyalty to the company is related to the literacy component of the programme or to the feeling of being valued enough by the company to warrant investment.

Freire (1993) discussed education as liberation from oppression and Sticht (2004) refers to literacy as freeing the world. Both of these approaches highlight liberation as a positive outcome for the individual through the development of literacy skills.

However, other research exists expounding views that the development of literacy skills for an individual is neither positive nor liberating (Scholtz & Prinsloo, 2001; Castleton, 2000). Impacts on the workplace from a management perspective talk of 'enchanted' workplaces, self-directed work teams and empowered workers (Scholz & Prinsloo, 2001, p.710). From a worker's perspective though, Scholtz and Prinsloo's study found that the workers felt alienated rather than empowered by literacy practices they had not before had to deal with. Castleton's (2000) research also suggested that traditionally held views of workplace literacy legitimise and sustain certain forms of power so that workers with poor literacy continued to be marginalised and held morally accountable for the nation's inability to produce quality goods to trade competitively. For workers to be and feel more valued, she argued for workplace literacy to fulfil real purposes for all stakeholders.

2.2.2 Organisational gains

Workplace literacy programmes need to also benefit the organisation, there needs to be accountability and there needs to be the meeting of organisational goals with meeting individual goals. Canadian studies have found workplace literacy programme outcomes also benefit the company. The ability of employees to work independently, their increased participation in all workplace activities and a willingness to take on new roles as mentors and peer learning coaches are impacts experienced in the workplace. Relationships between employees and management usually improve and employees feel more committed to the company (The Conference Board of Canada 2002, 2005, 2005a, 2005b).

Long's study (1997) also found direct links between workplace literacy programme outcomes and organisational gains. The gains identified were increased work effort, increased productivity and improved quality with a decrease in errors. Participants in the programme also had an increased ability to work independently and use workplace-based technology. They were also better able to work within a team-based model.

Several recent studies have produced links between increased literacy skills and increased productivity providing incentives for investing in skill development. Light (2002) reported how on-site literacy and numeracy training improved Rotaform Plastic's performance and profitability. The NZ$18,000 training package was a pilot study of 17 employees who were assessed on NQF (National Qualifications Framework) unit standards in plastic manufacturing. From losing NZ$50,000 per annum, the company increased its profitability by 20 percent. The benefits in improved performance were identified as better communication and understanding resulting in less supervision, improved understanding of instructions, improved safety in the workplace, lower absenteeism, fewer reject products, savings in maintenance, and improved customer service (Light, 2002).

Further studies have established direct links between increased literacy levels, increased productivity and increased gross domestic product (GDP). The Movement for Canadian Literacy (2005) and Johnson (2000) report that one percent increased literacy levels would yield 1.5 percent increase in a country's gross domestic product. Balzary (2004) follows a similar theme in an Australian Chamber of Commerce report relating the significance of increased literacy and numeracy skills to a direct increase

in productivity and rise in GDP. A recent report from the HM Treasury (2006) concludes that basic literacy and numeracy are skills that have a positive impact on productivity. The figures of this study are consistent with preceding studies showing that increasing the literacy score of a country by one per cent leads to a 2.5 per cent rise in labour productivity and a 1.5 per cent increase in GDP per head (p.9).

Greater efficiency in German workplaces has been linked to higher levels of 'key' skills (McDonald, 2003). Similarly, a Canadian case study cites that greater efficiency required for global competition has been the driver for workplace literacy programmes (Folinsbee, 1994).

The research reviewed so far has shown that investment in skill development can contribute to individual and organisational gains. The outcomes experienced by the individuals from participating in workplace literacy programmes are generally impacting positively in the workplace and contributing to a more productive workplace culture and more efficiently organised work. These key drivers of productivity, as identified by the Workplace Productivity Working Group (2004) are, in summary, improving workplace productivity. Does this research provide enough information to overcome the obstacles facing employer buy-in? My suggestion is that until issues of measurement are addressed, the information, although providing a favourable picture of what can be gained from workplace literacy programmes, is not complete. Another driver of improved workplace productivity concerns measuring what matters (Workplace Productivity Working Group, 2004).

2.2.3 Issues of measurement

Organisations need to be able to produce evidence that there is organisational gain from skill investment. Measurement of outcomes can be difficult to establish as it involves issues of perspectives, issues of what is being measured and how it is being measured. Issues relating to the measurement of productivity are illustrated by Grugulis and Stoyanova(2006, p.2):

> *There are three main reasons for the difficulties in establishing a link (between skills and productivity). Firstly, organisations are complex social systems and it is unlikely that there is a single generic cause of productivity and profitability. Secondly, there are a number of ways in which firms can succeed, including deskilling and work intensification. Thirdly, skill is not simply an input to organisations' productivity.*
>
> *Skill is complex. It may be possessed by individuals, through qualifications, experience, expertise or attributes. It is built into jobs, the successful completion of which may demand autonomy, decision-making, technical know-how or responsibility. And it produces, and is itself the product of, status. Essentially skill is part of a social system; and skilled and expert work is a product of the way different parts of the system relate to one another...highly skilled workers may be found in organisations where strategies concentrate on cost-cutting, just as low skilled and tightly regulated employees are hired to work in technologically sophisticated workplaces.*

Although previous research (Light, 2002) has calculated a measurement of return on investment, neither return on investment nor the increased productivity resulting from the provision of literacy programmes is easy to determine. Berryman's (1994) analysis revealed that adult basic literacy skills, which are usually acquired in school, do affect the wealth of individuals and nations both directly and indirectly. However, in determining the costs of training and the return on investment, he has suggested that measurement of training costs is too poor to yield estimates of returns sufficiently to serve as a basis for policy decisions.

What measures are actually being taken? The research of this current study demonstrates in the next chapter that none of the companies involved in this research had measured their programmes' outcomes, however from anecdotal evidence, the results being achieved, were sufficient to justify the provision of the workplace literacy programmes. We need to be reminded that the companies involved were already in the 10 percent grouping of companies already 'doing it'. From my experience in talking to employers, I believe that measurement needs to occur to provide substantial evidence for employers to be able to make informed decisions on provision of workplace literacy programmes.

According to Mikulecky and Lloyd (1993) one of the difficulties on measurement is that impact on production is often precluded at levels below the work-team. They have suggested that measures of productivity should be taken before and after training. Such measures should include company records, employee interviews and questionnaires and supervisor ratings. They concluded that programmes need to have clearly-stated goals and instruction must address those goals if the desired results are to be achieved. This approach is also supported by McDonald (cited in Workbase, 2002b) who stressed the importance of companies being clear about why they are undertaking training.

With regard to the measurement of individual gain there are issues of outcome complexity and self-assessment. The measurement of programme outcomes is difficult to establish due to the complexity of the interrelationship between programme outcomes. 'Some outcomes build on others, while some seem to be consequences of other outcomes' (NCVER, 2005, p.27). Westell's (2005) work

reinforces the notion of complexity in adult learning and the difficulty in measurement of non-academic outcomes.

Self-assessment by programme participants is also challenged due to the participants' 'social desirability' when individuals either respond by over-reporting activities to be socially or culturally desirable or under-report activities that are deemed to be socially or culturally undesirable (Henningsen & Henningsen, 2004; Bernardi, 2006). Furthermore, the skill to self-assess which may be a newly acquired outcome from programme participation could be difficult to employ due to a lack of previous practice (Battell, 2001).

Differences in perception between employers and their employees also highlight challenges of self-assessment (O'Neill & Gish, 2001). Their research found discrepancies between the employers and employees with the employees identifying a higher competency level. Although differences existed, both groups identified effective communication and functional literacy skills as requiring improvement.

Finally, employers need to have information regarding effective programmes and effective delivery. Employers may have unrealistic expectations of what can be achieved through a single programme and need to take a longer term view. Smith and Dowling (2001) note that the nature of the financial markets in the English speaking world has produced a culture in which short-term financial results are important to managers at all levels. Workbase stresses the importance of viewing investment in literacy training as a long-term commitment. 'You can't expect major progress after

one training programme. The programme is the starting point' (Workbase, 2002b, p.16).

2.3 Prior academic learning contributing to low literacy levels

What prior academic learning experiences have contributed to people with low literacy levels? Previous research in this area focuses on low school attainment, alienation from the education system and feelings of low self-esteem. The studies in this section provide not only an insight into issues faced by some of the workplace literacy programme participants but also implications for government policy and schools. The discussion of implications for government policy and secondary schools is raised later in the conclusion (Chapter 6).

Low school attainment features as a contributing factor to low literacy (Culligan et al, 2005; Bynner, 2002, NALA, 2005). Of predictive variables of low literacy, namely education, ethnicity and labour force participation (Culligan et al, 2005), the strongest predictor is educational attainment. Culligan et al's study, found that the majority of respondents who were assessed as having Level One or Two literacy proficiency were also within the lower secondary schooling attainment or below level. Bynner's (2002) research also concerning low school attainment has shown that a lack of basic skills, especially reading skills is the key ingredient of a poor educational career leading to lack of qualifications. His study identified more than 80 percent of young people in the lowest literacy and numeracy categories had left school at a minimum age of 16 years.

The experiences of students with low school attainment are generally negative. Unsupportive teacher-student relationships, feelings of alienation from the education system and low self-esteem are recurring experiences of these people.

> *Most adults who experience difficulties with literacy realised at a fairly early age that they were finding it hard to learn to read, spell or use numbers. In school they often did not receive the extra help they needed and may have faced negative attitudes from teachers and other pupils. Often very low levels of attainments were expected of them and they often dropped out of school altogether. Many were blamed for their difficulties and labelled as either 'stupid' or 'a problem'. Negative experiences at school range from neglect and isolation to verbal and physical abuse and have left some adults deeply alienated from the education system. People who are labelled as failures at school sometimes internalise this image of themselves and find it hard to develop confidence in other aspects of their lives.*
> (NALA, 2005, p.13)

Alienation from the education system as described by Maclachlan and Cloonan (2003) found that students experience feelings of foolishness, stupidity, fear, shame and lack of confidence. The suggested remedy by Maclachlan and Cloonan is to empower the learners through educating them on the dominant discourse which is seen to marginalise people. Tett's (2000) work also identified marginalisation due to the dominant discourse at school. Her study described how literacies of working class communities can be marginalised by a system that privileges middle-class English school-based literacies. Falk and Millar's (2002) study on effective communication interaction found that effective communication is the integration of knowledge, skill and identity resources and that focus for policy and practice should be more on effective learning. Key factors contributing to effective learning is the topic of the final section of this chapter.

Coupled with the self-labelling of low or non-achieving students is the further labelling by school and workplaces which continue to focus on the skills deficit of the

workers leading to underestimation and devaluing of the human potential (Hull, 1999). Hull has suggested that workplaces must provide workers with the need for reading and writing on the job. This raises the issue of relevant and meaningful programmes which is also raised in the next and final subsection.

Research in this section has identified that the people participating in workplace literacy programmes are often people who have had to overcome personal barriers of low school attainment, alienation from the education system and low self-esteem to participate in workplace learning. Against a background of failure and low self-esteem these people have taken a second chance at education.

2.4 Key factors contributing to effective workplace literacy programmes

In contrast to the previous section on generally negative prior academic learning experiences, this section addresses key factors contributing to effective learning. Not all the research in this section is specifically adult literacy related but they are included here because of their connection to effective practices for successful learning and which can be applied to workplace literacy programmes. The research is grouped into themes of Kaupapa Māori approaches and the need for recognition of cultural identity, values and appropriate teaching and learning styles; stakeholder buy-in; meaningful learning, a workplace culture of learning; and integration of literacy within programmes.

Bishop (2003) explored how 'deficit' notions of Māori students can be addressed with an alternative model emphasising empowerment, co-construction and cultural recognition. By asserting principles of Kaupapa Māori educational achievement by

Māori can be greatly enhanced. Within this approach the traditional role of the teacher needs to change to incorporate interpersonal and group interaction.

Fraser (2004) provided a window into the world of Māoridom and its integration into the education system. Her study focused on factors influencing successful achievement such as group identity, manaakitanga, tangihanga and karakia, which link Māori inextricably with their cultural and spiritual essences. Fraser illustrated how through these practices Māori learn more about themselves; develop greater self-worth and self-esteem that translate into successful educational experiences.

The Māori Adult Literacy Reference Group (2001) has acknowledged the limitations of informing effective policy due to the limited research available in the field of adult literacy. The Māori Adult Literacy Reference Group's Te Kāwai Ora report (2001) argued that for Māori, successful learning depends on identifying solutions that accord with Māori values. Those working with Māori learners need to take into account Māori definitions, priorities and teaching and learning styles. It further argued that literacy is a social, political and economic necessity and that mastery of literacy skills is important for self-esteem and vital for whānau development.

The key factors highlighted in this Māori research accords closely with approaches in teaching English as a second language. Both cases emphasise the need for cultural sensitivity, cultural respect, appropriate teaching and learning styles, student centred learning and engagement in learning (Cunningham Florez and Terrill, 2003). Cunningham Florez and Terrill's research discussed effective practices with adult English language learners in the literacy class. The practices closely reflected adult

learning principles of content, relevance, practical application, recognition of prior experience, integration of the four language skills of reading, writing, listening and speaking, asking learners what they want to learn and connection with the outside world as in real-life experiences.

The remaining research reflects principles contributing to successful adult literacy programmes. These principles include: stakeholder buy-in especially by management; learning as a culture of the organisation; contextualisation of learning programmes; recognition of life experiences brought to the programme by the participants; and integration of literacy within programmes.

Campbell (2003) summarised the findings on setting up a workplace literacy programme in Canada. The key strategic barriers identified were a lack of motivation of the company and the need for long-term duration. The key operational barriers identified were: a lack of time; lack of funds; the difficulty of scheduling a programme and ways of measuring its effectiveness. Solutions for the various barriers included enlisting managers and union representatives as training champions, prioritising literacy training, conducting a needs assessment, researching low cost alternatives, creating a central space for training and utilising both soft and hard measures for effectiveness measurement. Best practice approaches were identified as the inclusion of learning as a daily activity by senior managers, implementation of e-learning initiatives within the organisation and the utilisation of peer tutoring. This research provides an example of learning at all levels becoming workplace culture. For employees experiencing low literacy their buy-in to workplace literacy programmes is crucial. Perhaps one way for employees to overcome the stigma

attached to low literacy is to find themselves in a workplace where on-going learning at all levels is part of everyday business.

An example of successful stakeholder buy-in is Te Whare Ako, a workplace literacy programme in the Tasman Paper Mill, Kawerau. The essential ingredient for the success of this programme was stakeholder buy-in of the programme by management, by the people involved in setting up the programme and by the employees at the mill (Workbase, 2002). Within a Māori dominated workplace culture where all the tutors are Māori and are sensitive of programme delivery to Māori learners, is a case study where principles of Kaupapa Māori, adult learning and a safe environment are practically implemented to ensure an effective programme of learning.

Meaningful course content and relevance to practical application requires contextualization of programme content for the workplace. Beddie's (2004) study identified best practice literacy principles as contextualisation of content, duration and human motivation. Searle's (2002) study also emphasised the contextual nature of the workplace for successful communication and argued against the teaching of generic skills which she claims are inadequate because language and literacy are cultural and social constructions.

The integration of literacy into programmes is more effective than stand-alone literacy programmes (Krusche & Yeomans, 2005). This raises the question of what vehicle or what current training and or qualification within the workplace can be used as a programme in which to integrate literacy. Krusche and Yeomans' (2005) research reported that 'front end' literacy and numeracy programmes where students and

trainees undergo preparatory literacy and numeracy classes in readiness for further study, is less effective than integrated literacy. Their research also found that in order to provide integrated literacy delivery, tutors required professional development.

The research in this section has identified key factors contributing to effective literacy learning. Identified as key factors are Kaupapa Māori and English as a second language approaches combined with stakeholder buy-in and adult teaching principles of meaningful and relevant programmes and the integration of literacy into programmes.

2.5 Summary

The difficulty of linking outcomes specifically to workplace initiatives are recurring themes in the literature. The relationship between investing in skills and outcomes is complex and it is difficult to measure, or to identify which component of the intervention or if any intervention at all, had most influence on the outcome. Although the complexity between skill investment and outcomes exists, previous research has generally reported positive gains made for both individuals and organisations. Identifying specific organisational goals (pre-programme) which are re-measured (post-programme) would provide data for employers to assess the benefits of workplace literacy programmes.

The workplace literacy programme participants portray similar characteristics of disenfranchisement and marginalisation leading to low achievement in school. For these people to agree to participate in workplace programmes some years later requires courage and determination to overcome their past experiences. Finally, the

literacy programmes require clarity about meeting the goals of both the individuals and the organisations, and clarity about realistic expectations of achievable outcomes within the specified time frame.

Chapter 3: Research Design and Methodology

3.1 Introduction

Research involves finding a way of looking at something. It requires us to determine what we are going to observe and analyse: why and how. It provides us with a purpose to explore something that has been puzzling us. It invites us to ponder questions such as: Who asked for the research to be done? Who designed the questions? Who has control of the data? What is my role as the researcher? When and where will it be published? Who will the research help? Who owns it? What is the best research methodology for my study? This chapter identifies some different research approaches and how they influence inquiry. It also provides insight into why I selected the particular research design for this study and describes the methodology employed to carry out the research.

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        3.2.2   The researcher's paradigm
        3.2.3   Strategies of inquiry
                3.2.3.1 Quantitative approach
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3.3   The research process for this study
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        3.4.3   Research participants
3.5   Programme participant interview
3.6   Management representative interview
3.7   Data analysis techniques
3.8   Summary
3.9   Limitations of this study

3.2 Different research approaches

Successful research is about the art of the possible, not about one best research method (Davidson & Tolich, 1999). More particularly, it is about tailor-making the research to best suit the theory involved, the questions being asked, the people they are being asked of, and the amount of time and money that are available to complete the research.

Three approaches to research are identified in this chapter: quantitative, qualitative, and mixed methods research. They contain philosophical assumptions about knowledge claims by the researcher, strategies of inquiry to inform procedures, and specific methods of data collection. The choice of which approach to use is based on the research question, personal experiences, and the audience for whom one seeks to write.

Stating a knowledge claim means that researchers start a project with certain assumptions about how they will learn and what they will learn during the inquiry. These claims might be called paradigms. Through interpretation of paradigms I can better understand my own decision to select and carry out the research that I did. What made me decide that literacy programmes were providing outcomes beyond the anticipated academic literacy up skilling of reading, writing, oral communication and numeracy? What led me to narrow adult literacy programmes specifically to workplaces? What made me decide to include management voices in the research in addition to the workplace programme participants? What made me believe that I was capable of telling the story of these individuals? What made me think that this research would have some value?

3.2.1 Paradigm

A paradigm provides a framework for how we see the world. It leads us into selecting a methodology influenced by who we are, where we live in the world, what our background is, where we work, our aspirations and our way of creating our own reality. According to Masterman (cited in McIntyre, 1996), paradigm constructs the research. Researchers use a variety of paradigms to organise how they understand and inquire into their research. Masterman (1970, cited in McIntyre, 1996) identified three main meanings of paradigm in Thomas Kuhn's work; metaphysical, sociological and construct paradigm.

The metaphysical paradigm represents our core assumptions about knowledge and reality. From a Western world view of research, the model is usually characterised by research that is 'hard', quantitative and esoteric (McIntyre, 1996). It embodies our philosophical beliefs about the nature of reality (ontology) and knowledge (epistemology).

The sociological paradigm explains the institutionalised grammatical construction of doing research. Universities have traditionally been the bastion of research culture although recently there has been a move with encouragement for research within the Institutes of Technology and Polytechnic (ITP) sector with a more practical focus rather than academic. In New Zealand now, research has become a funding/status criteria in tertiary institutions so that teaching staff are increasingly required to undertake research. As a researcher I need to consider what influences have encouraged me to carry out research. Is it an institutional influence or an intrinsic desire?

The construct paradigm is the level of choice about a research inquiry and the ways to approach it. According to McIntyre (1996) this level of paradigm is crucial. He describes it as choosing a problem and a method together. One influences the other. I chose the question of workplace literacy programme outcomes because I observed outcomes from a 2004 workplace literacy programme delivered by Tairawhiti Polytechnic (Gisborne) that I had not anticipated from a programme of study. In some cases the outcomes were life changing for the participants. My curiosity was ignited; I wanted to find out more about the process that was taking place.

3.2.2 The researcher's paradigm

To identify my own particular paradigm I needed to analyse my motives and priorities for doing this research. First, why am I doing this research? My motives included:

1. Completion of my post graduate degree.

2. Following through an inquiry into people disenfranchised from the education system.

Secondly, I needed to examine my values. What are the driving influences for where I am today? I have been involved in tertiary education for 22 years, 20 years of which was with international students both internationally and in New Zealand. Throughout that period I have been curious about the ways people learn and what they bring to the learning process and why some people do not manage to make it in 'the system', wherever that 'system' may be. I have become interested in alternative education and alternative assessment methods. I have over the years developed my own views on and philosophies of education.

Thirdly, what assumptions am I making about knowledge? Can I measure it? Can I observe it? How will I interpret it? I have a constructivist view of learning. I cannot be completely objective as I already have a view on outcomes from literacy programmes but I need to remain open to new knowledge that may emerge from the research.

3.2.3 Strategies of inquiry

The researcher brings to the choice of a research design assumptions about knowledge claims. At a more applied level are strategies of inquiry that provide specific direction for procedures in research design (Creswell, 2003). These strategies of inquiry contribute to our overall research approach. Although there are many paths open to the researcher, in general these can be classified as either quantitative or qualitative (Davidson & Tolich, 1999). In order to understand these research approaches it is important to acknowledge some of the differences between quantitative and qualitative research methods.

3.2.3.1 Quantitative approach

Quantitative research deals with quantities which focus on providing statistical measures of things being studied. Two strategies of inquiry are experiments and surveys which can include a hypothesis, and offer concepts such as validity, reliability and prediction (Bogdan & Biklen, 1992). It is useful for collating or comparing statistics.

3.2.3.2 Qualitative approach

In contrast, qualitative research describes events, persons and behaviours in as many different ways as possible, often in a non-numeric way. One strategy associated with a

qualitative approach includes 'grounded theory' in which the researcher attempts to derive a general, abstract theory of a process, action or interaction grounded in the lives of the participants in a study. Another is 'case studies' in which the researcher explores in depth a programme, an event, an activity, a process or one or more individuals. (Creswell, 2003).

3.2.3.3 Mixed Methods Approach

For this research project I selected a mixed methods approach. This approach best suited my aim of finding out how programme participants were experiencing workplace literacy programmes with a need to hear the 'voices' of the participants and the 'voices' of management. I wanted the participants to share with me how it was for them, not how I thought it was for them.

A mixed methods design is useful to capture the best of both quantitative and qualitative approaches. It employs strategies of inquiry that involve collecting both forms of data either simultaneously or sequentially in a single study to best understand research questions. This approach developed from recognising that all methods have their limitations and researchers felt that biases inherent in any single method could neutralise or cancel the biases of other methods. Triangulating data sources, a means of seeking convergence across qualitative and quantitative methods became a way of using results from one method to inform the other method (Greene, Caracelli & Graham, 1989, cited in Creswell, 2003).

3.2.4 Triangulation

Denzin (1978) identified four basic types of triangulation: data triangulation (use of variety of data sources), investigator triangulation (use of several different researchers or evaluators), theory triangulation (multiple perspectives), and methodological triangulation (use of multiple methods). According to Silverman (2000), we may be able to triangulate the 'true' state of affairs by examining where the data intersect. This could improve the reliability of a single method. 'Qualitative researchers do not claim that there is only one way of interpreting an event. There is no one 'correct way'' (Denzin & Lincoln, 2003, p.69).

3.2.5 Validity and reliability

Questions that need to be asked of any research are; is it valid and is it reliable? Validity refers to the extent to which the question or variable accurately reflects the concept the researcher is actually looking for. It can be both external and internal. 'External validity refers to the generability of the findings gathered in the research, whereas internal validity refers to the design of the research project' (Davidson & Tolich, 1999, p.32). Reliability refers to consistency. For example, if another researcher were to carry out the same project using the same methodology, would they come up with similar results? If they did, it would seem that the research is reliable. 'Qualitative researchers tend to view reliability as a fit between what they record as data and what actually occurs in the setting under study, rather than the literal consistency across different observations' (Bogdan & Bilken, 1992, p.48). Qualitative researchers acknowledge that different researchers will experience the collecting of the data differently depending on what actually occurs in context.

3.2.6 Choosing a method

Both qualitative and quantitative approaches have a variety of different research methods that the researcher can use. As mentioned previously there is no one best method, instead research should be tailor-made to suit the inquiry. The questions which drive the choice of individual methods are the same as those that determine the kind of general approach to take. Those questions are: what do you want to know; from whom do you want to know it and what resources do you have? The methods selected for this research were interviews and surveys.

The interview is a 'useful technique for gathering data which would be unlikely to be accessible using techniques such as observation or questionnaires' (Blaxter, Hughes & Tight, 1998, p.153). Interviews can be carried out face to face, or over the phone. They may be structured with very set questions or open-ended allowing discussion to take place. An unstructured interview gives participants more control. The interviewee may have prior knowledge of the topic to be discussed and may be allowed to gather together information that could be relevant and bring it to the interview. Interviews can be recorded on a tape recorder and later transcribed. The interview gives the researcher an opportunity to 'connect' with the participant and hear how it is for them.

According to Blaxter et al (1998, p.70), survey research in education 'involves the collection of information from members of a group of students, teachers, or other persons associated with the educational process, and the analysis of this information to illuminate important educational issues'. The idea behind a survey is to ask a group of people questions about a particular issue in order to understand their viewpoint. A survey instrument is usually in the form of a questionnaire which is used to gain

statistical data. 'While the statistical analysis of data is largely (but not entirely) one of quantitative technique, the design and application of a statistical survey instrument is largely an exercise in qualitative technique' (Davidson & Tolich, 1999, p. 305).

3.2.7 Ethical considerations

Ethical guidelines ensure that the researcher acts ethically. The most important issues concerning research with human subjects include informed consent and the protection of participants from harm. Usually these guidelines are implemented through the use of consent forms that highlight the purpose of the study and the participant's role in it and what will happen to the findings (Bogdan & Biklen, 1992). Most importantly, the subjects' identities should remain anonymous, so that they are not exposed or embarrassed. Therefore, researchers need to be careful about sharing information with others who may use it for political or personal gain. Participants should be treated with respect, and be told what the terms of the agreement are. Finally the researchers should interpret what their data has revealed, even if it is not the conclusion that was expected.

3.2.8 Data collection procedure

In order to carry out the research, the researcher needs to gain access to conduct the study. This involves approaching the organisation or institution, explaining the purpose of the research and the intended approach. Once access is gained, it is important to clearly explain the process, how long it will take, what it will mean in terms of disruption and what will happen with the findings.

Other processes that need to be considered are the selection of the sample group and when, where and how often they will be required to meet. With interviews, it is

necessary to inform the subjects of the purpose and reassure them that what they say will be treated confidentially.

3.3 The research process for this study

3.3.1 Background

In 1994 Tairawhiti Polytechnic, my workplace, delivered its first workplace literacy programme in Gisborne. From this programme two things became key for this research process. First, my interest was ignited in what was happening to programme participants as a result of their participation in the programme and secondly, Tairawhiti Polytechnic formed a relationship with Workbase: The National Centre for Workplace Literacy, and became part of Workbase's provider group. Informing Workbase of my research and discussing access to other providers became the first stage of the research process. The enquiry contained an overview of my research, a request to contact the workplace literacy partners and a company permission form for Workbase's participation. Workbase provided their permission and so the second stage was underway with an introduction of my research by Workbase to the partner providers. The next stage involved me making contact with each of the partner providers individually to seek their interest in participation. These providers had all been participants at various Workbase workshops and as partner providers we were known to one another.

The contact person in each case was either the company's training manager or the coordinator of the workplace programme. A substantial part of the early stages of the research was spent developing relationships with the company contact person. The relationships developed over a two to three month period in early 2005 from a series of email and telephone communications. The communications involved information

about the research, the anticipated benefits of the research, copies of interview questions for the programme participants, and interview questions for management representatives.

I found that willingness by the companies to participate was limited due to a variety of reasons including: recent or current restructuring in companies and therefore inappropriate timing; a belief that their programme was inappropriate to be part of the research because it was either too small or struggling; the programme was no longer being provided; or it was a new programme and therefore would not make any noticeable impact. Because the research approach was underpinned by the need for voluntary participation with the company and programme participants, the process of selecting companies became a process of elimination. Some of the companies, who were reluctant to participate due to the previously mentioned obstacles, referred other companies through their own initiative.

3.3.2 The companies

The result was a total of five companies, three of which were partners with Workbase and two which had been referred by Workbase partners. Two companies were located in Auckland, one in Hamilton, one in Taranaki and one in Hawke's Bay. Such a wide geographical area required careful scheduling and subsequent rescheduling for visits to interview all the participants. The companies ranged in size, from small of less than 50 employees, with average from 50 to 150, to large from 150 to 500 and to very large of more than 500 employees The five companies in Table 3.1 are known here as companies A, B, C, D and E.

Table 3.1: Company profiles

Company	Size	Number of staff	Company product/service	Location	Interviewees
A	Large	456	Beverage distributor	Urban South Auckland	1. Packaging supervisor 2. Team leader of distribution
B	Average	115	Paper bag manufacturer	Urban South Auckland	1. Manager of services- paper bags 2. Production manager of 'Y' shift
C	Average	150	Building maintenance	Urban Hamilton	1. Training manager
D	Large	580	Food manufacturer	Regional Taranaki	1. Training manager 2. Production manager of natural pack
E	Very large	1100	Food processor	Urban Hastings	1. Training advisor 2. Quality assurance team leader

I believe these companies agreed to participate in this research because they were part of the 10 percent of the group of companies identified by Schick (2005) which had recognised the link between addressing literacy needs in the workplace with workplace productivity and were willing and interested in having their programmes researched. The anecdotal evidence that was observed from the workplace literacy programme outcomes justified provision.

Having located the companies, the contact person in each company proceeded with finding willing staff to participate and organised interview schedules. I wanted to interview programme participants and company management. Before I could venture into this research I developed all appropriate forms to gain approval of access, personal data of interviewees, and their written agreement to recording the interviews

and using the transcribed interview information in my thesis. I designed a company permission form and information sheet to go to the company management (refer Appendix A) and a participant consent form and information sheet for the programme participants (refer Appendix B).

Each interview with a programme participant took about one hour during either their work time or their literacy programme time. The management interviews were generally less than an hour and also held during their work time. In total, the data gathering took six months and the transcribing of interviews took another two months. The time frame for the research process is outlined in Table 3.2.

Table 3.2: Time frame for the research process

When?	What?	Where?
November/December 2004	Ethics approval gained	Massey University, Palmerston North
January to March 2005	1. Identified companies willing to participate 2. Established contact with key person at each company 3. Identified potential interviewees 4. Arranged interview schedule	Hawke's Bay Hamilton New Plymouth Auckland
April to July 2005	Carried out interviews	Same as above
August /September 2005	Transcribed interviews	Gisborne
October to December 2005	Writing up data results	Gisborne
January to December 2006	Writing thesis	Gisborne

3.3.3 Ethical concerns

In the application for the proposed research to the Human Ethics Committee, Massey University, I undertook that the research would not harm the participants in any way and that names would not be used thus ensuring confidentiality of participants. A consent form was used for the programme participants which included statements

with regard to permission to use data, confidentiality and the taping of interview sessions. In anticipation of the participants requiring oral consent due to their limited reading ability it was agreed that this could be provided orally by tape, however this situation did not present itself and was not an issue. A second consent form requesting permission from the company for the research to take place was provided to the management representatives. This form also included statements with regard to permission to use data, confidentiality and the taping of interview sessions. Workbase: National Centre for Workplace Literacy, also signed a consent form supporting the research.

I ensured that all participants involved in the research were informed about the process and purpose of the research both before agreeing to participate and again during the interview sessions. Firstly, a summary of the research was presented to the volunteers by the workplace programme coordinators and a further information sheet and discussion of the research was held at the beginning of each interview session.

Two ethical issues became apparent from this process. The first was confidentiality of the participants and the second was the issue of conducting interviews with people who could perceive the role of the interviewer as someone from a position of power and privilege.

The issue of confidentiality was resolved by using reference numbers to identify the interviewee with the company. One of my concerns was that information provided by the interviewees could be misused by the company so it was important to me that all information remained confidential and that the interviewees were protected.

The second concern was the interviewer in a position of power. I tried to allay these perceptions by using an interview approach which was undertaken as humanistically and personally as possible. Whether the approach was in fact able to allay perceptions of power and privilege remains unknown, but in anticipation of it occurring, I tried to moderate it by the dual perspective approach of including management voices in the research.

3.4 Method of approach

For this research project I chose to carry out individual interviews with management representatives (refer Appendix C) and a combined individual interview and self-assessment progress questionnaire with the programme participants (refer Appendix D). In total I carried out individual interviews with nine company representatives and 16 workplace literacy programme participants.

3.4.1 Programme participant interview

The rationale behind choosing individual interviews with a questionnaire for the programme participants was to gather some quantitative data on the participants' perceptions of their progress from the programme and to explore these perceptions through the interview. The individual interviews gave me an opportunity to link with the participant and hear a little about their learning journey and their previous school experiences. The interviews also provided an opportunity to explore whether the self-assessments were consistent with what they had indicated on the questionnaire. I chose to carry out structured interviews with the questions written down so that I could stay on track and provide consistency across the range of interviews. Although the questions were written down in the order that I thought would make the most

sense, I found that it was not quite that simple in practice. The interview was derived from two sources: Programme review survey for learners (Workbase, 2004) and Bridging Education for Women research (Anderson, 2004).

Self-assessment was included in the interview structure for the programme participants to describe their learning experiences. It provided quantitative data on the progress gained by the programme participants since embarking on their literacy programme. Self-assessment can present challenges firstly in terms of 'social desirability' responses with interviewees either over-reporting or under-reporting activities that are deemed to be socially or culturally desirable or socially and culturally undesirable (Henningsen & Henningsen, 2004; Bernardi, 2006). In this research context it is possible that participants responded in a way that would either conform to a dominant view or that would indirectly please their tutor or management.

In order to limit effects of 'social desirability' responses in this research, two strategies were employed. The first strategy was interviewing one-to-one so that group pressure did not exist to influence their responses. The second strategy was to clarify responses in more depth during the interview and to explore whether the self-assessments were consistent with what the programme participants had indicated on the questionnaire.

3.4.2 Management representative interview

The rationale behind the management representative individual interview was to research a more organisational view of the impacts of the workplace programmes from the management perspectives. The management interview was also structured with questions written down which again helped in staying focussed on the topic and assisted in making the interviews as time efficient as possible. The interview was based on a Workbase Evaluation interview for management (Workbase, 2004).

The goal of combining two data-gathering methods (triangulation) was first to strengthen the research and examine issues around workplace literacy programmes from different angles and second to assist in balancing any 'social desirability' bias from the programme participants.

3.4.3 Research participants

After gaining approval from each company, the company contact person identified people from within the company who were willing to be interviewed. The contact person provided the potential interviewees with my research information and compiled an interview schedule.

In April, 2005, I visited the first company, Company E, in Hawke's Bay and interviewed one programme participant and the training manager. Two programme participants were absent so I rescheduled to meet with the other two participants and the quality assurance team leader the following month. The workplace literacy programme in this company had started in 2002 and had just finished at the end of 2004. It had been a self-paced computer assisted programme with a tutor from an external provider. The programme participants had participated in the programme in

their own time. I returned to this company six weeks later to complete the interviews. The programme participants had been involved in the programme from between 24 and 36 months. The programme had finished at the end of 2004 so at the time of interviewing they had been out of the programme from between four and five months.

The second company, Company B was located in Auckland. The interviews took place over two days in May 2005 with three programme participants and two management representatives. The literacy programme had been operating for 18 months and was a component of the Standard Operational Procedures (SOPs) training in small groups. Literacy up-skilling was provided to anyone who was experiencing literacy difficulties with the SOPs on a one-to-one basis for one to three hours per month. The programme participants had been involved from three to 24 months.

The third company, Company A, was also in Auckland and four of the five interviews were carried out the day following the second company. The four interviews were with two programme participants and two management representatives. Due to absenteeism the third programme participant interview was rescheduled and took place six weeks later in July. This workplace literacy programme took place as a one-to-one individual session for one hour per week with an external tutor during work time. The participants had been attending the programme from 11 to 20 months.

The fourth company, Company C was in Hamilton where I interviewed one participant and the training manager in July. The programme participant had been attending the programme for seven months in one-to-one individual one hour sessions per week during work time.

The fifth company, Company D was located in Taranaki. Over two days in July I interviewed six programme participants and two management representatives. This programme was also one-to-one for one hour per week and during work time. Participants had been attending this programme from 12 to 24 months.

Apart from one programme participant in Company B who tended to be wary of the interview process, all the other interviewees were enthusiastic to talk with me. Company B had just undergone some major restructuring; one of the programme participants asked for the tape recorder to be turned off and another was reluctant to answer some of the questions.

I ended up with a good mix of 16 programme participants with ages spanning from 31 to 60 years, with eight females and eight males of whom eight were Pākehā, three Māori and five Pasifika. The nine management representatives were made up of three Pākehā females, three Pākehā males, one Māori male and one Pasifika male.

Table 3.3: Programme participants

Reference	Company	Age bracket	Gender	Ethnicity	English as a Second Language	Job	Time in programme (months)	Time out of programme (months)
1	B	31-35	M	Tongan	No	Machine operator	24	0
2	B	56-60	M	Cook Island	No	Line leader	6	0
3	B	46-50	M	Māori	No	Machine operator	3	0
4	A	56-60	M	Samoan	Yes	Distribution	11	0
5	A	51-55	M	Samoan	Yes	Forklift driver	11	0
6	A	31-35	M	Tongan	Yes	Forklift driver	20	0
7	E	51-55	F	Pakeha	No	Quality assurance	36	4
8	E	51-55	F	Maori	No	Machine operator	24	5
9	E	36-40	F	Pakeha	No	Machine operator	18	5
10	C	46-50	M	Pakeha	No	Carpenter	7	0
11	D	26-30	F	Pakeha	No	Packing hand	24	0
12	D	56-60	F	Pakeha	No	Training assessor	24	0
13	D	56-60	F	Pakeha	No	Packing hand	12	0
14	D	36-40	M	Pakeha	No	Palletiser	12	0
15	D	51-55	F	Pakeha	No	Packing hand	18	0
16	D	36-40	F	Maori	No	Machine operator	24	0

The eight females were aged between 26 and 60 years of age. Six were Pākehā and two were Māori. They were all native speakers of English. Apart from the Quality Assurance and Training assessor women, the rest were on the factory floor. The eight males were aged between 31 and 60 years of age. One was Pākehā, three Māori, two Samoan, one Tongan and one was a Cook Islander. All the jobs except for the Line Leader were on the factory floor. The three programme participants from Company A were all speakers of English as a Second Language with their key objective to be able to communicate clearly.

Table 3.4: Management representatives

Reference	Company	Gender	Job
17	A	M	Supervisor
18	A	M	Team leader
19	B	M	Manager of services
20	B	M	Production manager
21	C	F	Training manager
22	D	M	Production manager
23	D	M	Training manager
24	E	F	Quality assurance
25	E	F	Team leader

I interviewed two management representatives from each company except for Company D which only had one representative and who was also involved in the programme delivery.

3.5 Programme participant interview

I developed a range of questions for the programme participants (refer Appendix D). These were designed to find out how the participants perceived their learning from the workplace literacy programme, how the learning was being applied in the workplace and what they perceived as key factors for making learning effective. I also wanted to see if the participants' experiences matched some of the findings in the literature review.

The interviews were done in private and were about one hour in duration. In all cases they were carried out in the company where they worked, during either their work time or their programme time. I used a tape recorder with a built-in microphone.

Each interview began with me talking about the research and reading through the information sheet and consent form which was subsequently signed. They were given time at both the beginning and the end to ask me any questions about the research. It was important for me, the researcher, to gather data in a way that was perceived and experienced by participants as personal in nature. Cernea (1991, as cited in Patton 2002, p.175) has called this approach of personalising and humanising evaluation as 'putting people first'. Patton (2002, p.176) expands further on this approach in talking about the 'need to communicate respect to respondents by making their ideas and opinions (stated in their own terms) the important data source for the evaluation'.

The programme participant interview session (refer Appendix D) was designed to obtain both qualitative and quantitative data from the participant's perspective. The session comprised three parts. The first part of the session (Programme Information) was designed to gather personal data and provide an overview of the participant's involvement in the programme. The second part of the session was the questionnaire. It focussed on self-assessment of the participants' perceptions of their learning and was grouped into: literacy skills; economic changes; social changes; and overall progress. The final part was the interview which sought to clarify responses from the questionnaire. It also invited responses about prior academic learning experiences and effective learning.

The first part of the self-assessment questionnaire (Sections A to D) asked the participants to rate their perceived progress of their academic literacy skills (oral communication, reading, writing and maths) with values from 5 (strongly agree) to 1

(strongly disagree). The final part of the questionnaire (Section G) asked the programme participants' perspectives on their overall progress from attending the programme with a rating from 5 (very strong) to 1 (very weak). The descriptors of *'before the programme'* and *'now'* were used to identify the progress from where the participant started to where they were at the time of the interview. All the participants except three from Company E were still attending a programme. These self-assessment questions were adapted from a Workbase Programme review (Workbase, 2004) which I had used previously with Gisborne workplace literacy programme participants. I had found it a useful tool for directing the participants into assessing their perceived progress.

The economic and social change questions (Sections E and F) focussed on what changes the participants may have noticed in their lives since doing the programme and were also self-assessed with a value from 5 (strongly agree) to 1 (strongly disagree). These social and economic questions were based on Bridging Education for Women research (Anderson, 2004) in which the questions had been developed in focus groups by programme participants who had participated in bridging learning programmes at Manukau Institute of Technology. In Anderson's research, the questions were developed by the programme participants according to what they perceived as having value. In my research there were varying ranges of time in which programme participants had participated in workplace literacy programmes which may have skewed some of the responses. I thought it was relevant to include the same questions in this research as the questions in the foundation learning research as the questions had been developed by foundation learning programme participants who had an insight into what benefits were possible.

The interview questions from 1 to 10 (Appendix D, p.4) were designed to explore in more depth the self-assessed responses given by the programme participants and to check for consistency in responses between the questionnaire and the interview. These questions were also based on Workbase's programme review. The first ten questions provided an opportunity to clarify responses and to explore how the participants were applying their learning in the workplace. From the literature review, Chapter 2, it was found that many individuals attending workplace literacy programmes become more confident. Employers also state that their employees have more confidence. Based on this information, I formulated questions 9 and 10.

Interview questions 11 to 19 were used to elicit the programme participants' perspectives on key factors that made learning effective in their current learning experiences. Their current learning experiences aimed to assist the participants to reflect on prior academic learning experiences.

3.6   *Management representative interview*

The management interview (refer Appendix C) was used to provide another perspective on programme outcomes and the impacts of workplace literacy programmes in the workplace. Patton (2002, p.559) describes this approach as a triangulation of qualitative data sources. It was used to 'compare and cross-check the consistency of data derived at different times and by different means within qualitative methods'.

I used a semi-structured questioning approach with the management representatives. The questions were based on a management interview structure from Workbase's evaluation of training programmes for management representatives (Workbase, 2004a). The questions were designed to guide management representatives into thinking about and disclosing their perceptions of the progress of the literacy programme participants and the impacts that the programme outcomes were having in the workplace. Due to the semi-structured nature of the questions the management representatives were able to digress from the topic and talk about associated interesting issues which I found relevant, such as their reflections on the bigger picture, changes occurring in the workplace organisation and the company philosophy behind providing workplace literacy programmes.

The management interview was a series of eight questions and structured into themes of: impacts on the programme participants; impacts on productivity; changes in work tasks; changes in relationships; and changes in work practices. Again as in the programme participant interview, the approach of a personalising and humanising evaluation was taken with care to ensure that interviewees' ideas and opinions were stated in their own terms and used as a data source for the evaluation (Patton, 2002).

3.7   Data analysis techniques

The self-assessment questionnaire of the programme participants was calculated by using values from 5 ('very strong') to 1 ('very weak') in Sections A, B, C, D and G. Sections E and F were also calculated from values 5 ('strongly agree') to 1 ('strongly disagree') (refer Appendix D). The values in each instance were multiplied by the number of respondents. This calculation strategy was used to present data in a

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meaningful way, however due to the limited number of 16 participants, rather than the data representing precise or statistically defensible measures it is instead an indication of general trends.

Each interview was recorded on a tape recorder. This allowed me more opportunity to follow through on a line of questioning and as I became more familiar with the type of responses I was able to ensure a more natural flow of conversation while checking that all areas of interest were covered. On completion of all interviews I began the task of transcribing each interview. Having the verbatim transcripts allowed me to carefully read and re-read the data, looking for themes and patterns. Both the programme participants and the management representatives were identified as belonging to companies A, B, C, D, and E. I began to look for threads that were recurring. These were grouped into different themes which I transferred onto separate sheets of paper. Key themes emerged, such as: examples of learning that had taken place; academic outcomes; non-academic outcomes; self-confidence inter-connected with varying outcomes; application of learning in the workplace; the role of the tutor in relating to the participants; the importance of relevant content in the programme; previous school experiences; overcoming barriers to participate in a workplace programme and company philosophy in providing workplace literacy programmes.

The time that the process took, from my first hand experience of hearing some highly personal disclosures from the programme participants, to the analysis of the data, allowed for review and reflection on what I had heard and provided time for the emergence of patterns. Themes, indicators of progress and interviewees' words relevant to the aims of the project were identified and pulled from the transcripts.

Having verbatim transcripts also allowed me to use words of the research participants which in many cases were very direct and heartfelt in their communication.

3.8 Summary

The research approach I selected was influenced by the way I see the world and by what triggered my interest about workplace literacy. Witnessing the changes in the lives of the workplace literacy programme participants and the effects of these changes in the workplace created the motivation to investigate. I had confidence in my own ability to slip into the worlds of the interviewees, to listen to their responses and record their interviews. Mixed methodologies with triangulation of perspectives were incorporated into the research design. Denzin (1978b, cited in Patton, 2002, p.247) states that 'no single method ever adequately solves the problem of rival causal factors. Because each method reveals different aspects of empirical reality, multiple methods of observations must be employed'.

A mixed methods approach best matched my interest in a people-based approach. This approach allowed me to hear the stories of the programme participants and allowed me to hear the stories of management. The interview questions were structured to elicit open-ended responses and to encourage discussion around topics. Due to the open-ended nature of the questions both the programme participants and management were able to self-select their own terms to describe their experiences and their ideas. This enriched the qualitative data with terminology and expressions personally meaningful to the participants. The personal nature of this approach was carefully designed to create more opportunities for 'putting people first' (Cernea, 1991, cited in Patton 2002, p.175).

The tables below represent the relationship between the interview questions and the research aims.

Table 3.5: Programme participant questions relating to aims of research

Workplace literacy programme outcomes	Questionnaire Sections A, B, C, D, G
Impacts of the programme outcomes in the workplace	Questionnaire Sections E, F Interview questions 1 to 10
Key factors contributing to effective learning in relations to workplace literacy	Interview questions 11 to 19

Table 3.6: Management questions relating to aims of research

Workplace literacy programme outcomes	Interview question 1
Impacts of the programme outcomes in the workplace	Interview questions 2 to 8

3.9   Limitations of this study

There are a number of limitations to consider in this study. Firstly the sample population is quite limited with only twenty-five interviewees in total, with sixteen programme participants and nine management representatives from five companies. The participating companies were all companies which overall had enjoyed a high success rate with their workplace literacy programmes. Furthermore, the participants had volunteered and generally all the responses were positive. Some companies had been running these programmes since 2002, and felt reasonably confident that positive data would be forthcoming. Companies who were not confident did not participate in the study. The relatively small sample size makes it difficult to generalise any results beyond the confines of this sample.

The second limitation was possible interviewee bias. As mentioned with regards to the sample, the interviewees in this research were generally positive. A few of the programme participants who declined to respond to certain questions were possibly

not so positive but opted to say nothing rather than something negative. As a participant on a programme who is experiencing positive self-esteem and empowerment, they are less inclined to report any negative perceptions. Generally, the programme participants spoke highly of the programmes and the tutors. This was particularly noticeable in Company A with the three speakers of English as a Second Language (ESL) who could have been culturally influenced with their desire to report positive outcomes. I felt that in a few cases the interviewees' social desirability to please the researcher and be accepted as having made progress could have produced slightly skewed positive responses. I did not interview anyone who had been unsuccessful on a programme.

Another limitation was a constraint of the research design with limited contact time with the interviewees, in particular with the programme participants. Although the research was structured to only have one interview, the results could have possibly been more meaningful if there were pre-programme interviews and post-programme interviews. This was not possible due to the difficulty in finding companies and people willing to participate within a relatively short time frame and the constraints of time on completing the study.

The next chapter provides the results of the research followed by discussion in *Chapter 5* of the key findings related to previous research and *Chapter 6* concludes with implications from the discussion and suggested future research.

Chapter 4: Results

4.1   Introduction

This chapter presents selected and principal findings from the field work carried out

and is divided into two sections. The first describes the programme participants' and

management representatives' perspectives on programme outcomes and their impacts

in the workplace. The second section describes the programme participants'

perspectives on learning experiences relating to prior school experiences and

experiences relating to workplace literacy programmes.   An overview of the sections

is:

4.2   Programme outcomes and their impacts in the workplace
         4.2.1   Academic outcomes
         4.2.2   Non-academic outcomes
         4.2.3   Management perspectives on impacts in the workplace

4.3   Programme participants' perspectives on learning experiences
         4.3.1   Prior school experiences and low literacy levels
         4.3.2   Factors contributing to effective learning

4.4   Summary

4.2   Programme outcomes and their impacts in the workplace

This section describes programme outcomes from the participants' perspectives

grouped together as academic outcomes and non-academic outcomes. The outcome

responses have been collated firstly from the questionnaire part of the programme

participant interview session in which participants self-assessed themselves, and

secondly from the interview responses provided by the participants. Interviews with

management representatives provided insights into how the outcomes have impacted

in the workplace.

To gain an overview of the participants' perspectives on their progress I asked the participants to reflect on their perceptions of their literacy before they started the programme and then at the time I interviewed them. The findings are referred to in the following descriptions as 'pre-programme' and 'current'. At the time of the interviews, participants had been attending programmes for varying periods of time and some had already finished. The three who had finished, had been out of the programme between four and five months when they were interviewed and had attended the programme from between 24 and 36 months. The programme was no longer on offer at the company. The remaining 13 participants had been attending their programmes from between three and 24 months.

4.2.1 Academic outcomes

The first two tables (Table 4.1 and Table 4.2) represent a self-assessment by the sixteen programme participants on how they viewed their overall progress dating from 'pre-programme' to the time when the interviews were held which as already mentioned is referred to here as 'current'. The self-assessment specifically relates to the academic literacy and numeracy skills of oral communication/speaking, reading, writing and maths. Seeking the programme participants' perceptions on their progress was part of the design rationale to gather data from various data sources. *Section 3.4 Method of approach* (Chapter 3) explained the rationale for the self-assessment approach and also the need for awareness of the possibility of bias arising from 'social desirability' responses.

In the first table (Table 4.1), we depict the 16 participants' pre-programme assessment of their academic literacy and numeracy skills. The second table (Table 4.2) shows their self-assessment at the time of the interview known here as 'current'. The calculations have been based on a value of 5 for 'very strong' to 1 for 'very weak'

multiplied by the number of participants in each category and then totalled to find an overall score for each indicator band from 'very strong' to 'very weak' and an overall score for each skill area. The totals from each band of the two tables can be compared to show the movement between the bands from the 'pre-programme' assessment to 'current' following their time on the literacy programme. For example, in the instance of 'oral communication', there is an increase from three participants, valued at 12, who assessed themselves as 'strong' to 10 participants, valued at 40, who assessed themselves as 'strong'. *Section 3.7 Data analysis techniques, Chapter 3*, described the calculation strategies for presenting data in a meaningful way and suggested that due to the limited sampling of interviewees, rather than the data representing precise or statistically defensible measures, it is instead an indication of general trends.

Table 4.1: Programme participants' perceptions of their academic literacy skills prior to their programme commencement.

Pre programme	Oral communication/ Speaking	Reading	Writing	Maths	Total
Very strong (5)	2 (10)	0	0	0	**10**
Strong (4)	3 (12)	2 (8)	1 (4)	4 (16)	**40**
Average (3)	5 (15)	7 (21)	10 (30)	5 (15)	**81**
Weak (2)	4 (8)	6 (12)	3 (6)	3 (6)	**32**
Very weak (1)	2 (2)	1 (1)	2 (2)	3 (3)	**8**
Not applicable	0	0	0	1 (1)	**1**
Total	**47**	**42**	**42**	**40**	

Table 4.2: Programme participants' perceptions of their academic literacy skills at the time of the interview.

Current	Oral communication/ Speaking	Reading	Writing	Maths	Total
Very strong (5)	4 (20)	3 (15)	2 (10)	3 (15)	**60**
Strong (4)	10 (40)	8 (32)	5 (20)	6 (24)	**116**
Average (3)	2 (6)	5 (15)	5 (15)	4 (12)	**48**
Weak (2)	0	0	1 (2)	1 (2)	**4**
Very weak (1)	0	0	0	0	
Not applicable	0	0	0	2	
Total	**66**	**62**	**47**	**53**	

The overall progress for 'oral communication' has increased from 47 to 66 (+140%), for 'reading' from 42 to 62 (+148%), for 'writing' from 42 to 47 (+112%) and for 'maths' an increase from 40 to 53 (+132.5%). These results are shown in the following graph (Graph 4.1).

Graph 4.1: Academic skills 'pre-programme' to 'current' as perceived by programme participants.
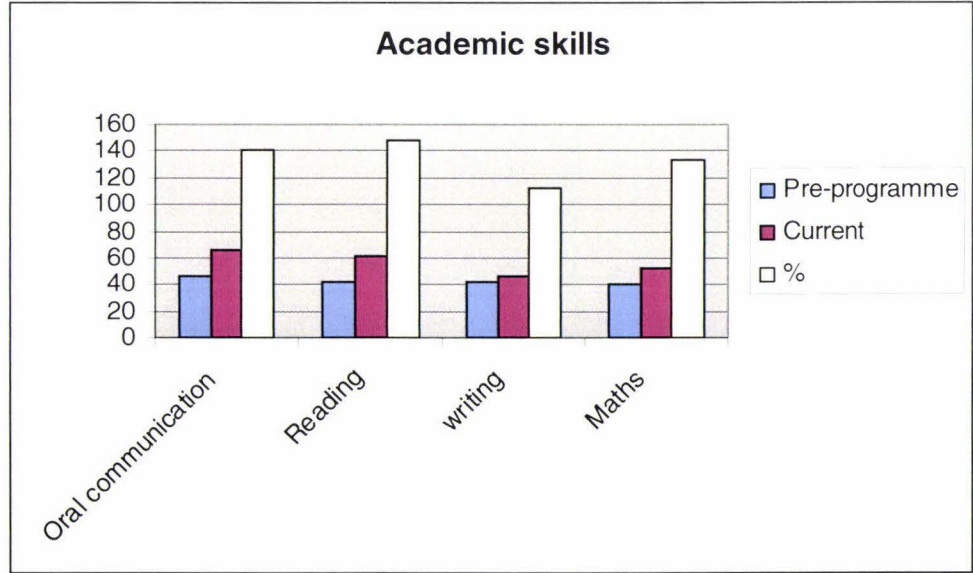
When these results are totalled across each band we can see that the 'very strong' band has increased from a 'pre-programme' value of 10 to a 'current' of 60 (+600%), the 'strong' band from a 'pre-programme' 40 to a 'current' 116 (+290%), the 'average' band has decreased from 81 to 48 (-169 %), the 'weak' band from 32 to 4

(-800%) and the 'very weak' band from 8 to 0 (-800%). This data is represented in the following graph (Graph 4.2).

Graph 4.2: Overall band values 'pre-programme' to 'current' as perceived by programme participants.
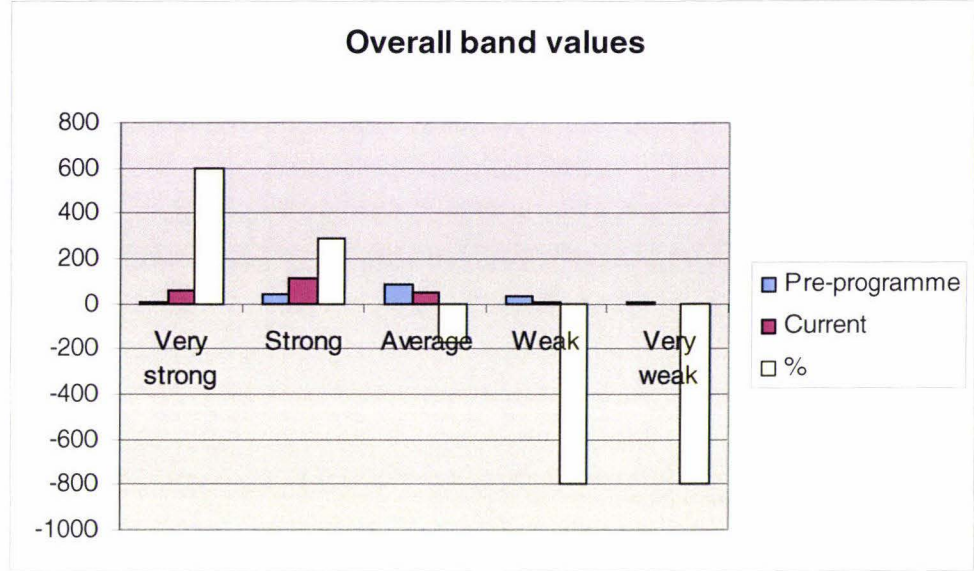
This data indicates that participants perceive that there has been progress made in the academic outcomes of oral communication, reading, writing and maths. From further questioning during the interview, the programme participants gave examples of these outcomes in relation to their progress. These examples are described under the sub-sections of oral communication, reading, writing and maths and provide qualitative data to supplement the quantitative data collated from the questionnaire.

Oral communication

Twelve of the 16 programme participants referred to improved 'oral communication'.

One participant expressed his improved 'oral communication' as:

> *I get a lot busier in my smokos now and talk to more people...my communication is better and I feel better about myself and talk more.*

The 'feel better' part relates to increased self-confidence and self-esteem which is also referred to later in the chapter in *Section 4.2.2, Non-academic outcomes*. The

quotation above connects improved 'oral communication' with perceptions of increased confidence and self-esteem and demonstrates an interconnection of outcomes. Another example of the interconnection between outcomes is increased participation in meetings, with a combination of outcomes of improved oral communication, risk taking and increased self-confidence. One participant expressed this with an example of increased participation:

> *I feel a bit more confident to speak out instead of sit back and be quiet about things...whereas I probably wouldn't before, just used to sit back a bit.*

The following chapter, *Chapter 5: Discussion* raises this issue of interconnection between the outcomes, indicating that it is often a combination of outcomes which are involved in increasing overall literacy competency.

Other examples of improved communication were cited by participants as increased vocabulary, the use of more words, increased ease in talking to people including the boss and workmates, increased ability to explain and to be understood. One participant combined several of the examples together when she described her communication improvement:

> *Just putting words in the right place and hopefully learning to listen...and answering them properly...You communicate with your managers and team leaders a lot better and when they start using big words at least you understand what they are talking about.*

Specifically in reference to the use of words, another participant describes his improved speaking:

> *Like, just getting my tongue around some of the words and understanding what they actually mean.*

The same participant went on to describe how improved communication helps his work:

> *I'd say just communicating with management and public like when I go to explain something to them, I can explain it to them.*

Reading

Fifteen of the 16 programme participants described examples of improved reading outcomes. These included: the use of the computer specifically with emails; notices and signs in the workplace; training and operating manuals; and understanding forms such as job sheets, order forms and complaints. One participant in response to a question on what he was now able to read explained with an example of form filling:

> *Day sheets and job sheets and that that come out, I get different jobs and to understand it and read it, when I get it now I can read and understand what it means like garage doors, adjusting and...like that.*

Another participant described her improvement in being able to work things out, something she was unable to do previously:

> *Just learning how to spell out words properly and putting things together and that but sometimes I can sit and read a piece of paper that's got big words in it and that's fine, sometimes when it comes to little ones I get stuck but yeh, can still work out a way, at least I'm learning to do it better.*

Further examples were given by the participants in relation to their personal lives and included: being able to do their own paperwork at home; helping their children with their homework; reading their children's books; and reading newspapers, magazines and novels. However, due to the parameters of this study relating specifically to the workplace, outcomes relating to personal lives have not been analysed.

Writing

The complexities and relationships between outcomes involved in literacy development were evident again in discussing improvement in the skill of writing.

Five of the 14 participants referred to improved writing as improved spelling and improved reading. This combination was expressed by one of the participants:

If you can't spell it you can't read it, you can't write it 'cos you can't spell it.

Of the 14 participants who identified progress in writing, nine of them described the outcome as being more correct in completing forms and documentation, specifically leave forms and time sheets. Other examples of improved writing were cited as being able to write notes and letters for school and being able to write complete sentences.

Maths

Not all of the programme participants had maths in their programmes but of the 11 who did, eight participants provided examples of their progress in maths by talking about improved form filling and an ability to perform calculations. Again the notion of interconnection of outcomes arises with maths, in the context of form filling, which also featured in both reading and writing. The need to be able to calculate volume, percentages, addition and subtraction for storage space, for example, is a normal part of a job for a person with competent literacy levels. However, for someone who is struggling, performing a simple calculation can develop into a highly complex problem leading to inefficiency and, wastage, and ultimately this reduces productivity in the workplace. Issues around productivity are raised in *Chapter 5: Discussion* in relation to impacts in the workplace.

One participant provided an example of how improved maths helped him in his job:

...so I can look at a carton now and say that there are so many cartons to go.

In reference to more accurate form filling, one participant expressed how this related to her and the impacts of it on her work:

> *At work we're adding up our downtimes, you know you put in what time you stop, the next time you start so you've got to find out how much is in between for your downtime tallies and I know mine is a lot better now. Sometimes you're only a little bit out but it's still, it all adds up and it makes it easier for the bosses in regard to the paperwork.*

The same participant described how she dealt with her low level of maths prior to the programme:

> *Like I wasn't very good at minuses, minuses was a real ... and the writing times tables, you could always find them written down somewhere, whenever I needed to times something then I'd set back to the kids type thing but just the little things you do, like you're too scared to ask anybody how to exactly do them properly and it was just the little easy things.*

4.2.2 Non-academic outcomes

The next table (Table 4.3) represents a self-assessment by the programme participants on how they have viewed their progress in non-academic outcomes dating from 'pre-programme' to 'current'. The self-assessment specifically relates to the non-academic outcomes of 'self-confidence' and 'care with money'. The numbers represent the number of participant responses for each category of 'very strong' to 'very weak'. Again as in the section on academic outcomes, it is necessary to be aware that the data represents general trends rather than precise statistical measures.

Table 4.3: Programme participants' self-assessment on 'self-confidence' and 'care with money' pre-programme compared with current.

Pre programme	Self-confidence	Care with money	Current	Self-confidence	Care with money
Very strong (5)	2 (10)	1 (5)		4 (20)	5 (25)
Strong (4)	4 (16)	4 (16)		10 (40)	3 (12)
Average (3)	5 (15)	7 (21)		2 (6)	7 (14)
Weak (2)	3 (6)	2 (4)		0	1 (2)
Very weak (1)	2 (2)	2 (2)		0	0
Total	**49**	**48**		**66**	**60**

In the instance of 'self confidence', there is an increase from two participants in 'very strong' to four, from four to ten in 'strong', a decrease from five to two in 'average', a decrease from three to zero in 'weak' and a decrease from two to zero in 'very weak'. In the category of 'care with money' there is an increase from one to five in 'very strong', a decrease from four to three in 'strong', a constant at seven in 'average', a decrease from two to one in 'weak' and a decrease from two to zero in 'very weak'. In terms of overall totals calculated from the band value and number of participants, 'self-confidence' shows an increase from 49 to 66 (+135%). Graph 4.3 following represents the increase in self-confidence.

Graph 4.3: Increase in self-confidence as perceived by programme participants.
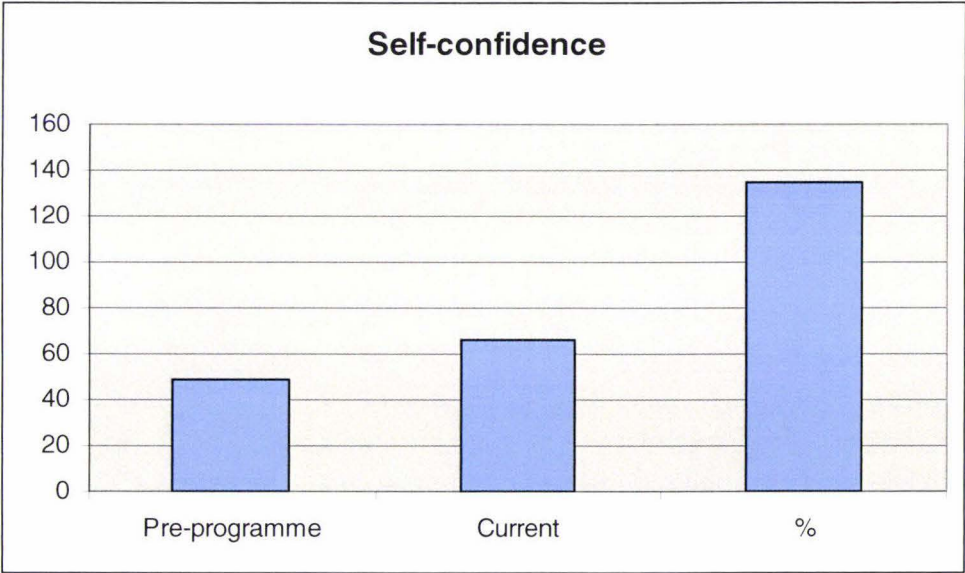
The increased self-confidence from 'pre-programme' to 'current' suggests that it is a programme outcome. Increased self-confidence is corroborated further from *Table 4.4: Social changes* and supported by qualitative data from the interview. The overall progress for 'care with money' from 48 to 60 (+125%) suggests 'care with money' has been an outcome and is represented in Graph 4.4, however the results in *Table 4.5: Economic changes* do not provide strong evidence for this nor does it feature further in the interview data.

Graph 4.4: Increase in 'care with money' as perceived by programme participants.

Care with money
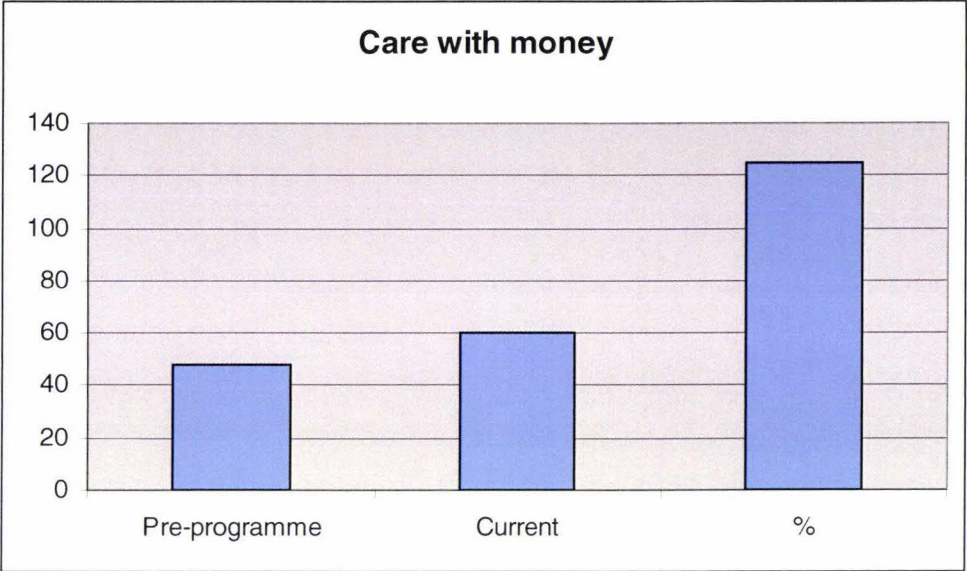
The next two tables, Tables 4.4 and 4.5, provide more detail of the social and economic outcomes perceived by the programme participants. The percentages represent the proportion of programme participants indicating how they perceived changes from 'strongly agree' to 'strongly disagree'. The bracketed number represents the actual number of participants. For example, 50% 'strongly agree' with 'I have more responsibility at work' represents eight of the 16 participants.

Table 4.4: Social changes self-assessment.

	Strongly agree	*Agree*	*No change*	*Disagree*	*Strongly disagree*	*N/A*
I have more responsibility at work	50% (8)	25% (4)	25% (4)			
I make more decisions at work	31% (5)	44% (7)	25% (4)			
I suggest more ways of doing things	31% (5)	63% (10)	6.25% (1)			
I feel more confident with my work colleagues	31% (5)	56% (9)	12.5% (2)			
I feel more confident with my manager	31% (5)	56% (9)	12.5% (2)			
I feel more confident in communicating at work	31% (5)	56% (9)	12.5% (2)			
I have better communication with my family	19% (3)	56% (9)	25% (2)			
I spend more time with my family	25% (4)	31% (5)	31% (5)	6.25% (1)	6.25% (1)	
I spend more time helping my children with their homework	6.25% (1)	25% (4)	25% (4)	6.25% (1)	6.25% (1)	31% (5)

From this table of social changes, the total percentages for 'agree' and 'strongly agree' of 75% and more, indicate trends in 'increased responsibility', 'increased decision making', 'suggesting more ways of doing things', 'increased self-confidence' and 'better communication'. The last two variables of 'spending more time with family' and 'spending more time helping children with homework' show disagreement and non-applicability. 'Spending more time with family' at 31% 'agree' and 25% 'strongly agree' indicates only a tentative trend while 'helping children with their homework' at 25% 'agree' and 6.25% 'strongly agree', indicates an even more tentative trend. These results are diagrammatically represented in the following graph.

Graph 4.5: Social changes
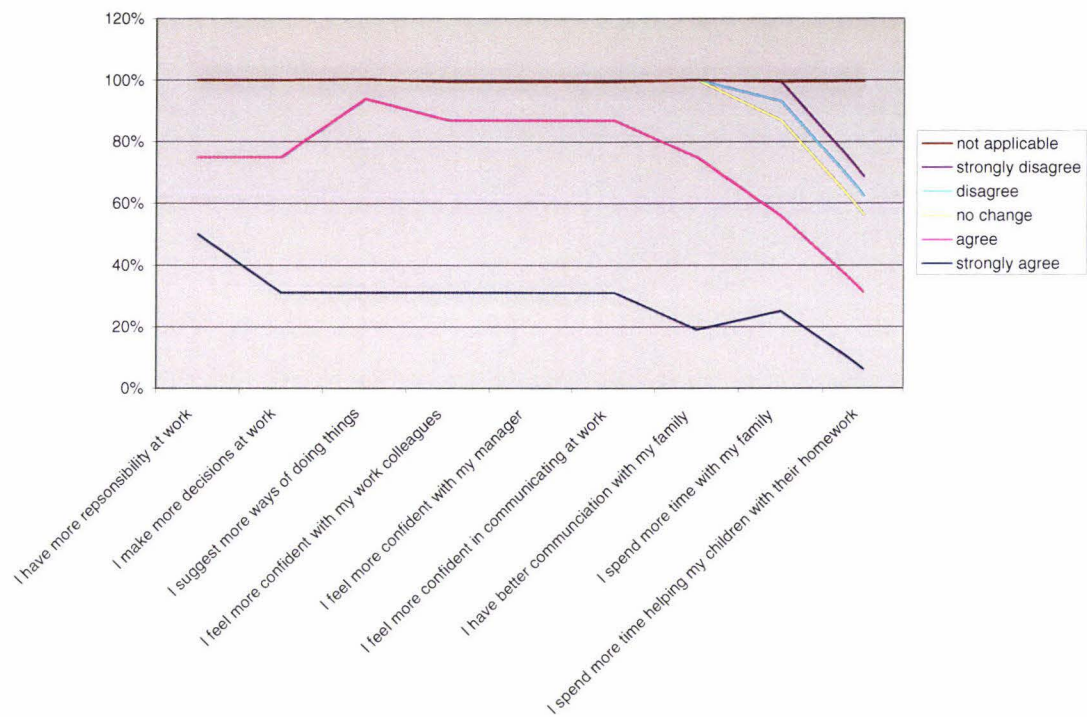
Again, as in *Table 4.4: Social changes*, the percentages in *Table 4.5: Economic changes*, represent the proportion of participants who 'strongly agree' to 'strongly disagree' at the time of the interview. The bracketed number represents the actual number of participants. For example, 12.5% 'strongly agree' with 'I earn more money' represents two of the 16 participants.

Table 4.5: Economic changes self-assessment.

	Strongly agree	*Agree*	*No change*	*Disagree*	*Strongly disagree*
I earn more money	*12.5% (2)*	*25% (4)*	*50% (8)*		*12.5% (2)*
I budget more carefully	*12.5% (2)*	*38% (6)*	*50% (8)*		
I stay within my budget more often	*25% (4)*	*44% (7)*	*31%(5)*		
I have moved to a better house	*12.5% (2)*	*19% (3)*	*63% (10)*		*6.25% (1)*
I am saving to buy a house	*12.5% (2)*	*6.25% (1)*	*76% (12)*		*6.25% (1)*
I have made economic goals for myself	*25% (4)*	*38% (6)*	*31% (5)*	*6.25% (1)*	
I feel more in control of my money	*25% (4)*	*44% (7)*	*25% (4)*	*6.25% (1)*	

Four variables indicating possible trends in having reached more than 50% in 'agree' and 'strongly agree' are: 'budgeting more carefully' at 50.5%; 'staying within budget more often' at 69%; 'making economic goals' at 63%; 'feeling more in control of money' at 69%. The other variables indicating a degree of agreement show 'I earn more money' at 37.5%, 'I have moved to a better house' at 31.5% and 'I am saving to buy a better house' at 18.5%. These lower percentages indicate only tentative trends. Disagreement was expressed with 'I have moved to a better house', 'I am saving to buy a house', 'I have made economic goals for myself' and 'I feel more in control of my money' all record disagreement of 6.25% with 'I earn more money' at 12.5% also suggesting that these are only very tentative trends. The results graphed below provide an alternative diagrammatic representation.

Graph 4.6: Economic changes
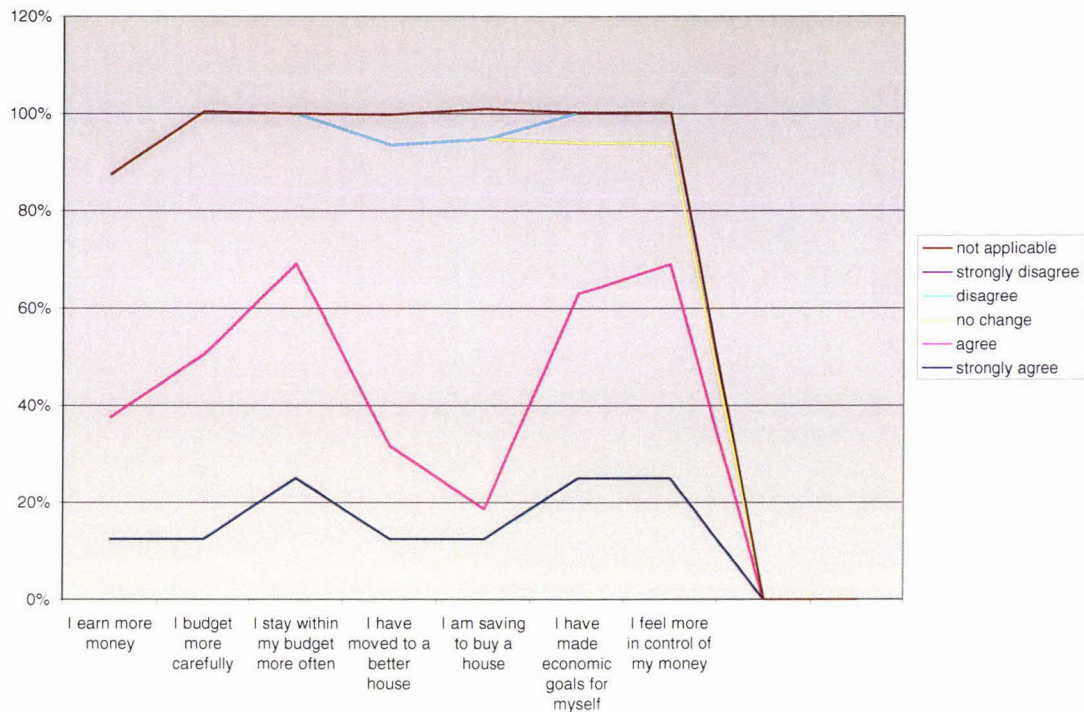
The remainder of this section provides examples from programme participants speaking about non-academic outcomes from the programme.

In the programme participant interviews, 14 of the 16 participants expressed 'increased self-confidence'. The concurrence found between the quantitative and qualitative data in this research further supported by management perspectives suggests that 'increased self-confidence' is a non-academic outcome of this research. As already noted in the academic outcome findings, there is often a combination of outcomes contributing to the resulting impacts. This is particularly relevant to self-confidence as the examples given by the participants are often interrelated with other outcomes, such as improved communication, increased participation, more accurate documentation, increased responsibility, improved attitudes and life changing experiences. These outcomes are illustrated with corresponding quotations illustrating the complexities involved.

'Improved oral communication' as a non-academic outcome encompassed feelings of being more at ease with people, being able to speak to people in 'higher positions', saying it 'properly', putting views across, expressing oneself, keeping a conversation going and feeling better about oneself. Twelve of the 16 participants referred to their improved 'oral communication' during the interview. Three of these participants are quoted below:

> *I feel more at ease with people in power...I feel more confident approaching people in higher positions...now I find I am better able to communicate better with those sorts of people, get on with them.*

> *I feel more confident with my work colleagues, with my manager and communicating at work...like when they're explaining something and that I understand it a lot more. And at least I can go up and have a good talk to them now whereas before I was never like that, I'd just stand back. But now I can go up and sit in the office and if I have something to say I can say it properly so that's really good.*

> *I'm confident with myself...I'm not shy, I've broken out of all that kind of stuff, you can't shut me up most of the time. That's how confident I am, I express myself and if I know something and I want to put my views across I will put them across instead of sitting back on the fence...I'm more sociable and not so shy, I'll go up and talk to people...I'm able to keep a conversation going on a bit longer than I normally would.*

Two participants spoke about their 'increased participation'. One of the participants gave an example of increasing his vocabulary and his increased participation in meetings:

> *I'm speaking to people who have higher ability of different kinds of words and trying to understand what they are trying to say. It's a lot higher and trying to pick up to that level...you go to managerial level, they're people using different kinds of words that you wouldn't normally use down here, we're starting to pick up those words and in the last couple of years I've found that...more comfortably starting to get up in meetings and talk.*

Two participants referred to 'increased self-confidence' and 'more accurate documentation' in the workplace:

> *I'm more confident in doing things they teach you and anything else and documentation before, I couldn't do that, I always had to get someone else to help me do it.*
>
> *I can fill in a few more forms and I fill them and then I get them checked to make sure they are correct. I am usually right...and a little bit more confidence in like paper work.*

Three other participants described 'increased responsibility'. This quotation refers to increased responsibility in terms of taking on bigger jobs:

> *She (my tutor) has noticed my confidence so I take on bigger jobs. They've chucked bigger jobs (at me) and they'll give you jobs different...it's opened bigger doors, before I was very limited on a lot of stuff you know and I used to shy away from a lot of stuff and just cover things up.*

Three participants expressed the view that their attitudes had changed with feelings of increased calmness, being less argumentative, less swearing and a willingness to cooperate and help others:

> *I have improved my words, more clearer than what they used to be, I used to just get panicky and jumble them all up...I don't panic, I used to panic.*
>
> *(In talking to management)...he can explain his side and I explain my side and we'll come to some agreement...(before) I'd go up and argue and that would be the end of it but now I'll sit and go up and have my say and he has his and it's good.*
>
> *I used to have a really bad attitude and now I know why and always been outspoken...all the learning has made me better...I don't swear as much...they reckon I've got calmer, a better attitude, willing to teach other people, before I wouldn't even do that.*

Finally some of the participants finished their interview sessions by describing how they had, from the literacy programme, perceived life-changing experiences. One of

them expressed it as 'opening bigger doors' and the other as 'becoming an excited and new person'. Their quotations below complete this section.

> *It's opened bigger doors, before I was very limited on a lot of stuff you know, and I used to shy away from a lot of stuff and just cover things up.*

> *It took me ages just to get this job and it's taken me, and I've been here ten years, and it's taken me all this time just to be who I am, this open person, excited person.*

4.2.3 Management perspectives on impacts in the workplace

From the total five companies located in Hawke's Bay, Hamilton, Taranaki and Auckland, I interviewed nine management representatives. The companies were selected from Workbase's partner providers as explained in *Section 3.3 The research process for this study*. The contact person in each company found willing staff to participate in this research and also organized the scheduling of interview appointments.

The preceding quotations provided in the academic and non-academic sections reflect programme outcomes and some of the impacts in the workplace from the participants' perspectives. The participants were able to articulate how they viewed their progress and how that affected their work. Management perspectives were able to provide another view of the impacts from the bigger organisational picture while still apparently taking into account the plight of the workers struggling with literacy demands. Management recognised that workplace literacy programme outcomes have positive impacts in the workplace with some impacts being more tangible and more easily observable than others. One of the more tangible impacts, for example, is improved computer skills resulting in increased competency with data entry and emails. Other impacts are more complex and interconnected with impacts resulting

from a combination of outcomes. An example of this and one of the most commonly mentioned impacts by management was the impact of 'more accurate documentation' in the workplace which could be attributed to increased competency in reading, writing, maths, self-confidence and a more positive attitude. Other impacts identified by management included: better use of time; increased teamwork, increased efficiency; increased delegation; improved positive attitude; improved communication; improved workplace relationships; increased self-confidence and increased productivity. These impacts are described in the remainder of this section.

Documentation

The first three questions of the management interview (refer Appendix C) invited responses to questions about the impacts experienced in the organisation from the workplace literacy programmes. Six of the nine company representatives described 'more accurate documentation' as an impact in the workplace. Better performance in the programme participants' literacy skills of reading, writing and maths, resulted in more correct form filling. 'Increased self-confidence' was also a contributing outcome with workers feeling more confident in making an effort and being able to 'get it right'. In terms of more 'accurate documentation' one manager provides an example of the importance of 'getting it right' as viewed through the company's philosophy of 'building capability through people', the process of fewer mistakes leading to more 'accurate documentation:

> *The main benefits we see (of the programme) are the staff who*
> *have struggled previously can now complete their own*
> *documentation, some of it's real low level stuff like being able to*
> *complete their leave applications properly...we'd like to see an*
> *increase in productivity, that would be fantastic, but if we can*
> *see less mistakes, if we can get people doing things right for the*
> *first time, particularly if we can get people who struggle with*
> *documentation, they're the ones who are prone to make mistakes*
> *or who just won't complete the documentation at all so that is the*
> *key, right first time on the line rather than improve*

productivity...so by developing people, if we do the people one first, we truly believe and we've seen benefits from it, not only financially but just through people being better people and raising morale etc. if we get the people right, operational excellence and revenue growth will come.

Self-confidence

Seven management representatives referred to 'increased self-confidence' in terms of improved attitudes, improved communication, increased motivation and increased independence. One manager described the effects of increased self-confidence in the workplace:

One of the main things I think I see is a really positive difference in their self-esteem, their self –confidence, the way they start dealing with other people, you know, after they've been in the programme a while there's a real noticeable difference in the way they look at you when you talk to them, they smile, they communicate, they're more cooperative.

Efficiency

'Increased efficiency' was an outcome perceived by seven of the nine management representatives. Increased efficiency was referred to as 'time saving', 'better use of time', reduced errors, machine efficiency, pre-job planning, delegation and a better flow of work. One manager talked about the difficulties of time wastage with hand held radios:

We couldn't understand what the main staff, the learners, were saying, couldn't understand over the radio when they called for help. It was a big issue. After several weeks of the programme we got nothing but praise from the maintenance staff for the trainees on the learning programme. They came across a lot more clearly.

The same manager found that with more delegation and less supervision he was freed up to do his job. In total three management representatives referred to 'increased delegation' and 'time-saving' as perceived impacts:

It's a lot easier for me to delegate a lot more, so that means you can free up yourself to do other tasks. I used to be snowed under with the old team and now I can leave them eight hours no worries. It's a lot easier on myself and I can concentrate on

*other tasks rather than holding their hands which you don't want
to do for the rest of your career, you can actually delegate and
have faith that your workers can get on and do the job.*

Workplace relationships

Seven of the nine managers spoke about 'improved workplace relationships' among

both managers and workers, and workers and their colleagues. Their observations

found individuals experiencing increased confidence, more willing attitudes to help

one another and taking more responsibility resulting in increased cooperation and

cohesion especially within teamwork. Not only was there improved relationship

building among colleagues in teams, but also an improvement between management

and worker relations.

One manager described a scenario of how relationships between management and

workers have strengthened from overcoming a fear of exposure:

> *What I was aware of with several of the learners was that they
> had difficulty relating to their managers and supervisors or what
> have you and I think it was just that whole stand off you know, it
> is hiding that fear thing of being exposed, it's like I don't have
> the confidence to do this or try this or come forward or what
> have you so I will just stick in the background and be a little
> negative so yeah it has really strengthened relationships...and
> from the management point of view for some of them it gave them
> some encouragement as well.*

Another manager talked about the improved teamwork:

> *The signs are definitely there with the work, the way the team is
> structured it's more teamwork now...There is better planning
> now and before a job, they are more prepared, more pro-active,
> more onto it.*

'More positive attitudes' were recognised by four management representatives who

described the process of programme participants developing improved attitudes. They

cited examples of participants becoming more positive, more willing to try and

becoming more participatory in their team. The following quotations by one of the

managers described this connection when talking about increased efficiency in the workplace:

> *It has really been through things such as attitudes, a turn around in attitudes to become far more positive and willing to try and learn new things and be more flexible... they just seem to be more prepared to work more as part of a team.*

> *The learners' confidence gained and their attitude started to improve and they felt better about themselves, the ability and willingness to communicate and it had quite a lot of impact.*

Six management representatives perceived 'improved communication' in connection to increased confidence, increased efficiency, improved relationships and improved teamwork. This following quotation refers to improved communication from both the trade's people and the administration people:

> *When we started one of the issues was inaccuracies and things like that were impacting between the trades people and the administration level...there was a real issue between them...but that seems to have diminished considerably...I think communication methods have improved from both sides, part of it is because we identified that some people did have literacy issues and we've been working on those. As strange as this sounds, sometimes, just the identification of the issue is half the solution.*

The impact of 'increased productivity' was perceived by four managers. Although one manager acknowledged that 'increased productivity' was hard to quantify, she was convinced that due to the improved flow of work there was increased productivity happening. Another manager who was quoted previously on 'more accurate documentation' was also convinced that 'increased productivity' resulted from 'reducing errors' and by building 'people capability' first. Finally, 'improved organisational efficiency' was also perceived as an impact resulting in 'increased productivity'.

4.3 Programme participants' perspectives on learning experiences

This section reports the results from the two final parts of the interview with the programme participants. The first part is the perspectives on prior learning experiences at secondary school and the second part is on key factors contributing to the effective learning that took place on the workplace literacy programmes, also from the programme participants' perspectives. These questions made up the final part of the programme participants' interview (refer Appendix D, questions 11 to 19).

4.3.1 Prior school experiences and low literacy levels

Nine of the 16 participants described negative secondary school experiences. These are grouped into three common themes of leaving school early, feelings of inadequacy and being left behind. Five participants identified that they had left school early. Two of them identified the fourth form, one of them said she was 15 years old and the others only mentioned having left early.

Six participants reported feelings of inadequacy. Their descriptions encompassed feelings of being labelled 'dumb', not being able to do the work, lacking confidence, being shy and being too scared to ask for help. The following quotations were articulated by the participants beginning with three of them who spoke about their shyness and the associated repercussions.

> *As a child I was shy and I found it very hard, I tended to keep to myself a bit and I don't know how a child breaks that down.*
>
> *I wasn't a very confident person to start off with and I've never been a very confident person, it has taken me a long time, I wouldn't ask anybody to do anything because I wasn't confident to do it.*
>
> *The teachers I was scared of, never asked for help, I was too shy to ask for help, I finished, I was in fourth form when I finished, I was scared, you know, just couldn't go through the school thing.*

One of the participants talked about being labelled 'dumb':

...because you were slow you were called 'dumb' and everything else...

Another spoke about missing out on the basics:

> *I found I didn't do any because I couldn't and I've gone right back to the basics here which I needed to. You don't get that at high school.*

The third theme of 'feeling left behind' was described as needing extra help and not getting it, being pushed aside, feeling self-esteem drop and going through a system without being noticed. This final series of quotations provides five participants' perceptions of how they felt in feeling left behind:

> *...especially at high school, if you don't keep up, you fall behind and that's the hardest thing,....once you got behind you keep getting more and more behind and you see the gap between you and the other students grow bigger.*

> *...once you got behind you felt your self-esteem dropped down, it was hard to catch up...*

> *The teachers had just passed me off as she's just sick I won't even go there so I never got help or anything like that because I was always lagging behind on everything anyway.*

> *If you were too slow you more or less just got pushed aside and forgotten about, not the bright ones, but the slower ones, doesn't mean to say we are dumb.*

> *But you could go through the system and not read and nobody'd pick it up and that's why my goal was when I had children they were going to be educated...I didn't want them to go through what I went through so you know sometimes you think I wish I'd carried on at school and could've got a better job and done things.*

4.3.2 Factors contributing to effective learning

In contrast to the negative experiences described from school, the programme participants were able to talk positively about what had made their learning effective on the workplace literacy programmes. The two key factors were firstly a 'positive

teacher and student relationship' and secondly the 'programme's practical application and relevance to learning'. A total of ten participants identified these two factors as key for effective learning. One other factor mentioned was 'one-to-one tuition' which provided individualised rates of learning. The participants expressed the importance of the teacher student relationship in different ways. Their descriptions follow:

She's not judged me, she comes in and taken time out to see where I started and then she's taken me up the ladders.

She was the best, she could relate to anybody, didn't matter what culture they were.

Sometimes like I said, we just sit here and yak about different things and I find that is very good.

She's really good, helpful, gives you different ideas and gets you thinking about things too...she understands what I'm going through or whatever and then she has her ideas and if I think of something and she gives you good ideas and you think about it.

The participants expressed the second key factor that of 'learning being meaningful and relevant' in a variety of ways:

Main thing has been help me more, using like example writing on the computer, filling in forms or doing paperwork for the trucks.

If we can use it at work and use it daily...it becomes second nature to you and then it's really good.

The first tutor we had in the first year, she was showing us how to do all punctuation full stops and to me I wasn't really interested in that, I wanted to learn to read.

Everybody is different and so they come here and do whatever they want to learn. I think that's great. It's not set down...it's what you want as a trainee.

We also have hands on at the machine which is probably the best way to go about it. I've always believed that if you are going to learn something it's better to do it hands on...I found it easier that way.

4.4 *Summary*

The connection between programme outcomes and their impacts in the workplace is complex with some outcomes more directly cause and effect related than others, but more often than not, these results indicate a combination of outcomes with each impacting on one another and in turn impacting on the workplace. From corroboration of quantitative and qualitative data from programme participants' and management perspectives, the key findings from this research are that outcomes, both academic and non-academic, are realised from participation in workplace literacy programmes and that impacts in the workplace occur as a result of the programme outcomes. The research here suggests that the academic outcomes developed were: 'oral communication'; 'reading'; 'writing'; and 'maths'. The non-academic outcomes developed were: 'increased self-confidence'; 'improved communication'; 'increased participation'; 'improved attitudes'; 'increased responsibility'; 'increased decision making'; and 'suggesting more ways of doing things'. More tentative in findings were the outcomes relating to 'care with money' and 'earning more money'. This research suggests that programme outcomes have resulted in positive effects in the workplace which management has recognised as impacts from the workplace literacy programmes. The resulting impacts described by management were: 'more accurate documentation'; 'fewer mistakes'; 'increased self-confidence'; 'better use of time'; 'increased teamwork'; 'increased delegation'; 'increased independence'; 'improved working relationships'; 'more positive attitudes'; 'increased motivation'; 'improved communication'; 'increased participation'; 'increased efficiency'; and 'increased productivity'.

Common experiences at secondary school related by the programme participants suggested that school was not a positive environment for them. Feelings of

inadequacy, lack of qualifications, lack of skills and lack of self-confidence were typical findings from this research. In contrast to the school experiences, the learning on the workplace literacy programmes was reported to be uniformly positive and the programme participants perceived key factors contributing to effective learning outcomes as a 'positive tutor-student relationship' and the 'programme's practical application and relevance to their needs'.

This research data provides a platform for discussion in the following chapter in which each research question of this thesis is analysed and related to previous research from *Chapter 2: Literature Review*. The final chapter, *Chapter 6: Conclusion*, raises implications for government and policy, employers, literacy providers and schools in relations to some of the issues arising from the discussion.

Chapter 5: Discussion

5.1 Workplace literacy programmes - their outcomes and impacts

As outlined in the introduction, this study sought to find out how workplace literacy programme participants perceived their experiences, what progress they made and what outcomes resulted from the workplace literacy programmes. It then went on to explore what impacts the outcomes had in the workplace from the management perspectives. Finally, it investigated the programme participants, what their perceptions and experiences they brought to the learning process were and what ingredients they perceived to be key for effective learning.

A review of the literature showed that research supports that literacy skills can be developed within a workplace context and can result in economic and social benefits to employers and employees. What is unclear is the relationship between specific linking of outcomes to the workplace literacy programmes and their impacts in the workplace. Factors contributing towards low achievement in school with subsequent low literacy levels of workplace literacy programme participants can be identified and key ingredients for effective learning can also be identified.

The first three chapters of this thesis explained the background to the development of adult literacy in New Zealand and described factors contributing to the current focus of foundation learning and workplace literacy. This set the scene for researching workplace literacy programmes. My own interest in workplace literacy developed through experience in workplace literacy programme development and delivery, was influential in the research design and chosen methodology. Questions were developed

to gain a wider evaluation of workplace literacy programme outcomes from programme participants and their impacts in the organisation from management representatives. Their responses were categorised into a number of themes which were explored in the previous chapter.

What can we learn from all of this? What is the experience of the programme participants and what are the programme outcomes? Overall, the experiences are positive, but what is the link to the impacts in the organisation? What are the obstacles for the employers to providing workplace literacy programmes? The programme participants are benefiting, do the organisations also benefit? Can organisations confidently invest in workplace literacy programmes in anticipation of gaining organisational benefits? These questions form the basis of this discussion chapter.

This discussion chapter will analyse the findings at various levels. First it will focus on the experiences of the programme participants and their perceptions of outcomes from the programmes. After reflecting on their experience, it will focus on the impacts of these outcomes in the workplace from the organisations' perspectives. Finally it will focus on the programme participants' perceptions and experiences from prior learning and the key ingredients for effective learning. An overview of the sections in this chapter is:

5.2   Outcomes of workplace literacy programmes
        5.2.1   Academic outcomes
        5.2.2   Non-academic outcomes
5.3   Impacts of workplace literacy programmes in the workplace
5.4   Programme participants' prior academic learning experiences
5.5   Key ingredients for effective learning
5.6   Summary

5.2   *Outcomes of workplace literacy programmes*

In exploring outcomes from workplace literacy programmes, the results of the programme participants' interview and questionnaire sessions provided data identifying academic outcomes and non-academic outcomes. The academic outcomes describe the literacy and numeracy skills of oral communication, reading, writing and maths. The non-academic outcomes include and are not limited to such outcomes as increased self-confidence, independence and risk taking. Some of the outcomes appear more likely as a general trend whereas others, due to their low recorded frequency of data, are either less tentative as a trend or do not appear as a trend at all.

5.2.1 Academic outcomes

The academic outcomes of oral communication, reading, writing and maths all showed increased improvement from pre-programme to the time of interviewing (refer Table 4.2 and Graph 4.1). These results were supported qualitatively from interview questions with 12 of the 16 participants describing an improvement in 'oral communication', 15 of the 16 participants describing improvement in 'reading', 14 participants (two had not done writing) with improvement in 'writing' and eight of 11 participants (five had not done maths) describing improvement with 'maths'. The percentage increases and the support from the interviews indicate that the programme participants perceived these as programme outcomes.

Beder's (1999) work identified increased literacy skills as outcomes from effective adult literacy programmes and Sticht (cited in Castaldi, 1991) specifies improved reading skills from participation in programmes. Mikulecky and Lloyd (1993) have also reported positive improvements in literacy gains.

Measurement

To what extent these perceived academic outcomes in this study occurred is unknown as there was not one programme which measured the progress to provide objective evidence. These outcomes were self-assessed and as previous research points out, there are issues of reliability and validity with self-assessment. First, there are difficulties in participants' actual perspectives of self-assessment (O'Neill & Gish, 2001; Battell, 2001) which, secondly, can be further complicated by the interviewee's wish to provide a desirable response (Henningsen & Henningsen, 2004; Bernardi, 2006). Measurement features as an issue throughout this study in relation to workplace literacy programme outcomes and to impacts in the workplace. Although measurement continues to be mentioned as the discussion develops, the implications of measurement for employers' decision-making, programme participants, government policy, literacy providers and schools are raised in the final chapter.

Transferability

Sticht's study (cited in Castaldi, 1991) and Mikulecky and Lloyd's (1993) study having both affirmed that academic outcomes can be identified, raise the issue of transferability of skills. To what extent can academic skills be transferred from a specific contextualised workplace arena to a more generic arena? Castaldi's (1991) research finds that reading gains in job-related tasks are almost twice as much as on general reading ability. Similar results were found by Mikulecky and Lloyd (1993), showing literacy gains made were in specific areas addressed by instructional activity only.

Transfer of academic skills from the specific workplace programmes to generic application outside of the workplace was not a specific research variable in this study,

although there was discussion during the interview around increased use of academic outcomes outside of work. 'Increased self-confidence', incorporating improved oral communication, was a recurring theme. Reading, writing and maths were also reported positively in terms of increased use outside of work (refer Section 4.2.1 in the previous chapter).

Sustainability of literacy skills

How realistic is it to expect the academic outcomes to be sustainable? The longest any one programme participant could report on sustainability was someone who had completed her workplace literacy programme some four or five months prior to being interviewed, and who had been in a programme for three years. In her opinion, she reported positive and on-going outcomes. The academic outcomes she had experienced from the programme were still being employed by her in her work role. Sustainability of programme outcomes requires on-going use of the skills which, in turn, requires the workplace to be supportive in providing on-going practice while requiring the workplace literacy programme to provide meaningful and relevant learning for workplace application.

Academic literacy gains

The findings in this study relating to literacy skill gains have been corroborated with findings from management representatives' perspectives acknowledging that one of the impacts of workplace literacy programmes is more accurate documentation and reduced errors. Increased accuracy in documentation requires reading, writing and often maths skills and because the errors detected in documentation are often the

starting point for detecting the literacy needs of the employees, increased accuracy would appear to be a valuable workplace literacy programme outcome.

> *When we started, one of the issues was inaccuracies and things like that that were impacting between the trades people and the administration level that lets all the jobs, invoices all the jobs and follows everything through and there was a real issue between them...that seems to have diminished considerably...There is an improvement and we know there is an improvement because the administration people are not getting their hair on fire all the time, they're not tyring to kill the trades people.*

Along with the programme participants' perspectives of their improved literacy skills, it would appear that this picture supported by management indicates that as a general trend, academic outcomes of improved oral communication, reading, writing and maths can be identified from participation in workplace literacy programmes.

5.2.2 Non-academic outcomes

Continuing with the first research question, to explore outcomes from workplace literacy programmes, the results of the discourse analysis for non-academic outcomes are somewhat mixed. Programme participants' questionnaire responses of overall progress from pre-programme to the time of interviewing indicated an increase in 'self-confidence' and 'care with money' (refer Graphs 4.3 and 4.4). Perceived 'increased self-confidence' was reinforced with further questions relating to 'social changes' namely 'more confidence in communication', 'more confidence with colleagues and managers', and 'increased independence' (refer Graph 4.5). These responses were also supported from the interviews.

The 'care with money' outcome is only partially supported in the questions relating to 'economic changes' (refer Graph 4.6), referring to 'stay within budget more often' at

69 percent and 'feel more in control of money' at 69 percent. The other 'economic changes' questions of 'earn more money' at 37.5 percent, 'budget more carefully' at 50.5 percent, 'moving to a better house 31.5 percent', 'saving to buy a better house' at 31.5 percent, 'making economic goals' at 63 percent were not corroborated in the interview. Only two of the 16 participants referred to 'earn more money' and two referred to 'feel more in control of money'.

Increased self-confidence

'Increased self-confidence' is a recurring theme in the literature and is also referred to as 'self-determination, self-direction, self-esteem, agency, choice, control, independence and standing up for oneself' (Westell, 2005, p.7). Beder (1999) also claims that participation in adult literacy has a positive impact on learners' self-image. The high frequency of references to 'increased self-confidence' along with previous research (Eldred et al, 2004; Beder, 1999; NALA, 2005; NCVER, 2005; Westell, 2005) would suggest that it is a key programme participation outcome.

Is 'increased self-confidence' of the programme participant a desirable outcome for organisations to be motivated to provide workplace literacy programmes? Some organisations could interpret 'increased self-confidence' as an unintended consequence, perhaps even a risk. Whether the organisation perceives 'increased self-confidence' as a favourable outcome or not depends on the organisational philosophy and the value placed on investment in skill development. Already we have seen 'increased self-confidence' in positive terms in relation to 'more accurate documentation' (refer to the previous section on academic outcomes). As this discussion develops, it is shown that 'increased self-confidence' is an outcome

interrelated with other outcomes with NCVER (2005) research reminding us that learning is a complex web with some outcomes building on others while some seem to be consequences of others.

Increased earnings

Previous research has claimed that one of the outcomes of literacy programmes is increased earnings (Johnston, 2004; Beder, 1999; Castleton & McDonald, 2002). Johnston suggests that adults with better literacy skills are more likely to be employed and to earn more. Castleton and McDonald equate better literacy to higher pay. Beder finds that participation in adult literacy education results in earnings gain. In contrast to this research are Gorard's and Kazemek's findings. Gorard (2003) has warned against the current economic focus of adult learning on increased earnings as an absolute outcome, and instead favours the intrinsic fulfilment of lifelong learning with the possibility of, but not guaranteed, increased earnings. Kazemek (1991) claims that there is a lack of evidence regarding the relationship between participation in literacy programmes and better employment or income. Gorard's and Kazemek's views seem more in line with the findings from this study as only two of the 16 participants agreed that they had experienced earnings gain from their programme participation. In the light of this analysis, research referring to 'earnings gain' may have greater association either with people with very limited literacy, or with unemployed people for whom any employment would indicate a gain in earnings. It may also be related to a time factor of a number of years post-programme compared to this study where the participants have either only just completed or are still attending their programme.

Increased earnings and loyalty

With regard to potential programme participants, 'increased earnings' has implications in relation to expectations of programme outcomes. What is the driver for the employees to participate in the programme? Is it to better their literacy skills or is it to be focused on the result of increased earnings? What about loyalty? Once an employee has improved his or her literacy skills and whose eyes have been opened with 'increased self-confidence' and improved abilities, how likely is it that the employee will be satisfied to stay with the same employer and how attractive do they make themselves to other employers (Glass et al, 2002)? If employees expect increased earnings, how willingly will employers provide workplace literacy programmes? Benseman et al (2005) have found that contrary to the concerns of employees being poached or moving on, such programmes generally lead to a more stable workforce with improved staff retention.

Changes in attitudes

Changes in people's attitudes was another non-academic outcome from the workplace literacy programmes. From this study three participants expressed increased feelings of calmness, less arguing, less swearing and a willingness to cooperate and help others. Management representatives, who expressed a similar view from their observations of programme participants, supported these perceptions.

Employees with low literacy levels are often people who have managed through their lives with strategies to cover up their limitations and develop coping mechanisms. The following programme participant talks about how she has covered up her literacy problems.

I would look for substitute words and like I take lots of meetings and lots of programmes. I'll take a person from the group who I know is a fluent speller and I'll ask them to scribe for me and they just write down what it is I'm saying. If I did write something on the board and I spelt it wrong and somebody would comment, as people love to do, I would go straight on the defence and say to them, 'well you know exactly what I'm talking about so why are you making an issue of it?' And that would stop me from making me feel less of a person in front of that person. And sometimes I might remind them that maybe they have the smarts but I'm the one with the flash job so it's very easy to cut people down.

It is not easy for these people to identify themselves as requiring help. Instead, their frustration and their cover up can be manifested in other ways that can be interpreted as negative attitude characteristics. This is described by a management representative.

They show up as a surly attitude, they show up as aggression, a nastiness, a 'who cares' all sorts of other things. Once you identify the issue, the person who owns it seems to be able to come out and say yeah that's my problem and a lot of other stuff seems to disappear.

For these people to 'put up their hand' and say 'please help', and for management to recognise attitude as part of the literacy problem are key ingredients on the journey of attitude change.

She is now a girl I trust totally, in saying please can you tackle that for me, sure no problem, yeah, and that's amazing because 5 years ago even to ask M to do something, I probably would have had to stand behind a door, whisper it quietly and wait for the reaction.

Research by Westell (2005) also made a similar claim about shifts in people's attitudes in their work ethic. Westell's research questioned whether the attitude changes are specifically related to the programme content and education interventions or whether they are a natural by-product of more learning and being part of a diverse learning group. It is unknown which intervention takes precedent to initiate change. Is it the success at being able to complete a form with more accuracy, is it the 'increased

self-confidence' of the employee or is it, for example, the training manager who gets alongside the employee and says 'I think we can help you if you are willing'? This discussion reiterates the complex web of cause and effect and although it is not known whether the outcome of attitude change is the cause or effect, it would appear that it is a positive outcome.

Increased participation

In this study 'increased participation' encompassed references to 'increased responsibility', 'increased decision-making', 'suggesting more ways of doing things', 'increased communication' and 'relationship building'. 'Increased self-confidence' allowed the participants to take part in more activities in the workplace, for example in meetings where programme participants experienced an increased ability and willingness to express themselves. 'Increased self-confidence' also enabled the programme participants to communicate more effectively and confidently with other colleagues and managers in the workplace, which in turn helped to build relationships. With more effective communication the participants were also able to take on extra responsibility. Programme participants identified 'increased participation' as a programme outcome which supported by management perspectives, acknowledged 'increased participation' as an impact in the workplace.

These views on 'increased participation' are supported by Canadian case studies (The Conference Board of Canada 2002, 2005, 2005a, 2005b) which also report 'increased participation' and 'improved relations' in the workplace. This outcome corresponds with other research with references to self-esteem, positive self-image and self-confidence (Eldred et al, 2004; Beder, 1999; NALA, 2005; NCVER, 2005; Westell,

2005) alluding to the outcome of 'increased participation'. Westell's (2005) research also found that improved relationship building occurs in relation to the community and of the personal life of the participant.

Non-academic literacy gains

The references to 'increased participation' and 'increased self-confidence' again highlight the interconnection of outcomes. The question of whether employers favour 'increased participation' is a similar question to the one of favouring 'increased self-confidence'. The following section on impacts from management perspectives indicate that both these outcomes with the many interconnecting levels of other outcomes do contribute to a more positive workplace featuring increased efficiency, increased teamwork and with a better flow of work.

The mixed results found in this discussion of non-academic outcomes indicate some general trends of anticipated outcomes from workplace literacy programmes. The outcomes appearing more likely as trends were 'increased self-confidence', 'positive attitude changes' and 'increased participation'. In this context, 'increased self-confidence involved 'increased communication', 'more confidence with colleagues and managers', and 'increased independence'. 'Positive attitude changes' involved increased feelings of calmness and willingness to cooperate and help others. The outcome of 'increased participation' involving 'increased responsibility', 'increased decision-making', 'making more suggestions,' 'increased communication' and 'relationship building', also found in this study is closely connected to 'increased self-confidence'. The outcome of 'increased earnings' referred to in previous research was not found in this study.

5.3 Impacts of workplace literacy programmes in the workplace

The second research question for this study focused on the impacts that literacy programmes have in the workplace. This aim sought to capture the perspectives of management representatives and the way they experienced or observed programme outcomes impacting in the workplace. None of the impacts perceived and articulated by the management representatives were quantitatively measured by any of the companies but were in varying degrees recognised as occurring in the workplace and resulting from the programme outcomes. The results showed a range of responses due to the nature of self-selected responses and descriptions from the management interviews. Although the impacts of 'more accurate documentation', 'increased self-confidence', 'increased efficiency', 'improved workplace relationships' and 'improved communication' were recurring themes during the interviews, due to the varied range of responses and the small sample of nine management representatives interviewed, it is difficult to rate the responses in any particular order of priority or frequency. Other responses included 'increased delegation', 'more positive attitudes', and 'increased productivity'.

From the management data, each impact was closely connected to other impacts making a complex picture for analysing how the impacts are specifically linked and whether they are more or less tentative as findings. 'More accurate documentation' was linked to 'reduced errors' and 'increased self-confidence' of programme participants. 'Increased self-confidence' of programme participants was related to 'improved attitudes', 'improved communication', 'increased motivation' and 'increased independence'. Participants in the programmes were found to have an increased ability to work independently, making better use of time, with reduced

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errors and increased efficiency. They were also able to work better within the team with improved communication and improved relationships. Increased independence and increased delegation contributed to a better flow of work. And, an improved flow of work, more accurate documentation, reduced errors and organisational efficiency contributed to increased productivity.

We have seen from the previous section on programme outcomes that there is a complex web of cause and effect at play with interconnecting and interrelating outcomes with outcomes, and outcomes with impacts. Research in this study and previous research has established that the outcomes, either academic or non-academic, do not stand alone and that it is often a combination of outcomes and interventions, that are involved in increasing literacy competency (NCVER, 2005; Westell, 2005). The definition of literacy as a complex web of outcomes (Workbase, 2005) supports this notion and although there is not any research indicating that this is also the case for impacts in the workplace; the results from this study suggest that a similar interconnection among impacts exists.

Organisational benefits

To what extent does the organisation benefit from workplace literacy programmes? From the previous section we found that outcomes of 'more accurate documentation' and 'increased participation' impacted positively in the workplace. The interconnection of impacts as described in this study, provides a platform for discussion on the potential for increased productivity in the workplace. This study found that increased productivity in the workplace was related to impacts of increased teamwork, improved workplace relations, more accurate documentation, fewer

mistakes and organisational efficiency. However, measurement is again raised as an issue, as not one of the companies involved in this research measured the programme impacts made to the company, so far as I was able to ascertain. All the references to increased productivity appeared to be anecdotal from observation and experience.

Measurement of increased productivity

Measurement of increased productivity is difficult to rate due to what is or what is not measured. Mikulecky and Lloyd (1993) suggest company measures need to be taken before and after training and Berryman (1994) acknowledges that measurement of training costs is too limited. If increased productivity was to be measured, it would be necessary to devise and implement systems of measurement over a combination of possible contributing impacts before and after the workplace literacy programme. Determining which impacts are to be measured need to be related to the current issues and challenges facing the company. With this information, the programme provider can develop and deliver a programme targeting the identified company goals while addressing the literacy needs of the individual.

Light (2002) found that the impacts of improved communication, increased independence, improved safety, lower absenteeism, fewer reject products, savings in maintenance and improved customer service increased productivity with a return on investment study showing an increase in profitability of 20 percent. Previous research on increased productivity by Movement for Canadian Literacy (2005), Johnson (2000) and Balzary (2004) all reported a country's increased literacy and numeracy skills of one percent can make a direct 1.5 percent increase of productivity and

increase in a country's GDP. The recent HM Treasury report (2006), also supports these figures.

These are possibly compelling figures for governments, policy makers and employers. However, unless measurement of impacts is employed, employers are still left questioning whether increased productivity is a realistic and achievable expectation from providing workplace literacy programmes.

Link between skill investment and workplace benefits

Workbase states that there is a very direct link between literacy skills for participation in the workforce and increased productivity with 'research showing that the lack of literacy skills is in fact the hidden cause of many firms' quality and productivity problems' (Workbase, 2006c, p.2):

> *There are many concrete examples of how literacy skills can affect productivity. In one factory, a storeman could not calculate the quantities of raw materials needed to maintain supplies, so wasted time going backwards and forwards from the store. In another company, staff did not understand the written and verbal instructions from supervisors which led to a high number of product rejects. Frequently staff struggle to cope with the complexity of induction manuals. There is no doubt low literacy levels hold companies back from becoming high-performing workplaces and competing at the high-value end of the market. Low literacy is bad for business.*

Another company whose philosophy promotes investment in people skills also believes that a direct link between skill investment and increased productivity exists. The following quote provides an insight into their thinking when talking about their strategic platforms.

> *And this is the most important one; this is why it is our first one, which is our 'building capability through people'. We believe that if we train and develop our people correctly it will link into 'driving operational excellence', which is our second strategic*

platform which will of course contribute to profitable revenue growth which is our third strategic platform. So by developing people, if we do the people one first, we truly believe and we've seen benefits from it, not only financially but just through people being better people and raising morale etc., if we get the people right, operational excellence and revenue growth it will come.

Although increased productivity has not been measured quantitatively in this research, the evidence from this research suggests that workplace literacy programmes do contribute positively to the workplace, resulting in increased productivity.

Other impacts

With a focus on the economic impacts of workplace literacy programmes, our thinking can be swayed into suggesting that economic impacts have the greatest value and that the end result of increased productivity completes the justification for workplace literacy programmes. However, a workplace literacy programme discussion would be incomplete if it was limited to economic impacts only. The bigger picture of workplace literacy programmes is the contribution they can make towards creating a more functional and healthy society (Castleton & McDonald, 2002; The Māori Adult Literacy Reference Group, 2001; Gorard, 2003). Castleton and McDonald argue for adult literacy to be approached from a broader socio-economic agenda. The Māori Adult Literacy Reference Group focuses on empowerment and self-determination of the people and Gorard is interested in the benefits of lifelong learning for learning itself. This study has not focused on the bigger picture due to the limitations of the research and relative newness of workplace literacy programmes in New Zealand, but it is known from the Ministry of Social Development report (2004) that there are very strong links between literacy and a healthy society. Further research in this area would benefit a workplace literacy programme discussion.

It would be reasonable to assume that from the discussion on the interrelationship between outcomes and workplace impacts and the perceptions of impacts by management representatives, that varying degrees of combinations of impacts are experienced in the workplace. Further research in this area from other perspectives is needed to provide more conclusive results. The final chapter discusses recommended further research.

5.4 Programme participants' prior academic learning experiences

The third research question focused on prior academic learning experiences of programme participants. Who are the programme participants? What do we know about them? Do they share common prior academic learning experiences?

Lack of self-confidence

From the literature review and from the preceding discussion on outcomes, a recurring theme is increased self-confidence. Six of the nine participants in talking about school experiences referred to feeling a lack of self-confidence, being shy and being too scared to ask for help. Previous research has established that a lack of self-confidence contributed to low attainment at school (NALA, 2005; Maclachan and Cloonan, 2003). The NALA research suggested that experiences of failure at school is sometimes internalised, resulting in difficulty in developing confidence in life.

From the results on prior academic learning experiences of the programme participants, this study found that nine of the 16 participants had had negative school experiences with all nine expressing either a lack of self-confidence or feelings and

experiences related to a lack of self-confidence. The results in this study found that along with a lack of self-confidence at school was an experience by the programme participants of being labelled 'dumb'. This is supported by previous research of NALA (2005) which found that students were often blamed for their difficulties and with low levels of attainment expected of them, dropped out of school. The study of Culligan et al (2005) found that adults with low literacy proficiency was equated to low secondary school attainment and from the analysis of IALS, it was found that there was a strong relationship between educational attainment and literacy (Ministry of Education, 2001).

As a finding from this study, 'self-confidence' plays an important role in the successful acquisition of literacy skills, with implications for schools to be more vigilant with regard to students experiencing a lack of self-confidence. Implications for schools are found in the following and final chapter.

Low school attainment

Programme participants described feelings of being left behind at school, needing extra help, not getting it and being pushed aside. NALA (2005) also found that in school they did not receive the extra help they needed. It would be reasonable to assume that in not receiving the extra help the students were unable and unwilling to remain at school for longer than necessary, and left school at an early age with low school attainment. This is supported by Bynner (2002) who found that more than 80 percent of young people in low literacy and numeracy categories had left school at a minimum age of 16 years.

Marginalisation

Maclachan and Cloonan (2003) found that students experiencing alienation from the education system develop a lack of confidence. Tett (2000) also found that marginalisation occurs when a system privileges middle-class, English, school-based literacies. In terms of effective learning, previous research has found that 'deficit' notions of Māori students can be addressed with an alternative model emphasising empowerment, co-construction and cultural recognition (Bishop, 2003; Fraser, 2004; Māori Adult Literacy Reference Group, 2001). The Māori Adult Literacy Reference Group has argued for teaching and learning styles that better accord with Māori values. I suggest that this is not only necessary for Māori students but also for any student who is experiencing alienation from the education system.

Maclachlan and Cloonan (2003) found that alienation from the education system resulted in corresponding feelings of foolishness, stupidity, fear and shame. These feelings experienced by students reinforces a deficit model and as Hull (1999) found, occurs also in the workplace where underestimation and devaluing of human potential focuses on skills deficit of workers.

Courage to acknowledge problem

As already discussed in the previous section on non-academic outcomes, it is not easy for those people with low literacy levels to put up their hand and say 'help, I have a problem.' They have so far managed successfully in life employing their coping strategies which may or may not have been detected in the workplace, and they have managed to gain employment. It is hardly surprising therefore, that these people face

enormous barriers in participating in a workplace literacy programme. One of the programme participants who is in a supervisory position at work, describes her feelings.

> *I must be honest, to come to N was a big step for me to get over the barrier of coming in and feeling inadequate because of what I do at work, people think I am a high flyer or god or something like that and N had the same opinion, and when I came to her programme she was quite amazed, she couldn't believe I was coming because it's not what I portray outwardly.*

In the discussion on workplace literacy programme outcomes and impacts, it was found that improved literacy skills and increased self-confidence contributed to reduced errors and more accurate documentation. Company management working with people with low literacy levels in the workplace are familiar with these positive results. One company representative in support of workplace literacy programmes, acknowledges that people slipping through the education system can have a second chance in the workplace:

> *We no longer have the problems we used to have with the amount of paperwork coming through. I would like to see more of these incentives in all workplaces because regardless of the education system that this country does have, we still miss a lot of people.*

5.5 Key ingredients for effective learning

The fourth and final research question focused on the programme participants' perspectives of key factors contributing to effective learning. In contrast to the negatively felt and expressed experiences of prior academic learning, the programme participants described their current programmes of literacy as positive experiences.

Dignity and respect

The outcomes of increased self-confidence and the improved positive attitudes of the programme participants in this study suggest that from experiences of their workplace literacy programmes the participants were treated with respect and dignity in a safe and non-threatening environment. This is supported by The Nunavut Literacy Council (2004) which found that a safe, non-threatening environment is a key ingredient for successful learning and is identified by one of the programme participants:

> *They've given me abilities, they don't judge me, none of them have judged me here, the guys here are very helpful, if I wanted to know something or I can't do a job, they'll come around and show me or give me a hand to do it.*

Meaningful and relevant programme

Another key factor contributing to effective learning in this study was found to be the programmes' practical application and relevance to learning. From the results on prior learning experiences it appears that the five programme participants who identified they had left school early had not found their learning at school to be applied or relevant. Approaches to adult literacy described in the first chapter stated that effective learning requires the recognition of prior life experience brought to the learning process and the need for building on those experiences. It is necessary to be learner-centred and participatory, in which adults determine the content and direction of their own education (refer *section 1.3..* The difference between these earlier academic experiences and the workplace literacy programme experience can be vast in that the programme participant senses a feeling of ownership of their learning with a relevant and meaningful context.

> *It's not there for the company...it's there for you, whatever you want. Everybody is different and so they come here and do whatever they*

want to learn. I think that's great. It's not set down, you do this and this and this, what I want. It's what you want as a trainee.

Tutor-student relationship

A positive tutor-student relationship was identified by ten programme participants on effective learning. This requires teaching and learning styles better suited to participants who have experienced a lack of self-confidence in previous academic learning situations, and who have more than likely arrived at their workplace literacy programme still harbouring feelings of inadequacy. Programme participants spoke of the importance of the tutor being approachable and able to explain what things mean. They liked tutors who were patient, who understood what they needed and what they were going through. The key ingredient was a tutor who was non-judgemental and able to relate to the participant:

> *Yes, she was one of the best, if not the best, she could relate to anybody, didn't matter what culture they were...never downed anyone because they were slow or anything else and a lot of patience, that's what you need.*
>
> *She's really good, helpful, gives you different ideas and gets you thinking about things too...she understands what I'm going through...*
>
> *The way she has approached me and she's not judged me, she's come in and taken time to see where I started at and then she's taken me up the ladders.*

The programme participants in this study felt they had positive tutor-student relationships and experienced empowerment through their learning process. This matches the findings of Fraser (2004), Bishop (2003) and The Māori Adult Literacy Reference Group (2001) who found that successful educational experiences require empowerment, a greater sense of self-worth and self-esteem.

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Stakeholder buy-in

How do workplace literacy programmes become part of the workplace? First, there is a need for management to recognise and accept that literacy problems exist. Second, there needs to be a company position on whether it is in their interest to address the need, determined by key factors such as a belief in people skill investment to realise a more positive and productive workplace. Third, employees with low literacy levels need to be identified. Finally, the employees need to be wiling to participate. Each step of this process can be an obstacle to overcome as each step requires stakeholder buy-in from management to programme participant.

The case study of Te Whare Ako is testament to a successful workplace literacy programme (Workbase, 2002) based on principles of adult learning approaches, a safe non-threatening environment, innovative learning situations, relevant learning to the workplace, and accessible learning in terms of time and location. Further to this recipe for success is stakeholder buy-in. Management recognised that 'a number of employees and their families had been disenchanted by their experiences in the education system, yet our employees needed to operate in an increasingly intellectually demanding workplace and we had to face and overcome this hurdle' (Workbase, 2002, p.1). At the same time the employees voluntarily engaged in the literacy programme. 'We weren't told by management to go there but it was a clean and quiet place among the noise and machinery of the mill, and it was inside our territory, inside our comfort zone' (Workbase, 2002a, p.3).

In this study all five companies had stakeholder buy-in at all levels. Management perceived that skill investment was necessary to achieve company benefits and programme participants were willing to identify their needs and attend programmes.

5.6 Summary

This study has found that workplace literacy programmes provide positive outcomes for the individuals and their companies, however this discussion has highlighted that a lack of measurement and the complexity of interrelationship between cause and effect have added to the difficulty in establishing clarity. Although there is difficulty around the notion of measurement and the relationship between cause and effect, it does not mean that the positive outcomes do not exist. To the contrary, these outcomes have been supported by the programme participants, the management representatives and previous research.

Self-confidence is defined as a non-academic literacy outcome and is an outcome which, through its interconnection with other outcomes and impacts, has been found in this discussion to be a recurring theme. Self-confidence features throughout the learning journey of the programme participant including experiences from prior academic learning and is regarded as a key ingredient for successful learning achievement. Other non-academic and academic outcomes also feature which have varying degrees of impacts in the workplace. It was also noted that a workplace literacy programme discussion would be incomplete if its justification was based on increased productivity in the workplace. This discussion touched on the bigger picture of literacy gains creating a healthier and more functional society.

Throughout the discussion there was reference to implications for government, employers, literacy providers and schools. These implications are raised in the next and final chapter. There was also reference to further recommended research which is also included in the final chapter.

Chapter 6: Conclusion

Introduction

The aims of this study were to firstly investigate the outcomes of workplace literacy programmes and their impacts in the workplace from programme participants' and management perspectives and secondly to investigate prior academic learning experiences of programme participants and their perspectives on key factors contributing to effective learning. Following the introduction to the study and an overview of literacy development in New Zealand in the first chapter, *Chapter 2* described previous research related to the aims of this study. The research design and methodology of this study were detailed in *Chapter 3*. The results of the research were reported in *Chapter 4* with a discussion of the results following in *Chapter 5*. In this, the final chapter, the results will be briefly summarised in relation to the research aims of the study, some conclusions will be drawn from the results and the implications of this study will be considered. Suggestions for future research and the limitations of the present study will also be discussed.

6.1   Conclusions
6.2   Implications of this study
6.3   Suggestions for future research

6.1   Conclusions

Research Question One for this study asked:

To what extent do academic and non-academic outcomes result from workplace

literacy programmes?

The results of this study suggest that for these programme participants, both academic and non-academic outcomes resulted from their workplace literacy programmes. The

academic outcomes identified were the literacy skills of oral communication, reading, writing and maths. These outcomes were perceived to have taken place by the programme participants and also perceived by management representatives suggesting that as a general trend academic outcomes may result from workplace literacy programmes. Non-academic outcomes of increased self-confidence, positive attitude changes and increased participation were also identified as findings in this research. Increased self-confidence appeared as a recurring theme throughout the research on outcomes and impacts suggesting that increased self-confidence was a key finding. This study also found that due to the complexity of literacy and the interconnection of outcomes with other outcomes that it is difficult to establish cause and effect thereby making the ranking of outcomes difficult to establish.

The second research question in the study asked:

To what extent do workplace literacy programmes outcomes impact in the workplace and in what way(s)?

This research based its approach of distinguishing between programme outcomes and their impacts in the workplace as a way of determining programme effectiveness and accountability. *Section 1.7* in *Chapter 1* provides the background to this approach.

Impacts were identified in relation to other contributing impacts to create a full picture of how management perceived impacts in the workplace. The impacts identified were more accurate documentation, increased self-confidence, increased efficiency, improved workplace relationships, improved communication, increased delegation, more positive attitudes and increased productivity. Although more accurate documentation was a recurring theme, it is again difficult to establish any

particular ranking system of impacts due to the interconnection of impacts with other impacts.

Based on management perspectives it would appear that these impacts have resulted from workplace literacy programme outcomes however, due to limited previous research on impacts in the workplace and a lack of measurement, the results are somewhat inconclusive.

The third research question in this study asked:

What, if any, are common school experiences of workplace literacy programme participants that may have influenced low literacy levels?

Although the findings in relation to prior academic learning in this study were limited due to a low response from the participants, prior academic learning experiences described by the programme participants suggest that they may have influenced their low literacy levels. Contributing factors to low literacy levels found in this study and which appear to be in line with previous research included a lack of self-confidence, feelings of inadequacy and alienation from the school system (NALA, 2005; Tett, 2000; Maclachlan & Cloonan, 2003), low attainment at school (Culligan et al, 2005) and leaving school at an early age (Bynner, 2002).

The final research question in this study asked:

From workplace literacy programme participants' perspectives, what, if any, are key factors that contribute to effective learning on workplace literacy programmes?

Key factors contributing to effective learning perceived by the programme participants were an environment where participants are treated with respect and dignity, a positive tutor-student relationship and a programme of practical application and relevance. These findings are supported by research on principles of adult learning including a safe and non-threatening environment (Nanvut Literacy Council, 2004); meaningful programmes of learning (Sticht, 2005; Spener, 1992) while research relating to Māori students provides evidence for a positive tutor-student relationship and adapting to best suit the individual's learning style (Bishop, 2003; Fraser, 2004).

6.2 Implications of this study

While the results of this study have not provided conclusive evidence of the outcomes of workplace literacy programmes and their impacts in the workplace, it is reasonable to infer from this study that workplace literacy programmes have the potential to result in positive outcomes and impacts. The implications of the findings in this study raise a number of interesting insights that can be projected into the New Zealand domains of: government and policy making; the employer; training providers and schools.

Government and policy making

Workplace literacy programmes need to be available and accessible with a strong clear policy and strategy from government to ensure that literacy needs in the workplace are addressed. In addressing literacy needs in the workplace, effective funding systems and collaboration of government departments are required. Government departments and agencies (for example, Ministry of Education, New Zealand Qualifications Authority, Tertiary Education Commission, Ministry of Social Development, Department of Labour and Ministry of Economic Development) are beginning to work closer together (Workbase, 2006b). This whole government approach is necessary to break the cycle of low literacy and low school attainment to ensure that children today are not trapped in a low achieving tradition. Castleton and McDonald's (2002) study argued for a whole government approach with broader socio-economic agendas for adult literacy. With an emerging combined force of government departments along with substantial funding of up to 85 percent for effective programme delivery, employers remain reluctant in taking up the offer with only 12 percent of New Zealand companies providing workplace literacy programmes (Schick, 2005). What are the key ingredients needed to encourage more employers to provide workplace literacy programmes? What do they need to know?

My suggestion is that there needs to be more awareness of the organisational benefits of workplace literacy programmes. Funding criteria and measurement of success need to acknowledge the non-academic outcomes as well as the academic outcomes. The complexity of the interconnection of outcomes and impacts need to be promoted so that employers have a bigger picture understanding of what benefits are possible. Policy making needs to target all people who have been marginalised from the

education system not only Māori, Pasifika people and those for whom English is a second language. Finally, government needs to acknowledge that the education system still allows for people to slip through the system and this needs to be addressed within the education system.

Employers

Why would an organisation choose to provide workplace literacy programmes? Barriers to workplace literacy programmes from an employer's perspective include limited management buy-in, time, cost and identifying an appropriate training provider. Management needs to agree to the provision of workplace literacy programmes. However, reluctance to agreement includes such responses as: 'it is the education system's responsibility and not ours'; denial of having literacy problems in the workplace; a belief that if the employee is incapable of carrying out the job then either do not give it to him or her or provide an alternative way of doing it; screening for literacy competency as a recruitment tool; too much down time of staff; the employer might be poached or look elsewhere for work (Workbase, 2006a). Although we may rightly or wrongly believe it is the education system's responsibility, the current situation in New Zealand of low unemployment rates and identified literacy issues in the workplace requires, I would suggest, an updated perspective. Investing in skills and learning in the workplace, organising work efficiently and building a productive workplace culture are all drivers of productivity which can be enhanced by programmes in foundation and or literacy skills (Workbase, 2006a).

With changing organisational structures being flatter and more flexible and with increased worker independence and responsibility along with current low

unemployment rates, it is in the employers' interests to be addressing the needs of their current workers as well as potential new workers. With regard to recruitment, a new employee who exudes enthusiasm and willingness and is appropriate for the organisational culture but has literacy issues can be up-skilled. Similarly, a current employee who is hard working and loyal and who has been identified to take on increased responsibility but who is being held back by literacy issues can be up-skilled. Conversely, a new employee who has the literacy skills but not the appropriate attitude or organisational culture presents a much more difficult scenario for up-skilling.

The issue of time and cost of training is significant for the employer and is determined by company philosophy on skill investment and by the return on investment. Establishing and implementing measuring systems to identify literacy progress of the worker and measurement of impacts in the workplace pre and post-programme could provide evidence to support benefits of literacy provision. Mikulecky and Lloyd (1993) have suggested measures of company records, employee interviews and questionnaires and supervisor ratings. Measurement of outcomes and impacts appears to be crucial for employers to buy into providing workplace literacy programmes.

Training providers

Training providers are required to be accountable to the workplace employer and to the programme participant. An appropriate training provider needs to identify the literacy needs of the organisation and the literacy needs of the employees. It needs to develop an appropriate programme of study to meet both the organisational goals and the individual's goals and needs to provide reports to the company on the employee's

literacy progress. The Workplace Productivity Working Group (2004) identified issues around measurement as one of the drivers for increased workplace productivity. Assessing programme outcomes and impacts would assist in determining programme effectiveness and accountability

The provider's obligations are to provide expert tutoring with an understanding of approaches underpinning adult literacy acquisition. The expert tutor needs to be able to create a safe non-threatening environment where the programme participants are treated with dignity and respect and with the key aim to develop a positive tutor-student relationship. The tutor needs to be able to deliver a programme which best suits the learning style of the student and be mindful that the student may be someone who has experienced alienation, underachievement and feelings of inadequacy from the school system. The programmes need to be meaningful and relevant with appropriate content, resources and progressions. Most importantly the student needs to experience successful learning from the first day and on a regular basis.

Clarification between providers of literacy also requires addressing to ensure capability and capacity of literacy provision is increased rather than the current model where providers, as in the case of Industry Training Organisations and polytechnics, are competing for student component funding to provide literacy programmes.

Schools

Schools need to ensure effective teaching and learning of literacy skills is occurring. Implementation of systems for identifying students portraying characteristics of potential low achievement such as a lack of self-confidence, falling behind, negative attitudes and feelings of inadequacy is required. Another tool building on the early

identification of these students is on-going monitoring. Expert literacy help is required for appropriate programme delivery with cultural sensitivity' knowledge, experience and adaptability to match the individual student's learning style. This could range from school based to community support programmes in small groups or one to one tuition. Whichever approach is taken there needs to be the individual's willingness to participate with family and or caregiver buy-in and a safe and non-threatening environment where each individual is treated with respect and dignity and where successful learning can be experienced. In addition, easily accessible funding mechanisms also need to be available.

6.3 Suggestions for future research

It is clear from the results of this study that the relationship between workplace literacy programme outcomes and their impacts in the workplace is an area that requires on-going, in-depth investigation. Outcomes from literacy programmes can be identified but the on-going question of the extent of the outcomes and the impact they have in the workplace is still largely open. It would seem advantageous to look in more detail at what progress is made on workplace literacy programmes both for the participant and for the company by focusing on establishing and implementing systems of measurement both pre-programme and post-programme. Such work would provide more evidence for the need of workplace literacy programmes.

The primary focus of this study was to look at the outcomes and impacts of workplace literacy programmes. It has produced results suggesting that positive programme outcomes are achievable with beneficial gains for the organisation. Further studies are needed to investigate best practices specifically for successful workplace programmes

in terms of size of class, delivery of programme, regularity of tuition, the length of the programme and tutor approach. Factors leading to low school achievement are established from previous research while the analysis of prior academic learning experiences by programme participants contained in this study although preliminary, corresponds with previous findings. There needs to be research at schools to identify potential low achieving students and systems implemented to ensure that these students have successful learning experiences and do not slip through the education system.

This study set out to investigate the possible outcomes of workplace literacy programmes and their impacts in the workplace. The results suggest that government, employers, literacy training providers, schools and or researchers can gain greater understanding of the complexity of literacy learning and its benefits by providing opportunities for the provision of workplace literacy programmes. Such initiatives can also help to promote awareness of the potential for creating a more literate and healthier society. A final recommendation for further research is the link between workplace literacy programmes and a healthier society.

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Massey University

Impacts of Workplace Literacy Programmes on Employees

INFORMATION SHEET- For Company Management

Researcher(s) Introduction

Nicola (Niki) McCartney is a student at Massey University.

She is completing her Masters of Philosophy.

The overall objective is to assess the impacts of workplace literacy programmes on employees from a minimum of three different companies. The research aims to identify the extent to which learners have benefited, how they have benefited, the impacts of the programmes from the company's perspective, the key factors that have made the programmes effective from the learner's perspective and key factors that could have made past school experiences more effective from the learner's perspective.

Niki works at Tairawhiti Polytechnic, Gisborne. She is the literacy coordinator at the polytechnic.

If you would like more information about this project you can contact Niki at Tairawhiti Polytechnic:

Email:

Niki's supervisor for the project is Frank Sligo. Frank is an Associate Professor at Massey University, Wellington in the Department of Communication & Journalism. He is also available to be contacted on:

Email: F.Sligo@massey.ac.nz

Participant Recruitment

- **The research project needs participants representing company management who had a workplace literacy programme between 2002 and 2005**.
- 'Workbase, National Centre for Workplace Literacy', will contact its training provider partners to request provider participation. The training provider coordinator will contact the company(s) to whom they provide the workplace literacy programmes to explain the research and request participants from management.
- There will be an audio taped interview.
- It is confidential so your name will not be needed.
- The aim is to have a minimum of 2 participants from a minimum of 3 companies.

Project Procedures

- Information will be collected from an interview with the participants representing the company management.
- The data collected will be qualitative.
- The researcher will analyse the data.
- The results will be used to identify impacts of the workplace literacy programmes from the company's perspective.
- The researcher will write up these findings and present them in a report.
- The interviews will be stored at Massey University for 5 years.
- They will be destroyed in 2010.
- The audio tapes will be destroyed on completion of the research.
- The report will include a summary of the findings.
- The summary will be made available to all participants **directly, or via the company literacy coordinator at the end of 2005.**

Participant involvement

- The interview will take approximately 30 minutes.
- This will take place during work time.

Participant's Rights

You are under no obligation to accept this invitation.   If you decide to participate, you have the right to:
- *decline to answer any particular question;*
- *withdraw from the study (specify timeframe);*
- *ask any questions about the study at any time during participation;*
- *provide information on the understanding that your name will not be used unless you give permission to the researcher;*
- *be given access to a summary of the project findings when it is concluded.*
- ***ask for the audiotape to be turned off at any time during the interview***

Project Contacts

If you have any questions about this research and you would like to contact the researcher, Niki McCartney, or her supervisor, Frank Sligo, you are very welcome. The contact details are on the first page

Compulsory Statements

Committee Approval Statement

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Application **04/179.**   If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Campus Human Ethics Committee: Palmerston North, telephone 06 350 5249, email humanethicspn@massey.ac.nz.

Massey University

DEPARTMENT OF COMMUNICATION & JOURNALISM

Impacts of Workplace Literacy Programmes on Employees

COMPANY PERMISSION FORM

This permission form will be held for a period of five (5) years

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

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

Signature: ....   **Date:** ....

Full Name - printed
Company name
Postal address
Telephone
Email ....

Massey University

Impacts of Workplace Literacy Programmes on Employees

INFORMATION SHEET- For Learners

Researcher(s) Introduction

Nicola (Niki) McCartney is a student at Massey University.
She is completing her Masters of Philosophy.
The overall objective is to assess the impacts of workplace literacy programmes on employees from a minimum of three different companies. The research aims to identify the extent to which learners have benefited, how they have benefited, the impacts of the programmes from the company's perspective, the key factors that have made the programmes effective from the learner's perspective and key factors that could have made past school experiences more effective from the learner's perspective.

Niki works at Tairawhiti Polytechnic, Gisborne. She is the literacy coordinator at the polytechnic.
If you would like more information about this project you can contact Niki at Tairawhiti Polytechnic:

Email:

Niki's supervisor for the project is Frank Sligo. Frank is an Associate Professor at Massey University, Wellington in the Department of Communication & Journalism. He is also available to be contacted on:
Tel: Email: F.Sligo@massey.ac.nz

Participant Recruitment
- **The research project needs participants representing learners who have done a workplace literacy programme since 2002**
- 'Workbase, National Centre for Workplace Literacy', will contact its training provider partners to request provider participation. The training provider coordinator will contact the company(s) to whom they provide the workplace literacy programmes to explain the research and request participants from the training programmes.
- There will be an interview with a questionnaire to complete for the learners.
- The interview will be audio taped.
- It is confidential so your name will not be needed.
- The aim is to have a minimum of 15 learner participants from a minimum of 3 companies.

Project Procedures
- Information will be collected from a combined interview and questionnaire with the participants representing the learners.
- The data collected will be both quantitative and qualitative.
- The researcher will analyse the data.
- The results will be used to identify impacts of the workplace literacy programmes.
- Results will also identify key factors that made the programme effective.
- The researcher will write up these findings and present them in a report.
- The questionnaires will be stored at Massey University for 5 years.
- They will be destroyed in 2010.
- The audio tapes will destroyed on completion of the research.
- The report will include a summary of the findings.
- The summary will be made available to all participants **directly, or via the company literacy coordinator at the end of 2005.**

Participant involvement

- The interview and questionnaire for the learners will take approximately one hour.
- This will take place during work time.

Participant's Rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- *decline to answer any particular question;*
- *withdraw from the study (specify timeframe);*
- *ask any questions about the study at any time during participation;*
- *provide information on the understanding that your name will not be used unless you give permission to the researcher;*
- *be given access to a summary of the project findings when it is concluded.*
- ***ask for the audiotape to be turned off at any time during the interview***

Project Contacts

If you have any questions about this research and you would like to contact the researcher, Niki McCartney, or her supervisor, Frank Sligo, you are very welcome. The contact details are on the first page

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Massey University

DEPARTMENT OF COMMUNICATION & JOURNALISM

Impacts of Workplace Literacy Programmes on Employees

PARTICIPANT CONSENT FORM

This consent form will be held for a period of five (5) years

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

I agree to be audiotaped during the interview.   Yes ☐   No ☐

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

Signature: ....   **Date:** ....

Full Name - printed ....

Massey University

DEPARTMENT OF COMMUNICATION & JOURNALISM

Impacts of workplace literacy programmes for management

Interview   Candidate reference ....

Name of company:	Date:
Position:	
Brief job description	

Questions
Can you identify the main ways the programme has impacted on the learners?
2. Has the programme made any impact on productivity (added value)?
3. Are there any specific improvements in work tasks that you have noticed?

4. Has the programme made any changes in the relationships between the management and the learners? Or between the learners and the other employees?

5. Can you identify any work practices that changed as a result of the programme?

6. Any changes in your personal work practice?

7.Has the programme one aspect you would rate above the others?

8. Any other comments?

Massey University

Impacts of workplace literacy programmes for learners
Interview and questionnaire

Interview
Personal information

Name of company:	*Date:*
Position:	
Brief job description:	

Age: /18-20 / 21-25 / 26-30 / 31-35 / 36-40 /41-45 / 46-50 / 51-55 / 56-60 /

Ethnicity: Maori / Pakeha / Other: _____

Programme information

1. *When did you do the programme?*

2. *How long was the programme?*

3. *What was the focus of the programme (what did you do on the programme)?*

4. *About how long did you spend on each area?*

5. *How many students were in the programme?*

6. *Were they in the same department as you?*

7. *Were they at the same level of employment as you?*

Questionnaire
Please circle the number that best reflects your opinion.

5. Strongly agree
4. Agree
3. No change
2. Disagree
1. Strongly disagree

Section A

Oral communication/speaking					
I understand more English words	5	4	3	2	1
I can explain more things in English	5	4	3	2	1
My English is more correct	5	4	3	2	1

Section B

Reading					
My reading has improved because of this programme	5	4	3	2	1
Reading covered in this programme is useful in my job	5	4	3	2	1

Section C

Writing					
My writing has improved because of this programme	5	4	3	2	1
I can fill in forms better because of this programme	5	4	3	2	1
Writing covered in this programme is helping me in my job	5	4	3	2	1
My spelling has improving because of this programme	5	4	3	2	1

Section D

Maths					
My maths has improved because of this programme	5	4	3	2	1
Maths covered in this programme is useful for my job	5	4	3	2	1

Section E

Economic changes you have noticed since the programme					
I earn more money	5	4	3	2	1
I budget more carefully	5	4	3	2	1
I stay within my budget more often	5	4	3	2	1
I have moved to a better house	5	4	3	2	1
I am saving to buy a house	5	4	3	2	1
I have made economic goals for myself	5	4	3	2	1
I feel more in control of my money	5	4	3	2	1

Section F

Social changes you have noticed since the programme					
I have more responsibility at work	5	4	3	2	1
I make more decisions at work	5	4	3	2	1
I suggest more ways of doing things	5	4	3	2	1
I feel more confident with my work colleagues	5	4	3	2	1
I feel more confident with my manager	5	4	3	2	1
I feel more confident in communicating at work	5	4	3	2	1
I have better communication with my family	5	4	3	2	1
I spend more time with my family	5	4	3	2	1
I spend more time helping my children with their homework	5	4	3	2	1

How would you rate yourself:
5. Very strong
4. Strong
3. Average
2. Weak
1. Very weak

Section G

	Before the programme	Now
Oral communication/speaking		
Reading		
Writing		
Maths		
Self-confidence		
Care with money		
Interested in training programmes		
Interested in promotion at work		

Overall, how would you rate your progress?
5. Very strong
4. Strong
3. Average
2. Weak
1. Very weak

Interview

1. *How has your spoken English improved?*

2. *How is this helping in your job?*

3. *What are you reading now that you didn't read before?*

4. *How is this reading helping in your job?*
5. *What are you reading outside work that you didn't read before?*

6. *What improvements to your writing have you noticed?*

7. *How is the maths helping in your job?*

8. *How is it helping outside your job?*

9. *How has your confidence changed at work?*

10. *How has your confidence changed outside of work?*

11. *How do you feel about training programmes at work?*

12. *What were the best things about your programme?*

13. *What were the key factors that made it effective?*

14. *How does this differ to your school experience?*

15. *Can you describe your school experience?*

16. *If you could go back in time to change your experience at school what would you change to make school more effective?*

17. *What do you believe is necessary for school kids to have successful experiences at school?*

18. *Are there any other changes you would make?*

19. *Are there any other changes you have noticed since doing the programme?*