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The Transfer of Literacy, Language, and Numeracy Skills from Learning Programmes into the Workplace



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TE TARI MAHI



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EXECUTIVE SUMMARY

This study sought to understand more about how literacy, language, and numeracy (LLN) skills gained in workplace literacy and numeracy courses are developed, utilised, and transferred within workplaces. A literature review on the transfer of workplace learning (Cameron et al, 2010) provided a framing for the analysis of six case studies that were conducted during 2010. These 'cases' were a variety of workplaces that offered LLN courses funded by the Workplace Literacy Fund and delivered by external training providers.¹

Findings from the literature review

We located only seven research reports that directly explored the transfer of LLN skills from training programmes to the workplace, so we also used the wider transfer literature including meta-analyses of transfer of training (in particular, Baldwin and Ford, 1988). Baldwin and Ford's framework for understanding the transfer process describes three broad factors: training-input factors, training outcomes, and conditions of transfer. The model also describes six linkages that connect different factors, including the three most readily researched and observed: learner characteristics, training factors, and work factors.

Learner characteristics that support learning transfer include learners with sufficient background knowledge and skills to engage successfully in the learning programme, motivation to learn, and the belief that the programme is worthwhile. Some authors suggest that pre-training orientation helps to ensure that learners are clear about the purpose and value of training.

Training factors that impact on transfer include sufficient time for learning and practice, learning experiences that are well designed and implemented, and knowledgeable tutors who help learners to connect their learning with work and other contexts. Ongoing communication with workplace supervisors helps to ensure that programme-work connections are strong. Some researchers also recommend having shared expectations (learner, tutor, work supervisor) of programme outcomes, opportunities for learner self-assessment, and debriefing sessions to help learners to see how they can use their developing skills at work.

Work factors that impact on transfer include support and opportunities in the workplace for employees to attend their training programmes regularly and open communication between learners, tutors, and the workplace to identify problems and barriers that could hinder learning and maximise support and encouragement to use skills on the job. Transfer is enhanced when learners receive useful feedback on their use of these skills and encouragement to solve problems independently or with their peers and to work alongside more experienced workers. Formal and informal recognition of achievement of learning goals can foster an ongoing learning culture.

¹ Employer-led workplace LLN programmes are the focus of a separate evaluation.

Research methodology

The research was designed as a multi-site case study (Stake, 2006). Training providers identified workplaces that had just begun or were about to begin an LLN programme. The research was conducted in six workplaces that included three manufacturing companies, a warehouse facility, an aged care facility, and a Māori health provider. These workplaces were in the Auckland, Waikato, Bay of Plenty, and Wellington areas. The case study with the Māori health provider was undertaken within a kaupapa Māori research framework using the same research questions adapted to Māori contexts.

The research team comprised six researchers who visited each workplace in pairs for two days in May and June and for 1–2 days in November 2010. Structured interviews were held with LLN learners, tutors, supervisors, and managers. Where feasible, LLN teaching sessions were formally observed, as well as LLN learners being informally observed in their workplace.

Findings

Workplace and learner literacy, language, and numeracy needs

The predominant workplace LLN need was the development of employees' oral communication skills to improve effectiveness of communication within workplace teams and with clients. The learners in three programmes had English as a second or other language (ESOL); some of these learners had gained vocational qualifications in other countries, while others had little or disrupted previous formal learning. The learners in the other three companies had a range of LLN needs, including communication and written language skills, although most of these learners were not functioning at the lowest levels of LLN capability² (that is, they were achieving above step 2 of the learning progressions for adult literacy and numeracy).

Workplace needs assessments and individual learning plans

Considerable documentation that we had assumed would be available for research purposes was not available onsite, and in many cases we did not have access to workplace needs assessments and individual learning plans. The reasons for this included:

- not all tutors had access to the workplace needs assessments that were undertaken before the start of the training course
- not all tutors had completed individual learning plans
- some tutors were unwilling to share learner data because of confidentiality agreements with learners
- follow-up data to assess the progress of learners had not been collected in all companies.

² Tutors in the organisations that were included in our study used the Tertiary Education Commission Learning Progressions for adult literacy and numeracy to help map learner progress. The Learning Progressions have six steps with step 1 indicating very low literacy and beginner numeracy, and step 6 being equivalent to level 3 on the International Adult Literacy Survey and Adult Literacy and Lifeskills Survey.

Learning programmes

In four companies the tutor worked with individuals or small groups on work-related unit standards and/or qualifications and they embedded literacy teaching and learning into the teaching of unit standards. In two companies the literacy learning was not associated with a qualification but was directly related to immediate workplace needs. We have described this latter approach as an intensive literacy programme.

In two of the embedded programmes there was a large gap between learners' LLN levels and the qualification level they were working towards. This meant tutors had to spend considerable time helping learners read and comprehend written programme materials, often at the cost of working on specific LLN content and activities.

The programmes with embedded LLN skills tended to emphasise the acquisition of unit standards, with LLN skills taught when required. This approach appeared to work for learners who were beyond foundation levels; it was less successful when LLN needs were significant. Learners with high literacy needs, especially ESOL learners, may have benefited from intensive literacy tuition but this was not the focus of their programme. Conversely, many of the learners in the two intensive literacy programmes appeared to have more highly developed LLN skills and a stronger base of LLN skills on which to build higher skill levels. It is likely they could have also successfully transferred learning through an embedded programme.

Literacy, language, and numeracy learning gains

The study was not able to provide measured evidence of LLN learner gains, but programme participants, managers, and tutors provided anecdotal evidence of improvements in work-related LLN skills. Unsurprisingly, there were more reports of improvements in LLN skills when these were the focus of the training programmes. Programmes with a good match between programme LLN content and participants' LLN needs appeared more likely to assist learners to develop their LLN skills.

Transfer of literacy, language, and numeracy skills to work

The LLN learners in our study had a wide range of LLN skills and needs. At one end of the spectrum were learners in supervisory work roles whose initial skills were beyond foundation levels and whose jobs enabled them to practise newly acquired literacy skills as part of their regular work. These learners provided more accounts of transfer than learners with significant basic LLN needs who worked in unskilled and solitary jobs in noisy factories, and where opportunities to practise were understandably fewer. Most of this group of workers were doubly hamstrung by not having English as their first language and having most of their social and work contact with other ESOL adults. There were fewer opportunities for them to transfer learning at work.

Improvements in oral communication were reported by learners and supervisors—because people had better understanding they tended to make fewer errors, and were more able to question when they did not understand what was being asked of them. Other examples of transfer included improved

report writing, introducing a notice board to communicate with staff, and using the computer to write case notes and memos instead of relying on a supervisor to write them.

Transfer to other contexts

There were numerous examples of transfer to other contexts that participants attributed to their LLN learning experiences. These included learners being able to assist with homework and read books with children for the first time, fill in forms, read local newspapers, or calculate value when shopping. Skills improved through use as learners practised these in new contexts. Transfer was enhanced when tutors encouraged learners to bring examples of outside LLN tasks into class, so that they could be supported with these.

Reported impact of improved literacy, language, and numeracy skills on the workplace

Supervisors and managers identified more efficient documentation and record keeping and savings in supervisor time when employees were able to complete workplace forms independently. They considered that many employees had improved English and/or communication skills and that some were now better able to support others and take responsibility for projects. Some managers reported that improved communication skills had resulted in better care for clients and greater client satisfaction.

Key messages from the research

The LLN programmes appeared to have more demonstrable impact on workplace LLN practices when:

- programmes were defined and agreed programme goals were known and supported by key company people, tutors, and learners
- there was purposeful ongoing communication between the tutor and relevant company personnel
- the programme goals were achievable in the time frame available
- the programme goals were relevant to the workplace roles of programme participants
- the programme content was targeted and responsive to identified individual learner needs; that is, the right participants were on the right programmes
- learners knew what they wanted to learn and had a voice in determining and tracking their own progress towards the achievement of their goals
- teaching approaches were active and emphasised learners taking increasing responsibility for their own learning
- learning from outside the LLN programme was used as a resource within the programme.
- teaching resources and company manuals were user friendly
- tutors understood the role of formative and summative assessment in supporting teaching and learning and made good use of assessment documentation

- tutors encouraged a performance orientation using authentic work relevant tasks; the emphasis was not on 'ticking off' unit standards, but on employees demonstrating practical use of their learning
- learners had opportunities to practise the relevant LLN skills at work, and were provided with useful feedback from their peers and supervisors
- learners were able to devote additional personal time to achieving their learning goals
- companies encouraged and celebrated learner progress and achievements.

All of the conditions described above need to be in place for the intentions of the Workplace Learning Fund to be fully realised. This requires knowledgeable providers and tutors who are able to work constructively with personnel in companies to plan, teach, assess, and report on LLN programmes. Companies also need to know ways to support employees in their learning and appreciate the importance of opportunities for employees to practise what they are learning as part of their day-to-day work.

The case study research confirms and extends the findings from the literature review. Transfer is complex and depends on alignment between several interrelated factors. There is more involved than merely a transfer of what is learned by an individual to another context. When transfer becomes the shared responsibility of tutors, learners, supervisors, and managers, there is considerable potential for growing a successful workplace learning culture.

1 INTRODUCTION

Context for the study

In New Zealand, literacy is defined as 'the reading, writing, speaking and listening skills adults need to function in everyday life, including work' (Ministry of Education, 2008b, p 62). This definition recognises that these practices are more than a set of skills, but are social practices that are embedded in social contexts and purposes, and that vary from context to context. Adults who lack adequate literacy skills are less likely to participate fully in industry training, workplaces, and society, and they face limited employment opportunities and earning potential. Their talents are less likely to be recognised.

Low levels of employee literacy in New Zealand have been recognised for several years—in 1996 data from the International Adult Literacy Survey showed that one in four New Zealanders had very low literacy skills. The Industry Training Federation (2011) also notes that 'Literacy and numeracy skill issues reveal themselves in lower productivity, higher error rates, inability to understand and follow business procedures, and can be a key barrier to learning'.

Improving the literacy and numeracy levels of the population has been a government priority for several years. The 2001 Adult Literacy Strategy, *More than Words* (Minister of Education, 2001), had the goal that:

over the long-term New Zealanders should enjoy a level of literacy which enables them to participate fully in all aspects of life including work, family and the community, and to have the opportunity to achieve literacy in English and Te Reo Māori. (Ministry of Education, 2008b, p 64)

The Adult Literacy Strategy aimed to develop the capability of adult literacy providers, improve quality systems, and increase the opportunities for adult literacy learning by significantly increasing provision in workplaces, communities, and tertiary institutions. The follow-up Adult Literacy and Lifeskills Survey showed a small improvement.³ However, 44 percent of people aged 16–65 had low or very low prose literacy skills and 52 percent had low or very low numeracy skills (Ministry of Education, 2008a). Over 1 million adults had low or very low literacy and/or numeracy levels (levels 1 and 2 on the Adult Literacy and Lifeskills Survey) and 800,000 of these people are in the workforce (Ministry of Education, 2008a) The Tertiary Education Strategy 2010–2015 identifies increasing literacy and numeracy levels for the workforce as a continuing priority outcome for tertiary education (Minister for Tertiary Education, 2009).

The Literacy, Language and Numeracy Action Plan 2008–2012 aims to improve literacy and numeracy skills to support the building of a competitive, highly skilled and productive workforce (Tertiary Education Commission, 2008b). The plan focuses on adults with levels 1 and 2 skills with the aim of moving more adults to level 3, the literacy level required to function within today's economic market. Increased funding is directed to literacy, language, and numeracy (LLN) learning in workplaces (through the Workplace Literacy Fund), industry training embedded literacy and numeracy projects, one-on-one or small group LLN

³ These improvements largely reflected cohort effects (Satherley et al, 2008).

tuition, and community provision. The programmes in this study all received funding from the Workplace Literacy Fund, which is described in the next section.

Workplace Literacy Fund

The purpose of the Workplace Literacy Fund is to strengthen employees' literacy and numeracy skills linked to workplace requirements (Tertiary Education Commission, 2011, p 2). There is also the expectation that workplace literacy programmes will focus on 'developing the literacy and numeracy skills that employees need to enhance their contribution to the workplace' and that 'Raising literacy and numeracy levels will also impact positively on employees' family and community life' (Tertiary Education Commission, 2011, p 2).

The workplace literacy funding requirements for provider-led LLN programmes for the period of this study are outlined in Tertiary Education Commission (2009). Providers who received funding were required to:

- improve the literacy and numeracy skills of employees in named companies
- complete a workplace literacy and numeracy analysis for each business
- develop a customised literacy and numeracy learning programme that provides a structured programme of learning of at least 40 contact hours over a period of 10–40 weeks
- use appropriately qualified and experienced literacy and numeracy tutors
- use formal assessment to measure employees' literacy and numeracy gain
- maintain auditable records of employee participation and learning gain
- agree explicit business outcomes linked to the programme with each business, and report progress to the business on these, which the Tertiary Education Commission may audit
- work with individual employees for a maximum of 1 year, and a maximum of 2 years (two cohorts of employees) in any one business
- ensure the business has sufficient commitment and expertise, where viable, to continue contributing to raising employees' literacy and numeracy skills at the conclusion of the programme after the provider exits.

The programmes were intended to reach employees with low or no qualifications, or low literacy and numeracy skills, including, where appropriate, priority groups such as Māori and Pacific peoples. The document acknowledged:

there is no fixed way to identify who would be included. In a workplace context, employees who are not always able to perform reading, writing and numeracy demands of the job or who have insufficient English language to communicate at work would clearly be eligible. Any employee who is not accessing Industry Training Organisation Embedded Literacy and Numeracy Project funding or Workplace Employee Targeted funding and who needs to build the competencies described in the learning progressions would be eligible. (Tertiary Education Commission, 2009, p 4)

These definitions are broad enough to include many potential candidates who function above steps 1 and 2 on the learning progressions for adult literacy and

numeracy but would nevertheless benefit from developing relevant LLN skills to enable them to do their jobs more effectively.

Research on workplace literacy, language, and numeracy programmes

Since 2003 there have been a number of studies of workplace LLN programmes in New Zealand (Department of Labour, 2010; Benseman, 2010; Benseman and Sutton, 2007; Gray, 2006; Gray and Sutton, 2007). The intention is to both improve LLN provision and inform future policy.

Objectives of this study

The aim of this project is to contribute to broad understandings of LLN learning in New Zealand workplaces, and draw out some implications for the implementation of the Literacy, Language and Numeracy Action Plan. It complements other research such as the evaluation of the Upskilling Partnership Programme (Department of Labour, 2010).

The purpose of our study was to understand more about how LLN skills gained in workplace literacy and numeracy programmes are transferred, utilised, and developed within workplaces. It was not intended to be an evaluation of the LLN programmes, but in the course of the research information was gathered and observations were made that could be used in a future review or evaluation.

The research had two parts: a literature review on the transfer of workplace learning (Cameron et al, 2010) and an analysis of the findings from six case studies conducted during 2010 in a variety of workplaces that were offering LLN programmes funded by the Workplace Literacy Fund and delivered by external training providers. At the time of commissioning the study, the Tertiary Education Commission had also set up a new employer-led fund. We did not seek case studies of companies accessing this fund because a separate evaluation of the employer-led scheme was being conducted concurrently and the study was intended to build on the upskilling research that also focused on provider-led LLN programmes.

The research questions for this study are as follows.

- 1 What is learning transfer, what does learning transfer look like in workplaces, and what is known about factors that support and hinder transfer, especially in relation to the transfer of LLN knowledge and skills?
- 2 To what extent does the alignment between workplace literacy demands, learner needs, and LLN programmes impact on transfer?
- 3 What are the practices that appear to support LLN transfer in a range of New Zealand workplaces?
- 4 What is the productivity-related impact of LLN initiatives on participants, their immediate work environment, and the broader workplace?

Structure of this document

This report begins by discussing the first research question and summarising what we found in the literature review about factors that impact on how learners use (transfer) knowledge and skills from learning programmes to the workplace.

An overview of the methodology employed to address the research questions is in chapter 3. Workplace LLN needs, the needs of learners, and the learning programmes that were provided to address these needs are described in chapter 4. Chapter 5 reports the evidence of transfer of learning, and chapter 6 explores the key factors that appeared to impact on transfer. A summary of findings and implications is outlined in chapter 7. The six case studies are in Appendices A–F.

2 LITERATURE REVIEW SUMMARY

There is no more important topic in the whole psychology of learning than transfer of learning ... practically all educational and training programs are built on the foundational premise that human beings have the ability to transfer what they have learned from one situation to another. (Desse, 1958, *The Psychology of Learning*, cited in Haskell, 2001, pp 2-3).

Observations from the literature review

How people take what they have learned in one context, from a course for example, and use (transfer) it in another context has been a research focus for psychologists and human resource researchers for decades. One of the messages from this body of research is that transfer is not easily achieved, and in fact is rather unlikely in most circumstances, particularly when the learning that is required is complex.

Research that directly addresses the transfer of literacy, language, and numeracy (LLN) skills from training programmes to the workplace is extremely limited. Our extensive search of the learning, transfer, and LLN literature located some Canadian studies conducted by Taylor et al (2009) an unpublished New Zealand study (Benseman, 2010), and the Department of Labour (2010) evaluation of the Upskilling Partnership Programme. While there is very little empirical evidence that directly addresses LLN learning transfer, there is substantial and useful evidence from the wider transfer literature including meta-analyses of transfer of training (in particular, Baldwin and Ford, 1988) that has informed our understanding of LLN transfer. We also drew on our professional experience and understandings of literacy learning to develop a clearer understanding of the dimensions that could impact on LLN transfer from training programmes to the workplace. The following four observations have been shaped from our synthesis.

'Transfer' tends to reflect a narrow view of learning.

The first observation is that the term 'transfer' tends to reflect a narrow view of learning. Most definitions of transfer conceptualise learning as 'something' that is acquired from a source outside the learner, which the learner then carries to a new context. This orientation to learning has been termed 'learning as acquisition' or as a banking metaphor (Freire, 1998) in which knowledge is deposited by the teacher in a learner's head until it can be withdrawn and used in a new context. When people hold this 'commonsense' view, and the associated view that learning is a simple and rather obvious act, they tend also to assume that people will readily apply (transfer) what was 'covered' in courses to their practice. However, transfer cannot be assumed to be the result of a logical chain of events where someone 'teaches' something, someone else 'learns' it and then 'applies' it somewhere else. This linear sequence can occur when the learning is not very complex (such as learning to operate a new model of a machine that is slightly different from a current familiar model) but many acts of learning are not as tightly bounded as this example.

Many different kinds of transfer exist

The second observation is that many different kinds of transfer have been reported in the literature. Some of these concepts or definitions can be placed on a continuum, as the following examples illustrate.

Tasks that are the same or very similar to the training tasks are described as a 'near' transfer, while 'far' transfer occurs when a learner is able to transfer learning to considerably different tasks or to different contexts. Near transfer in literacy context occurs when learners are able to take what has been learnt in their LLN programme and use it on broadly similar work tasks. For example, an automotive engineer may learn how to write a limited bank of words listing the parts he has used on a job. Far transfer might occur if he is later able to use new supplier manuals for a car he had not previously worked on to locate parts and enter these names on a job sheet.

'Low road' transfer is achieved when learners are trained to automatically apply a repeatedly practised skill to a new situation. 'High road' transfer occurs when learners are able to mindfully abstract general principles from their learning and apply them in a new situation.

Other kinds of transfer such as 'sequential' transfer require learners to transfer learning from one level to a higher level. This has important implications for targeting learning programmes at the appropriate instructional level. Unless the learning at the earlier level is well understood and stable, a learner will not be able to integrate it with new learning.

Complex skills take longer to learn and require high road transfer

The third observation is that the more complex the skill, the longer it takes to learn it, and the more important it is for learners to use high road transfer. After extensive research into how professional workers transfer formal learning into the workplace, Eraut (2004, p 10) posits that transfer involves five interrelated stages, each of them inherently challenging:

- 1 Extracting potentially relevant knowledge from the context(s) of its acquisition and previous use.
- 2 Understanding the new situation, a process that often depends on informal social learning.
- 3 Recognising what knowledge and skills are relevant.
- 4 Transforming the knowledge and skills to fit the new situation.
- 5 Integrating the knowledge and skills with other knowledge and skills to think act, or communicate in the new situation.

In Eraut's (2004) view:

- course design and teaching approaches tend to focus on stages 1 and 3 but overlook the challenges in stages 4 and 5
- workplaces take stage 2 for granted, pay some attention to stage 3, and similarly fail to recognise the challenges involved in stages 4 and 5.

These choices and assumptions result in a situation where it is left up to learners to figure out how to actively process and use what they are learning in the initial learning context as well as adapt the learning in other contexts in order to integrate new knowledge and skills into these contexts. The role of the workplace in supporting and developing transfer from formal learning contexts is frequently underestimated. As a consequence, most of the general transfer research has focused on learner and programme factors without sufficient consideration of how workplace factors support or inhibit transfer.

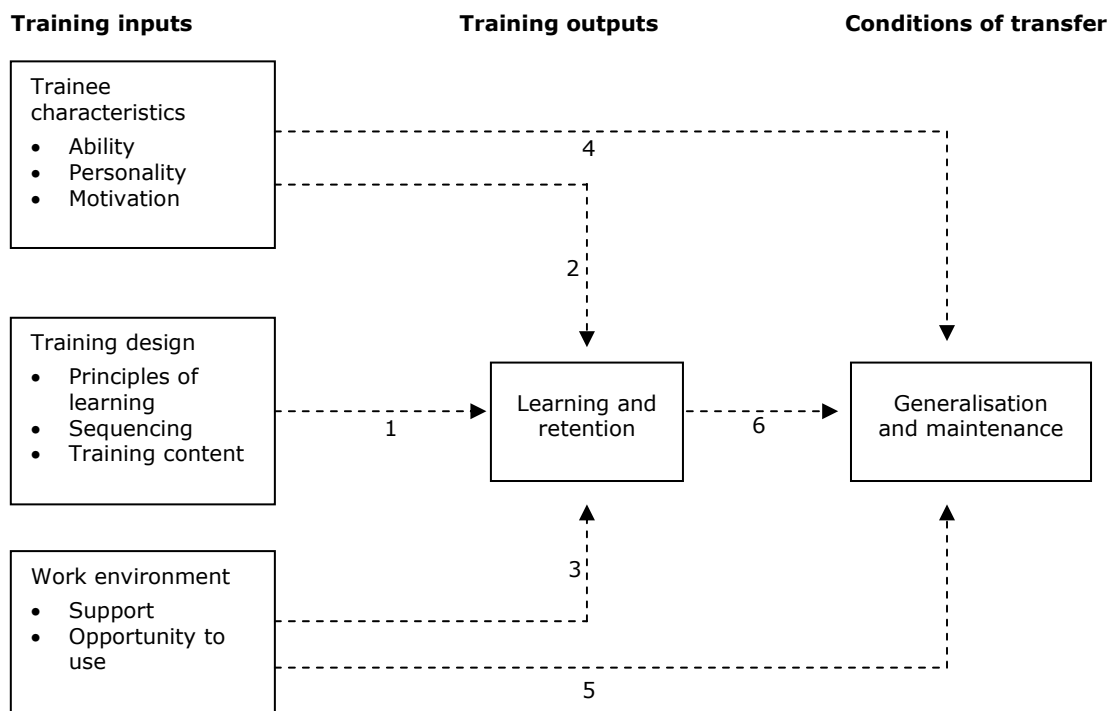
Eraut's (2004) stages require considerable self-direction and agency from learners, and learning how to progress through these stages is typically seen as the responsibility of learners. However, because these steps are not self-evident to learners and require conditions that support transfer, much of which is intended to be learned in training sessions fails to be used in new situations. This is why the workplace literacy tutor is central to learning transfer; as Taylor et al (2009, p 8) suggest, the tutor is 'the chief architect for connecting the design and delivery of classroom learning to the workplace'. While Eraut's research involves different workplace populations (for example, nurses and engineers) than are involved in our study, his work is important as it unpacks what is needed for the transfer of non-routine learning.

Little agreement about how to improve transfer

The fourth observation is that, while research on learning transfer has a long history, there is little agreement or clarity about the most important factors that impact on transfer and what can be done to improve transfer (Blume et al, 2009). Despite the lack of convergence there has been considerable research interest in 'how to lessen the gap between learning and sustained workplace performance' (Burke and Hutchins, 2007, p 263). The most frequently cited and useful model of transfer in workplaces is that developed by Baldwin and Ford (1988). Their model holds that transfer depends on a web of interconnecting factors during the training programme (training inputs) and learning and retention after the programme (learning outputs). Training inputs and outputs also affect whether learning is likely to be generalised to new situations and sustained over time (conditions of transfer). Baldwin and Ford's model includes the workplace environment as one of three inputs to the transfer process. Figure 2.1 identifies the interconnections between the training inputs, outputs, and conditions of transfer.

As Figure 2.1 shows, six key linkages are critical in the transfer process. Good training or learning experiences (linkage 1) make it more likely that learners will understand and remember what they are learning. Trainee characteristics (linkages 2 and 4) also impact on learning and retention and on whether the learning is used in the workplace—trainees may experience a well-designed programme, but decide that it is not relevant to their work. Or trainees may not receive support or opportunities in the workplace to attend regularly, which would impact on their learning (linkage 3) or to use the skills that are intended to be transferred (linkage 6). Workers also need support and opportunity to use their learning for it to be generalised to new situations and for the learning to sustain over time (linkage 5).

Figure 2.1: Model of the transfer process



Source: Baldwin and Ford (1988, p 65).

We have used the Baldwin and Ford (1988) model to frame the following key findings from the literature review.

Factors that influence learning transfer

Learner characteristics that impact on transfer

The following learner characteristics support transfer of learning. Learners must have:

- sufficient background knowledge and skill to engage successfully in the learning programme
- self-efficacy and motivation to learn
- perceptions that the learning is useful
- life circumstances that do not overwhelm their ability to benefit from learning.

Learning programme factors that impact on transfer

The following learning programme factors support transfer of learning. Learning programmes must:

- start with pre-training orientation so that shared expectations of programme outcomes are developed
- be relevant to learner LLN needs
- focus on the intended learning outcomes
- provide sufficient time for learning and practising the intended LLN learning outcomes

- provide a variety and range of approaches to learning
- provide opportunities to reflect, make connections, and discuss possible barriers to the use of strategies in new contexts
- be well designed and implemented to support learner understanding
- assist participants to develop self-assessment strategies, which they can then use in the workplace to help gauge their own progress
- be co-constructed by learners and tutors who agree on approaches that work best for participants
- provide regular debriefing sessions to help learners reflect on their learning in the workplace and connect the different learning contexts.

Work factors that impact on transfer

The following workplace factors support transfer of learning.

- Employees receive support and opportunities in the workplace to attend their training programmes regularly—from their peers, tutor, supervisors, and employers.
- There is open communication among learners, tutors, and workplace to identify problems and barriers that could hinder learning.
- Employees are encouraged by peers, tutor, supervisors, and employers to use the skills intended to be transferred. Employees are provided with feedback on the use of these skills.
- Employees are encouraged to solve problems independently or with their peers and to work alongside more experienced workers.
- The organisation uses programme evaluations to inform new programmes, including refresher sessions.

Training outputs

The transfer model predicts that training outputs (learning and retention) result from having appropriately selected learners who are able to benefit from the learning programme, learning experiences that are well targeted to the needs of learners and the workplace, and effective workplace support. Learner characteristics contribute to the achievement of learning outcomes. If the programme is valued and seen to be relevant by learners, positive learning gains are more likely. Training characteristics also influence whether a participant engages in the workplace learning programme. Successful learning outcomes are more likely when programmes are well delivered by capable tutors, and learning outcomes are strengthened when learner have time to practise and get feedback on their progress at work.

In addition, when the *linkages* among learners, programmes, and work alignment are strong, it is more likely that employees on these programmes will have meaningful learning experiences and successful learning outcomes.

Conditions of transfer

The model illustrates the connectedness of several factors in promoting the transfer of learning to new contexts. To some extent characteristics of learners influence whether they are able to practise their new skills at work (and elsewhere)—a self-confident learner who is able to remain motivated to keep trying to achieve in the face of obstacles is likely to be more successful at transferring learning to new contexts. Programmes that build in connections and networks between the training context and the workplace make transfer more likely, and workplaces that provide the conditions for employees to capitalise on these connections create ‘transfer friendly’ workplace environments.

The factors identified by Eraut (2004), Baldwin and Ford (1988), and others were used to inform the design of the empirical phase of the research and the analysis of the key findings. The research design is discussed next.

3 METHODOLOGY

The project was designed to investigate the transfer of literacy, language, and numeracy (LLN) skills from learning programmes into the workplace. It was intended to identify how LLN skills are utilised and developed, and the conditions that enable this learning to happen in provider-led training.

At the time this study began, the Tertiary Education Commission had instituted a new employer-led fund. We did not seek case studies of companies accessing this fund because a separate evaluation of the employer-led scheme was being conducted. In addition, the intention to improve the understanding of transfer in workplaces built on an evaluation of the Upskilling Partnership Programme (Department of Labour, 2010), which focused on provider-led companies.

Research design

The research was designed as a multi-site case study (Stake, 2006). Case study research was selected because it is most appropriate when the research addresses 'how', 'what', and 'why' conditions, and when the research focuses on contemporary events and behaviours that the researchers cannot control or manipulate (Yin, 2003). Our goal was to deepen our understanding of transfer by analysing information about, and linkages between, participants, learning programmes, and workplace factors with a view to explaining how, and under what circumstances, learners transferred their LLN learning to new contexts. The research instruments included interviews of LLN learners, tutors, workplace supervisors, and managers, observations in the workplace, observation of an LLN teaching session, and analysis of documentation such as workplace needs analyses, learning plans, and assessment records. The research design did not include assessments of learners as it was assumed at the time the research was initiated that assessment data would be available as part of programme records.

Selection of companies

To locate suitable workplaces for the research, providers listed on the Tertiary Education Commission database of funded workplace literacy providers for 2010 were telephoned by the first author in March to ascertain if they had a workplace LLN programme about to begin, and if they were willing to approach the organisation where it was being held to seek permission for the New Zealand Council for Educational Research (NZCER) to conduct the research. The polytechnic provider was identified through personal contacts. A number of providers did not have suitable courses; some had programmes starting too late for the research, and others had recently participated in other research programmes and did not wish to do so in 2010. However, six providers agreed to participate and nominated programmes. The research was begun a little later than expected because we had to fit in with programme starting dates.

The providers and workplaces were given written information about the purposes of the research and confidentiality safeguards, and gave formal approval for the research. Similarly, all workplace participants (managers, supervisors, LLN course participants, and the course tutor) provided informed consent, as required by NZCER ethics processes. The NZCER Ethics Committee approved the research.

The information and consent form that was sent to employers is in Appendix H. Details of the companies participating in the study are shown in Table 3.1.

Table 3.1: Company size and numbers of programme participants in case study companies

Company size	Company 1	Company 2	Company 3	Company 4	Company 5	Company 6
1–19 employees				✓		✓
20–99 employees	✓	✓	✓			
100+ employees					✓	
Number of participants	6	6	5	5	5	4

Kaupapa Māori case study

The case study with the Māori health provider was undertaken within a kaupapa Māori research framework, which is concerned with supporting Māori to be self-determining. The researchers visited the workplace before interviewing to establish a shared understanding of the research. During this visit, the Māori health provider elaborated on the community capacity building context in which it was engaging with the LLN programme, whereby learners were being encouraged to transfer their learning beyond the workplace. While the research instruments collected the same data as in the other case studies, additional questions were asked about learning transfer to whānau, hapū, and iwi.

Data collection

We visited each workplace for 2 days in May and June and for 1–2 days in November 2010. At each workplace we interviewed the owner or a senior manager, supervisors of the LLN learners, and the LLN tutor. In two instances we interviewed by phone when a tutor was not available on the days that we visited.

The research team consisted of six researchers who visited each workplace in pairs. Before the visits the team met to construct the interview schedules and approaches to the field work and analysis. Members of the team also met with Department of Labour staff who provided guidance about the interviews and planned observations. The interview questions were designed to gather information on learner, programme, and workplace characteristics shown in the literature review to be important for transfer of learning.

The interview schedules are in Appendix I.

Data sources

Several sources of data were used in this study. This allowed for triangulation of data sources to increase the accuracy and the credibility of findings (Patton, 1999). The literature review informed the methodology and research questions 1 and 3.

Structured interviews (for the LLN learners, tutors, supervisors, and managers) contributed to answering all of the research questions. Research questions were devised to ascertain the presence or absence of factors shown by the literature review as likely to impact on learning transfer. The learner interviews included a focus on learners' learning histories, job responsibilities, LLN demands of their jobs, views of the course, and practice at and outside work. Supervisors' and managers' interviews explored the significance of LLN issues for the workplace, their views on workplace learning, and their expectations of the programme. The tutors were asked about programme factors (workplace analysis, approaches to assessment, individual learning plans, learner opportunity to develop goals, their teaching approaches, links with the workplace and other contexts, and learner opportunities to practise what they were learning in the course).

As discussed earlier, while we had expected that there would be access to a range of documentation to provide data to inform the second question—including workplace needs analyses, assessment information, and individual learning plans (since they are requirements for Tertiary Education Commission funded programmes) —these documents were not kept onsite in most companies, and the data did not appear to have been collected in some companies.

Where feasible, LLN teaching sessions were formally observed, as well as informal observations of LLN learners in their workplace (research question 2). Field notes were taken of the workplace observations and the LLN teaching sessions. All interviews were taped and summarised as soon as possible after the interviews.

Data analysis

After each interview all interviews and field notes were summarised by each pair of researchers, and a case summary of the data from their visit was constructed, using a common template. This summary noted information about the:

- company:
 - its approach to workplace learning
 - the LLN issues it faced
 - management expectations of the LLN programme
 - management support of the LLN programme
 - views of learner progress
 - examples of transfer from the programme to work
- participants:
 - demographic information
 - learning histories
 - views of personal LLN learning needs
 - LLN workplace demands
 - work roles
 - expectations of the LLN programme
 - views of the programme (delivery, content, perceived usefulness)
 - support from the workplace to practise skills

- commitment to independent practice at and outside of work
- views of what and how they were learning
- examples of transfer from the programme to work and other contexts
- LLN programme:
 - tutor background, training, and ongoing professional learning
 - relevance of programme to workplace needs analysis
 - tutor views of the programme
 - tutor connections with supervisors
 - examples of transfer from the programme to work and other contexts.

A separate analysis of features of the learning programmes was also undertaken. This included information about:

- the use of needs analysis to inform the programme
- assessment data
- individual learning plans and targets
- ongoing assessment
- the length and delivery of the programme
- programme content and approach
- content linked to real life tasks
- communication with the workplace.

These summaries became part of a data record for each case, which was shared with other members of the research team.

The second round of data gathering in November 2010 followed up on the data gathered from the first interviews, and the accuracy of our interpretation of the first interviews was checked with interviewees. The second interviews focused on LLN learning and transfer, both at work and in other contexts. Data from these visits were added to the data record for each case. A case summary in relation to the key research questions was then constructed for each case, and these were compared across cases.

Draft summaries for each case were sent to providers and companies as a further check for accuracy. Any errors of fact were corrected in the final case summaries.

Study limitations

There are several limitations to this study. The researchers did not have access to the profiles of companies accessing the Workplace Literacy Fund, or to the information about learners or LLN providers of individual companies. We were not able to tell whether the case studies were representative of all workplace literacy programmes, although we did try to ensure a range of locations and company types, and using our own networks we were able to include a programme delivered by a Māori provider.

Another significant limitation is a consequence of inadequacy of the companies' records for research purposes. We assumed that documentation about the LLN learners, the LLN content of each programme, and the participants would be

readily available onsite. While some of this documentation was available, it was incomplete in every workplace, usually because records had been sent back to the provider. We had not expected that this documentation could be sensitive or difficult to locate, so had not negotiated with providers for access to it when seeking approval for the research. We made an initial attempt to ask tutors to access this information, and the response from providers was mixed. One provider agreed to return to the company to reassess learners because this had not been done, but was unable to find a time when programme participants would be released for this purpose. Another provider was willing to provide the information, but indicated that this would take time and require additional work. We made the decision not to create additional work for providers, especially because as one provider pointed out, we had not negotiated access to these records.

Another limitation is that in two workplaces the English language levels of LLN learners created communication difficulties. The quality of information gathered from their interviews might have been richer had the interviews been in the participants' first languages.

The project may have provided more information about transfer if the time frame allocated for the research had been longer. By the time programmes were under way around 7 months were available for studying the workplaces, which limited the time available to obtain evidence of productivity-related impacts as well as more complex or distant instances of transfer, or indeed of the maintenance of learning gains so that transfer might later be possible.

In the following section, we describe the characteristics of the six companies in relation to the literacy needs of the company and the learners, programme delivery, and programme outcomes, including instances of learning transfer that were observed and reported. In doing this we draw on Baldwin and Ford's (1988) model to structure the section.

4 WORKPLACE LITERACY, LANGUAGE, AND NUMERACY NEEDS, LEARNERS, AND PROGRAMMES

Workplace literacy needs

The workplaces varied in terms of the literacy requirements needed by the programme participants to carry out their work, as well as in the company expectations for outcomes from the literacy, language, and numeracy (LLN) programmes.

As Table 4.1 shows, the predominant workplace LLN demand was the development of employee oral language skills to improve effectiveness of communication within workplace teams and with clients. In three of the workplaces the major issue for employers was the need for learners with English as a second or other language (ESOL) to improve oral English communication skills. In Company 1 productivity was impaired by second language learners' ability to communicate ideas and information effectively, as well as their confidence in speaking, which was described as 'shyness' by a manager. The company wanted the programme to help ESOL employees speak out about problems or to make suggestions for resolving problems during workplace meetings. The company also hoped that the LLN programme would enable participants to 'step up' to a level 3 vocational qualification that other workers were completing.

Company 2 had recruited highly qualified workers internationally, and the goal was to improve their English language to enable them to participate fully in the workplace, and communicate internally and externally with clients. Their workplace needs analysis showed that job roles required advanced levels of foundation skills, including communicating effectively to other staff, being able to understand and give directions to team members, improving problem solving and critical thinking, completing workplace forms and reports, meeting the requirements of an offsite workplace, and managing and motivating junior workers.

Company 3 wanted its ESOL learners to improve their understanding, speaking, and writing of English to enable them to provide better quality care to its residents. The company also wanted employees to develop greater computer competence as the company had moved to electronic case records.

Table 4.1: Company views of workplace literacy demands for employees on workplace literacy, language, and numeracy programmes

Company 1	Company 2	Company 3	Company 4	Company 5	Company 6
<p>Understanding and speaking English (most were at or below level 1 in the adult literacy learning progressions)</p> <p>Communicating with others</p> <p>Reading and completing workplace forms and reports</p>	<p>Understanding and speaking English</p> <p>Communicating with others</p> <p>Using workplace forms and reports</p>	<p>Understanding, speaking, and writing English</p> <p>Improving computer literacy</p>	<p>Communicating with people and by phone—register and appropriateness, assertiveness and open communication, listening and responding</p> <p>Writing—language and text features, spelling, punctuation, sentence construction</p> <p>Writing for a specific purpose & audience—reports, emails, instructions, assignments, e-certificates</p> <p>Reading with understanding—policies and procedures, contracts, business documents</p>	<p>Communication, including conflict resolution and assertiveness</p> <p>Personal development</p> <p>Computer competency</p> <p>Writing for a specific purpose and audience—reports, emails, instructions, handover notes</p>	<p>Writing case notes, emails, quarterly reports, letters</p> <p>Telephone communication</p> <p>Presenting to client and community groups</p> <p>Development of learning confidence</p> <p>Personal interaction skills</p>

Note: Learners in companies 4 to 6 were achieving above foundation level but qualified for funding from the Workplace Literacy Fund because of their lack of qualifications.

Managers in Company 4 considered that inadequate LLN skills relative to company needs were a barrier to the participants' careers. The company was committed to promoting within its current staff but there was a group of employees who required greater interpersonal communication and more complex writing and reading skills to undertake supervisory positions. Similarly, Company 5 was seeking to develop communication and personal development skills and computer competency for those in management positions. Company 6 had a number of part-time employees who required higher levels of written and oral communication skills to work effectively with clients and communicate with funders, external agencies, and the community.

There were different perceptions within some workplaces about their workplace needs and the consequences of literacy difficulties for the workplace. For example, the manager in one company said that there were no issues with staff understanding workplace health and safety documentation but the supervisor saw this as a major issue.

Learner recruitment

Companies had different approaches to recruiting learners to the programmes. In some companies learners were told by management that they were going to be on a training programme although they were given a choice about whether they wanted to participate.

[Manager] told me about it. He said it was a little course for training for maths and English. He picked some of the people. I wanted to do it. I wanted to improve my English and do more and have a time to sit down for a while. (Female machine operator)

In this company, where work was repetitive and involved long periods of standing, some workers appreciated the chance for a break from the production line to interact with others and have time out from work pressures. In Company 4 the manager, in consultation with other senior staff, approached employees they thought had the potential to become supervisors and asked them if they would like to do the National Certificate in Business (First Line Management). At the care facility managers encouraged staff to join the programme but it was a voluntary exercise. The numbers grew in the programme as the news about its worth spread by word of mouth. At the Māori health provider the general manager recommended the programme to those he felt needed it, and invited others to participate if they wished. Sometimes the programme was explicitly referred to as an LLN programme, while at other times it was described as a (provider's name) course or a qualification.

Learners

Programmes funded by the Workplace Literacy Fund are intended to reach employees with low or no qualifications, or low literacy and numeracy skills including, where appropriate, priority groups such as Māori and Pacific peoples (Tertiary Education Commission, 2009, p 6).

Table 4.2 shows that the priority groups of Māori and Pasifika employees are well represented in this study.

Table 4.2: Learner demographics

Demographic characteristics	Company 1	Company 2	Company 3*	Company 4	Company 5	Company 6
Female	2	0	5	0	3	4
Male	4	6	0	5	2	0
16–24 years	1	0	0	0	0	2
25–54 years	2	6	4	5	4	1
55–65 years	3	0	1	0	1	1
Mean age	48	34	45	28	35	40
European Pākehā	0	0	0	2	3	0
Māori	0	0	0	3	2	4
Pasifika	6	3	5	0	0	0
Asian	0	3	0	0	0	0
Other	0	0	1 (UK)	0	0	0
New Zealand born	1	0	1	5	5	4
Recent immigrant (after 2001)	4	6	2	0	0	0
Speaks English as a second or other language	5	6	3	0	0	0
Work roles	Plant and machine operators and assemblers	Cleaning and driving, trades	Care givers, cook assistant	Certification officer, administration, yard forklift driver, storeperson	Manufacturing coordinators, warehouse supervisor, storeperson	Māori health services (client case-notes; report writing; oral presentations, group facilitation)

* There were 42 participants in this Workplace Literacy Funded programme that addressed computer literacy, embedded literacy for qualifications, and specific LLN skills. Specific demographic data were obtained only for the five learners with English as a second or other language who were engaged in specific LLN training.

In most cases the LLN learners had not achieved qualifications at school, although a minority had some or parts of vocational qualifications, and many were working towards them. For the most part, these learners fitted the criterion of having low or no qualifications. Although in one company the international workers brought vocational qualifications from their own countries to the workplace, they met the criterion of having 'insufficient English language to communicate at work'. While some programmes focused on competences at the higher ends of the learning progressions for adult literacy and numeracy, as well as some non-LLN skills, it could be argued that the participants were 'not always able to perform reading, writing and numeracy demands of the job' (Tertiary Education Commission, 2009, p 4).

In five of the six workplaces, the LLN learners were all employed full time. Most learners had worked for 3 or more years with their current employer.

The tutors in our study all referred to the learning progressions as benchmarks for their learners' achievements. The learning progressions have six steps with step 1 being very low literacy and beginner numeracy and step 6 being equivalent to level 3 on the International Adult Literacy Survey and Adult Literacy and Lifeskills Survey. The learners ranged from those who were not yet achieving at step 1 to those whose literacy and/or numeracy skills appeared likely to be at step 6.

Learning programmes

Five of the programmes were taught by private training establishments and one was taught by a polytechnic. In two cases the company approached the provider to ask it to participate in training, and in the other cases the provider contacted the company explaining the benefits of a workplace literacy programme.

Table 4.3 shows the content and delivery approaches of the programmes.

Table 4.3: Programme characteristics

Company 1	Company 2	Company 3	Company 4	Company 5	Company 6
Learning was focused on workplace vocabulary development in relation to gaining level 1 unit standards	Individual literacy, language, and numeracy (LLN) needs identified (wide disparity in these) LLN embedded in level 2 unit standards	Individual LLN needs identified and programme targeted to those needs Use of relevant literacy programmes on computers Computer literacy input Some embedding of LLN with vocational qualification for some participants	Embedded in unit standards for National Certificate in Business (First Line Management) Tutor worked individually with each participant Also worked on specific work-related tasks	Individual programmes based on needs (dealing with difficult people, writing emails, MS Excel spreadsheets, teamwork)	Learning programme tailored to meet individual learner needs, which reflect organisational LLN needs
1.5 hours a week per pair of learners	Group, 90 minutes a week	Group, 1 hour a week	1 hour a week per individual	1 hour a week per individual	Small group and individual 2 hours a week

Two of the programmes were intensive literacy programmes taught one on one with learners. The tutors worked with participants on building work relevant literacy skills. The learners in these programmes—who had English as their first language—appeared to have more highly developed LLN skills than most of the learners in the second type of programme where LLN was embedded with vocational qualifications.

Four programmes embedded LLN within vocational/workplace training: the first involved work on six unit standards including basic listening, numeracy, and reading skills; the second had begun in 2009 with 40 weeks on LLN unit standards, with a second year embedded in a level 2 vocational qualification; in the third programme the learners were working through a modular health care certificate; and the fourth programme was a level 3 vocational qualification with embedded literacy. In three of these embedded programmes, the learners spoke English as a second or other language (ESOL). Where participants were working towards vocational qualifications some time was spent working with the tutor completing assignments.

Because of the emphasis on qualifications, most programmes emphasised unit standards knowledge and/or oral communication skills. There was some writing, spelling, and reading as required, with very little attention to numeracy skills, unless learners were working towards a numeracy unit standard. One programme taught computer skills as well, and the tutor had sought out online applications that were appropriate to the needs of the learners, such as interactive vocabulary building or grammar skills programmes. In another programme the tutor said that the goal of the programme was to 'achieve as many unit standards as possible'.

Three components of the LLN programme were taught concurrently at Company 3. The programme had a large number of participants, with different approaches specifically targeted to company and learner needs. The company initially asked the provider to deliver a computer programme to upgrade nursing staff in computer literacy so the company could transfer records to an electronic system. Employees in this first programme component were all computer novices who began at very basic levels, but progressed throughout the year to the intended outcome of using computers to write all their care plans and patient records. In the second programme component the tutor taught literacy and numeracy skills to caregiving staff who were doing an industry qualification but who were having difficulties with it because of low literacy and numeracy levels.

The research focus in this study was the third programme component. This programme was designed for five ESOL learners. The group included two qualified Pasifika staff who aimed to gain New Zealand nursing qualifications so they could work as registered nurses in New Zealand.

In another workplace the five staff members were all engaged in study for the same qualification, although they were working at different speeds and had different LLN needs. The tutor worked one to one with each person and tailored each session to the individual. Learners worked with the tutor for between 45 minutes and 2 hours a week, with some group work organised where appropriate, for example, when everyone was required to give a presentation. The tutor reported that he made the programme material accessible by working with the manager to provide authentic work contexts. He also used examples

from outside of work, for example family budgeting, to unpack concepts some of the learners found to be abstract. He provided a monthly written report to the manager on learner progress. In this workplace the major goal of the programme was the achievement of a qualification, with the activities designed to achieve this.

The tutor's approach appeared to consist of working through the manuals for the first line management qualification with each person, helping them to complete these manuals. He reported that he had to do a lot of unpacking and contextualisation of the manual for the people on the programme for them to understand it. There was also specific training on relevant workplace tasks, such as report writing skills, graphs, punctuation, giving clear directions, speaking appropriately on the telephone to clients, and responding to emails.

Scheduling and hours per learner

Programmes were timetabled in a variety of ways to suit the work schedules of the companies. Three programmes were taught individually for an hour once a week, another was taught for 1.5 hours weekly with pairs of learners, and the other learners were taught for 90 minutes a week in groups of five or six. Our interviews with learners in one group suggested that the very diverse needs of the individuals would be difficult to address in group sessions. In one workplace, where an older ESOL learner had never been to school, the tutor worked with the learner individually for an extra hour a week as an unpaid volunteer.

Attendance was not a significant problem in most workplaces. Attendance was initially an issue in one company because the workers gave priority to workplace tasks. This was resolved by the tutor and the managers explaining more clearly the benefits to the company and to the learners of regular attendance. The tutor was also very flexible in accommodating the work schedules of the participants. Once learners could see the direct impacts on their workplace performance, attendance was no longer an issue.

In Company 2, which had a programme spanning 2 years, attendance became an problem for some learners when employees developed greater communication skills and were more able to work offsite. In one instance a worker had been absent for over half the programme in the second year.

Motivation to attend the programme sessions was high at Company 3, and learners interviewed said it was only illness or other unavoidable circumstances that kept them from attending. Learners felt well supported by the tutor and the company and valued their learning time highly.

The timetable at Company 4 was fully flexible to allow for peak and less busy work times. The tutor was on site 2 days a week, which enabled learners to check extra work with him on their non-teaching day or to attend class on a non-scheduled day if required.

Resources

Most of the workplaces had invested in providing appropriate training settings. Some had purpose-built learning spaces or re-locatable rooms with comfortable chairs and tables grouped in a semi-circle and a range of learner resources. Displays of work by groups of learners in other programmes were on the walls in

some companies, including photographs of teams and their projects. One learning space included a computer for learner use during and after timetabled sessions. Other training was held in multi-purpose rooms with few visible numeracy and literacy resources such as dictionaries, vocabulary charts, magazines, multiplication tables, or books at appropriate levels for learners.

One company had given up its main meeting room so that a suite of 10 computers could be installed permanently for the year. This became a dedicated facility that provided access for staff to practise in their own time. Learners also had access to texts relevant to their courses, stationery, workbooks, folders, and dictionaries. The tutor also was creative in finding computer programmes that helped learners' needs, such as a talking dictionary for a learner who could not read or write. There were also learning charts and work displayed around the walls.

The user friendliness of the printed material used in the programmes (both workplace forms and qualification booklets) was a common issue. The material would have been more accessible to literacy learners if it had been written with a less complex vocabulary and sentence structure. As one tutor explained:

All types of learner would benefit from a more *user friendly* vocabulary being used in their text books. I am not suggesting that the content be simplified; rather, the wording does need to be looked at so that it says the things they need to know in language that is more suited to their current level—while at the same time incorporating the workplace jargon they need, the technical words and explanations that they are used to hearing daily, along with helping them expand the vocabulary they do have. The ideal would be for all textbooks used for such learners be edited by those with experience in the field, those who have worked with such learners, and those who empathise with, and understand, the needs and difficulties brought to a class through learners having a limited vocabulary. Such text-books could, perhaps, reduce the time needed in each session for many current sentences having to be *dismembered* and rephrased in order to be understood by all the learners in a group, thereby freeing up more time to work on covering the requirements of the unit standards.

Teaching and learning approaches

While there were examples of sound learning and teaching, the research design did not permit regular observations of teaching, and tutor plans and assessment data were not generally available so we do not have adequate evidence about teaching and learning approaches. Tutors generally found it difficult to describe their strategies for teaching LLN, although the design of their programmes did to some extent reflect their approaches.

Programmes that primarily emphasised the acquisition of unit standards tended to focus on 'covering' the content required in each standard. Gaining standards was the key driver for teaching and learning. The following account of an observed lesson describes a tutor working with ESOL learners on level 1 health and safety unit standards.

Four learners gathered in a meeting room equipped with a whiteboard, pens, and display boards that showed examples of work produced by learners on other programmes. The learners sat in pairs with the tutor standing at the front of the room. The tutor began by asking the group, 'Can you remember what we did last week? We have finished the literacy skills and we are doing workplace communication. How do we communicate?'. She told the learners that in workplaces 'A lot of communication is by filling in forms'. She then gave the group a hazard identification form developed by the provider. She asked, 'Do you fill these in or does the team leader?' Someone answered that it was the team leader. She then explained that she was going to show them how to fill in the form.

The tutor worked through the form writing words such as 'hazard', 'harm', 'eliminate', 'isolate', and 'minimise' on the white board and then explained to the learners what the words meant. One of the learners asked, 'What means "harm"?'. The learners had personal dictionaries where they were encouraged to write down the meaning of words. They also filled in responses in programme booklets.

The teaching strategies used by the tutor consisted mainly of asking questions of the group, and helping them to understand the vocabulary in the programme materials, by telling stories. In explaining what 'eliminate' meant she told a story about cops and robbers.

The purpose of writing in this context was to build understandings of workplace vocabulary relating to safety, yet neither the supervisor nor manager had identified significant issues with workplace safety. The main purpose, therefore, appeared to be gaining health and safety unit standards, although the tutor tried to find examples that related to learners' lives.

Although the learners in this programme were generally positive, appreciating the tutor's positive and caring approach, they were not able to talk about what it was that they were learning and its relevance to their own lives. They shared the general perspective that the programme would 'improve English'. An informal check on their ability to read the materials they were working with showed that some participants were not able to decode more than 30 percent of the words. It is generally accepted that reading with understanding requires that readers can decode more than 95 percent of the words (Tertiary Education Commission, 2008a, p 23). This indicates that the programme materials were not well targeted to people who were learning English—a more appropriate programme for this group may have been a specifically ESOL programme. The evaluation of the Upskilling Partnership Programme found that learning was enhanced when approaches for teaching oral communication in English included 'maximising oral communication, discussion and group work, varying practice and interaction, and instructing in the learners' native language' (Department of Labour, 2010, p 5). As the above description exemplifies, in this instance the tutor did most of the talking and drove the learning.

By contrast programmes that were based around identified learner strengths and needs emphasised learning in context and developing learners' abilities to identify and achieve the 'next steps' towards their own learning goals. Tutors and learners shared the driving in these programmes.

The tutor in Company 6 described a 'transformative' approach to learning and teaching. The focus is on transforming learners as well as learning new ways of learning. The tutor assisted the learners to develop a greater knowledge of Māori views of literacy and Māori world views to enable them to think about how these ideas impacted on their own views of what it meant to be literate as a Māori.

Assessment of learner literacy, language, and numeracy skills

A range of assessment approaches and practices was used. Although tutors reported that learners were assessed in a range of ways, in most cases we did not have access to assessment data either because the data was held at head office or because the tutor had not expected to share it and did not have it available. Sometimes the learners were assessed by providers who passed on the assessments to tutors, and in other companies the tutor did the initial assessment. In some workplaces tutors did appear to 'sit down beside' learners and use their professional judgement to identify useful starting points for learning programmes. Typically, assessments were in relation to workplace forms and tasks, which then allowed the tutor to gain an appreciation of each participant's level of skills and contextualise the learning to the needs of the workplace. One tutor who described this approach stated:

We don't do diagnostics. We focus on workplace tasks, and what assistance the staff need with them. When we start working with them, we gather samples of their work to see what they need and where we can help them improve. It's also been my experience that once you get people started, they start to identify themselves what they'd like to work on next.

In other cases learners were assessed as part of the workplace needs analysis, but tutors did not always have complete records of this assessment or appear to use the information it provided.

In Company 1 the tutor had conducted initial assessments of literacy levels based on learner ability to fill out course enrolment forms, and the help needed to read, comprehend, and fill in New Zealand Qualifications Authority and industry training organisation forms. She also used the learning progressions for adult literacy and numeracy as a basis for assessing learners,⁴ but found this process to be stressful for new learners.

The initial assessment of learners in Company 2 had been carried out in 2009 by the provider as part of the workplace needs assessment. The tutor used this information to help plan his programme in 2009. Assessments included a range of activities and exercises from simple to complex. These activities included learners' talking about themselves and their job, comprehending form layout,

⁴ The Learning Progressions for adult literacy and numeracy are not assessment materials. They describe the main LLN elements or strands of learning that adults require to function in New Zealand society.

filling in workplace forms, completing measurements, matching signs with words, and undertaking problem-solving and critical thinking activities, simple numeracy skills, and free writing.

Three participants in Company 2 scored quite highly on the initial assessment, although there were issues with communication and relevant English vocabulary, and three had significant difficulties in understanding instructions, safety symbols used in the factory, reading comprehension, and writing. This diverse group of ESOL learners had, in some instances, achieved trade qualifications in their first language, which suggests that they would be able to transfer this knowledge into their learning in English. By contrast one participant was able to say his name only and did not complete any of the assessment tasks. Teaching a group of learners with such diverse needs would challenge any tutor. There appeared to be no formal assessment of LLN learning in this company in 2010. We were shown a 2010 individual learning plan for a new learner only. This indicated that his learner goals were to complete the LLN unit standards that support level 2 national certificates in health and safety and level 1 occupational safety and health standards. The individual plan for this worker did not include goals specific to LLN.

The tutor in Company 3 used a range of personal and workplace tasks and aligned these with the learning progressions for adult literacy and numeracy to determine each participant's learning levels. She was able to work on an individual basis with the learners needing the most help with literacy, numeracy, or English language assistance, particularly the caregivers doing the industry qualification, and Pacific staff.

The tutor in Company 4 described the assessment process as 'subjective' and judged that the programme participants would have been 'about level 2 or 3'. Similarly, the tutor in Company 5 described the initial assessments as informal and 'free form'. In both these cases tutors had access to the initial assessment undertaken by the provider, which gave an overview of where each learner was in relation to the adult literacy and numeracy learning progressions. In Company 6 the tutor outlined how she was able to determine people's skill levels and next learning steps by sitting with individual learners and exploring their skills with them informally.

There were mixed views about who should undertake the assessment—some tutors thought that it was preferable for the provider to do it so that tutors could start 'fresh' with the learners without having the assessment process affect their working relationship. Others thought that assessment could be done in a supportive way, using familiar documents, and building a shared understanding of learner needs and goals.

Individual learning plans

Individual learning plans are intended to build on the analysis of individual pre-programme assessment data and learner profiles to determine learners' specific LLN goals. The Tertiary Education Commission in its assessment guide (2010, p 7) recommends that the learner profile is shared with the learner and used to inform priorities and targets and time frames for completing an individual learning plan. Few tutors appeared to use written individual learning plans to guide their teaching.

The few individual learning plans that we saw typically itemised the unit standards that participants would be working towards or listed the general areas where learning would be focused. For example one plan listed a mix of foundation areas (increasing word bank, using a dictionary), and basic computer skills (identify components of keyboard, screen, advantages and disadvantages of computers) as well as other objectives, such as improving communication and relationships in the workplace (negotiation, dealing with difficult people) and personal development (identifying strengths and weaknesses). This was more of a list of content than specific, measurable learning objectives. In this example it was particularly difficult to obtain evidence of any transfer, since there were too many goals to provide for sustained focus.

In several workplaces we saw little evidence of processes for tracking learner progress apart from ticking off completed unit standards. In one workplace the tutor reported that each learner had a portfolio that allowed progress to be documented over time. These portfolios appeared to be a potentially useful strategy for making learning visible to learners and others. At the Māori health provider workplace, the tutor wrote an evaluation of each learner's progress after each session, which she then used to write her administrative reports. She also discussed these evaluations at the beginning of subsequent sessions with the learners, so progress was quite closely tracked. The tutor showed the interviewer her written assessment notes and how they were used to document learner progress. In this workplace the records demonstrated that all of the learners had achieved their goals, and some had exceeded them.

Summative assessment is the process by which it is determined if goals have been met by the end of the programme. No summative assessment records were available to us, but reports from tutors showed that numbers of unit standards had been achieved. Sometimes there had been no summative assessment, and at other times it had been completed but was unavailable.

Programme connection with other contexts

Some tutors took the time to understand more about the formal and informal ways that literacy practices played out at work and in learners' homes and communities. They did this to help learners to make meaningful connections between what they were learning in class and the social contexts they operated in outside of class. Many learners described their engagement in a range of literacy practices in their community, marae, or churches, which were potentially resources for their learning programmes. When tutors were aware of and valued learners' literacy practices and needs outside the teaching context, they were more likely to work with them to bring these experiences into the programme, as well as encouraging 'boundary crossing' by using artefacts from one context in another. For example, a traffic offence notice or a school report could be used as a teaching resource in class, and an email begun in class could be completed at home. One learner brought lists of words she could read but not understand to her classes and these were used for vocabulary building. Some tutors were better able to connect literacy learning across contexts than were others. Other examples of good practice included the following.

- The tutor from Company 3 discovered that a computer literacy learner wanted to sell something on Trade Me, so she showed the class how to use this website. Another person wanted to make notices for her church

functions so the tutor taught her to make borders and other designs to highlight the notices.

- In another company a learner wanted to be able to negotiate a pay rise so the tutor worked with her to practise her negotiation skills and rework her job description. The learner was successful in negotiating a pay rise using these new skills.
- At the Māori health provider, most of the learners were also involved in marae committees and wider community activities, as well as being parents and members of whānau. The tutor was able to link some of their class work to these activities, which gave learners a greater scope for transfer.

Learner practice outside of training programmes

There were three main ways for learners to build on their programme learning outside of formal classes. The first approach was to complete formal 'homework' tasks set by the tutor; the second approach was to work independently or in groups on the completion of the vocational course booklets; and the third approach was to look for ways to transform and practise what they were learning in new contexts.

Homework

Tutors had different views on 'homework', what it was for, and its importance. Tutors were realistic about the demands on learners outside class. The tutor in Company 1 explained

Homework is an important part of any course. However, it is used only as a refresher and not as a necessity. This is vital since most of these learners work extremely hard, both physically and mentally for long hours, especially when they are required to do overtime. Being adults they have families and other duties out of working hours so it is important not to add any pressure or stress. Stress at work, or stress brought from home, can result in accidents. Whenever homework is carried out it is an opportunity for congratulations, but if not then it is accepted as a fact of life, and the learner is encouraged to discuss the work done by their team member—sometimes one learner will be able to do the homework one week and the other the next.

This tutor asked the class to produce a mind map summarising their learning about a specific topic in their own time. One learner worked on this at home with her daughter, and the result was displayed on the wall. She was the only person to complete this homework, and it was used as a resource with other learners. This was a good example of using learner artefacts to enrich the teaching programme.

In Company 2 learners had homework that appeared to be open-ended and required them to do their own investigations by obtaining information from their colleagues or each other. The tutor reported that learners were more motivated when they engaged in these broad-based tasks that specifically required them to use their knowledge in context than in completing more narrowly focused occupational safety and health assignments.

In Company 3 the tutor set homework practice at each session and all the learners interviewed said they completed it and found it helpful. Their tutor read and commented on their homework, which probably contributed to its completion.

Work on New Zealand Qualifications Authority qualification booklets

Completing qualification booklets had the potential to provide opportunities for participants to practise their reading and writing (and occasionally numeracy) skills. The learners in one company found it hard to keep motivated to complete their vocational training materials in their own time, but their tutor kept encouraging them and sometimes substituted more appropriate unit standards.

An ESOL learner described that he enjoyed working on his level 1 health and safety qualification at home. He had done this work with a previous employer but had not gained formal credit. This previous experience meant that he had a good understanding of the content and he found it 'easy, I can pass ... I do homework every day and I telephone [co-worker] and double check'.

Where there was an alignment between the reading and comprehension levels of learners and the course booklets, completion of booklets provided a valuable opportunity for practice and consolidation of these skills. When the gap was too wide the learners were not able to engage in these activities without support from others. Sometimes learners worked together on their booklets, and sometimes family members provided this help. Unless there was a match between learner skill and task requirements, or additional support, learners were less able to engage outside of programme time with the qualification booklets.

Practice in new contexts

The computer learners in one company practised their computer literacy skills in off-duty times in the computer suite. In other workplaces, when learners were able to identify what they were learning they were sometimes able to practise these skills in their work. An example is the learner who talked about 'learning to write in plain English' and transferring this knowledge to working with his supervisor on writing a report—an authentic practice context that also included support and feedback. Learners who were focusing on oral communication skills sometimes gave examples of how they were practising to 'think before I open my mouth' or to 'give clearer instructions to others'.

Another worker who had been in New Zealand for less than a year described how he tried to keep up with company expectations for work outputs by working additional hours some evenings, 'If my boss gives me a long job, I work it out at home. It gives me a head start for the next day'.

5 EVIDENCE OF LEARNING TRANSFER

The Baldwin and Ford (1988) model (outlined in chapter 2) predicts that learning transfer is more likely to take place when learner characteristics, learning programmes, and the work environment parallel the optimal conditions outlined in the literature review. This section details the available evidence that the programmes led to learning that was transferred to the workplace and to other contexts.

Transfer at work

As with learning, transfer is not a process that is readily observed—it has to be inferred from changes in behaviour. The research design relied on learners' reports of behaviour change, supported by the reports of others (supervisors, tutors, and managers). Although participants did not use the term 'transfer' they were able to identify examples of learners' ability to do things that previously they had been unable to do, indicating that some transfer was occurring.

While there were some examples of improvements in simple workplace tasks by learners who had significant LLN needs—for example, completing workplace forms—those who appeared to have higher LLN skill levels initially reported more examples of transfer. There were examples of:

- greater confidence and capability in report writing
- a new ability to insert graphs in reports
- a notice board introduced for communication with staff
- increased professionalism, correctness, precision, and tone in written work
- the computer used to write case notes and memos.

Transfer was most often reported in the area of oral communication. Learners at every workplace reported greater confidence in speaking at meetings. The learners with English as a second or other language (ESOL) who had been reported to be 'shy' at the beginning of their programmes were now better able to ask questions and to raise issues appropriately. Supervisors reported that learners now had 'confidence to point out errors and suggest improvements' and because they had better understanding they made fewer errors.

ESOL learners frequently reported that they were now able to contribute to workplace conversations, which assisted them to feel more at ease and part of the company. Caregivers reported that they now were able to connect better with residents by having more meaningful conversations with them. The learners who had more advanced LLN skills were able to speak more confidently to groups, and were better able to give clear directions to others. Some of those who had been learning supervisory and first line management skills gave examples of a better appreciation of company expectations and requirements, greater ability to work in teams, increased knowledge of how to give and receive feedback, and improved ability to coordinate work and delegate responsibility.

Learner self-reports of transfer were not always supported by supervisors and managers. Supervisors in three companies, however, reported similar examples of changes in behaviour to those given by learners, and emphasised increases in interpersonal skills and increased personal confidence to learn and try new things, as well as noticing expanded thinking, initiative taking, and the seeking of new opportunities.

As in the evaluation of the Upskilling Partnership Programme (Department of Labour, 2010), there were many reports of people feeling more confident and part of the team, which impacted positively on morale and commitment to companies. Some learners interpreted their company's willingness to provide training to them as tangible evidence of their value to the company. Many of the learners were keen to continue learning now that they were beginning to see results.

Transfer to non-work contexts

There were numerous examples of transfer to other contexts. In three companies learners reported that they were interacting differently with their children in the following ways:

- explaining how to use a calculator
- doing homework with children
- reading books with children.

There is potential for transformational impact on both the learners and family literacy practices if these behaviours become embedded in the ways families interact about learning.

Other examples of new behaviours were:

- having the ability to fill in forms (visas, forms from school)
- making greater use of computers and mobile phones to communicate
- using a computer in the public library
- reading local newspapers
- being able to calculate value when shopping
- having greater confidence speaking with others
- being better able to communicate with whānau and friends
- assisting marae workers and volunteers to write up their programmes
- having an enhanced ability to perform in voluntary community roles.

Skills appeared to improve through use as learners practised these in new contexts.

There is potential for some of the reported practices to impact significantly on learners' lives and relationships if they are sustained over time. People appeared better able to use their learning when they themselves were changed in some way by the learning programmes, for example valuing learning more and having the confidence to engage with others in situations that would further develop their knowledge and skills, as illustrated in the following vignette.

A learner's story

One learner, a 40-year-old woman who had worked for the company for 8 years, talked about how the literacy programme she undertook had impacted on her life at work and beyond. She had had disrupted schooling and left with no formal qualifications. Her motivation to improve her writing (especially grammar and spelling) was high as she had been embarrassed about her lack of skills and avoided doing any writing.

Part way through the course I was feeling confident enough to leave notes for other people at shift changeover and to send emails ... I used to buy greeting cards and just sign my name on them, but the other day I bought a baby card for a new mother with no message in it, and wrote a page-long message myself.

She is now confident about communicating in writing with her work colleagues and actively seeks out opportunities to further develop her written language skills.

Impacts on workplace practices

Managers and supervisors typically reported favourable outcomes for their companies from the programmes, although there was no systematic data on workplace practices. One manager was optimistic that he would be able to provide specific data on reductions in accidents, rejects, and other workplace concerns, but he found this was not possible. This was partly because the time frame of the research was insufficient for any changes to show up and partly because all companies had several workplace initiatives to improve productivity and they were not able to isolate the impacts of each.

Supervisors and managers identified the following examples of impacts on workplace practices that appeared to be related to the programmes:

- employees could now complete workplace forms, saving supervisor time
- employees were now better able to support others, including having responsibility for an apprentice
- ESOL employees' improved English language skills allowed them to work as part of an offshore project
- improved communication, resulting in better care for clients and greater client satisfaction
- more efficient documentation and record keeping (case notes, reports, presentations, client programme development, emails, log books)
- employees with greater morale and a willingness to 'step up' to supervisory positions.

Managers from two workplaces considered that the programmes had a strong impact on the workplace in that learners became more empowered to take responsibility for their learning and the learning of others. In one workplace a supervisor who taught a vocational qualification described how her own knowledge of effective teaching strategies was enhanced through her informal observation of the LLN tutor:

Normally I go up to the seminar room with the [qualification] student and we would watch the DVD, and I can hear [tutor] over my shoulder. In the past I would have said to her 'read the book before you start', but when English is their second language, how can they read the book? So now we watch the DVD and we go through the book and the assessment paper together, and I find myself saying 'I can do what [the tutor] does'. I'm not an educator but I've learned a bit of how to teach from her. The hardest module is module one which focuses a lot on patient rights and [the tutor] made up a little quiz for them, so I have a photocopy of that and now that becomes part of module one and it gives them a better understanding because [the tutor] puts it in their words ... Module one is too hard and puts them off, but it is about patient rights and they need to know this—it relates to everything they do. They must do module one first and it was my sticking point. Once they had done [the tutor's] quiz it was easier for them to do the other modules. It's learning as you go and I wasn't approaching it the right way.

This is a good example of how effective approaches to learning can 'spread' beyond an initial context when the workplace is set up (in this case inadvertently) for people to learn from each other. Learning becomes more visible and available to others.

6 KEY FACTORS THAT IMPACTED ON LIKELIHOOD OF LEARNING TRANSFER

This chapter provides an analysis of the case study findings in relation to the research questions about the factors that support or hinder transfer. Whilst our findings support those factors identified in the literature, we also describe factors such as assessment practices that had not been highlighted in previous research.

In the first part of this section we discuss how learner characteristics impact on the likelihood of transfer. This analysis is followed by a discussion of the challenges and issues that the examples illustrate and a summary table of characteristics of practice that are more likely to support transfer.

Learner characteristics that impact on transfer

Although the evidence that was available on the actual literacy levels of the learners is not robust, it was clear from the interviews that learners had different levels of literacy, ranging from those who had not reached the first stage on the adult literacy learning progressions to those who were well above foundation levels. It is not clear from Tertiary Education Commission documentation which learners the Workplace Literacy Fund is primarily intended for, but in this study those learners who had a stronger foundation of literacy, language, and numeracy (LLN) knowledge and skills appeared better able to transfer their learning.

Almost all the learners reported that they were motivated to improve their English and/or complete unit standards and qualifications. However, as we described in the previous section, there were some learners who welcomed the 'chance to sit down' and who did not see any career paths for them personally within the company. In one company, these low-paid workers were primarily extrinsically motivated to improve their LLN skills, and reported that they thought that they should receive salary improvements for achieving unit standards. Workers approaching 60 years of age in particular, while interested in principle in improving their LLN skills, usually did not see significant tangible benefits for themselves in investing much extra personal time in independent practice outside of class. In another company, some learners reported little motivation to improve their qualifications in order to take on extra responsibility as they were happy with their current work roles.

Programme selection

The examples in the previous paragraph point to the need for judicious selection of candidates for LLN training as well as careful programme selection. As our findings suggest that transfer to the workplace is more likely when the right learners are on the right programmes, the decision about who should participate should be based on the analysis of information from the workplace needs analysis, rather than beginning with a preferred programme and expecting it to meet the needs of employees. The workplace needs analysis provides a focus for discussion between key company staff and an opportunity to clarify expectations, roles, and responsibilities. The situation where a company unrealistically hoped that learners with English as a second or other language (ESOL) would be able to step up to a level 3 workplace qualification after their LLN programme could have been avoided had the provider been able to develop the company's

understanding of the LLN skills required to be successful in qualifications at this level and the time needed for those skills to be developed.

There was a question about the appropriateness of the match between the programme and the learners in two of the workplaces. Both of these programmes were with ESOL learners, some who had a history of disrupted schooling who might have been better engaged in building their literacy skills rather than in trying to simultaneously gain workplace qualifications. For some learners in these programmes, the gap between their literacy levels and the LLN requirements of the qualifications appeared to be too wide, reducing their learning and, by implication, their ability to transfer.

Learning programmes

Literacy, language and numeracy content

The key factor that impacted on LLN transfer was the extent to which LLN content was part of the LLN programme. When LLN learning is peripheral to other content there is less learning of LLN skills, so there is less to transfer.

The most effective LLN programmes in this study, therefore, appeared to be those that focused explicitly on LLN knowledge and skills that were relevant to learners' jobs and personal roles. In some cases these learners did not fit the Tertiary Education Commission criterion of having low literacy or numeracy skills, although most met the criterion for having low qualifications.

Resources

Although we did not specifically seek evidence about the impact of resourcing on transfer of learning we identified the level of mismatch between some workplace forms, work books, unit standard materials, and learning needs as a barrier to learning transfer for some learners. In Company 3 the tutor worked with the supervisor to make the unit standard modules accessible to learners, and at the same time showed the supervisor how she could enhance learning and transfer by providing support material for the modules. Company 3 also provided an illustration of a learning organisation that placed resources at the heart of daily work. The provider provided a suite of computers and the company set aside its meeting room for study. The computers were available to learners at any time and many learners made time before and after their shifts and at lunch time to practice their LLN skills. Learners helped each other when the tutor wasn't there or was busy. This company and Company 6, the Māori health provider (described in the previous chapter) provide good examples of how resources can support transfer.

Learning and teaching approaches

The literature review discussed different approaches to learning and the impact that each had on learners' abilities to transfer learning. These approaches were broadly described as learning as acquisition, learning as participation in relevant activities, and learning as a transformative process. Further information on these approaches is in Appendix G.

Overall, the teaching in the programmes reflected all three approaches. Generally, the acquisition approach was more evident in the programmes that emphasised the achievement of unit standards, while those that focused primarily on relevant LLN learning emphasised meaningful participation and understanding the principles behind the learning. Bereiter (1995, p 22) points out that 'transfer of principles depends pre-eminently on how thoroughly the principles are understood'. There were indications that the learning as participation approach (that is located in relevant social practices) allowed learners to gain deeper understanding of the principles underpinning their learning, which made it possible for them to see how they might apply (transfer) this learning in other situations.

Programmes that focused on embedded literacy were influenced by the views of learning embodied within the unit standards framework, which tended to see learning as acquisition, so focused on the acquisition of unit standards. When learning was viewed primarily as acquiring content there was likely to be less emphasis on determining specific LLN needs and tailoring a programme to meet those needs. Tutors who wanted their teaching and learning to focus on encouraging learners to work with relevant activities but who were required to combine LLN with unit standards, found at times that learning was inhibited by a mismatch between the literacy levels of learners and the teaching materials they were using. They considered that LLN learning was hampered by the necessary focus on 'covering' content that the ESOL learners found difficult to comprehend. While some transfer to the workplace was reported for learners in embedded literacy programmes, transfer occurred for less complex tasks, and was unlikely to be built on in the future.

The programme that clearly had a transformative view of learning was delivered by the Māori health provider. The learner goals were relevant to both workplace and whānau/community, and activities were designed to create links between contexts that would support learning transfer. Learners worked with others inside and outside of work on typically occurring activities—they mastered the challenges and built their LLN skills by using them. All these learners provided evidence of transfer, and the learning appeared able to be sustained given that they were integrated into workplace and whānau/community practices.

Assessment

In all assessment practices the quality of the data gathered relies on the professional knowledge and understandings of the assessor. The Tertiary Education Commission (2009, p 4) requires providers to 'use formal assessment to measure employees' literacy and numeracy gain'. Baseline assessments are required to measure gains. The Literacy and Numeracy for Adults Assessment Tool was newly available to organisations when this research was undertaken. However, no tutors in this project used this tool as there was no requirement to do so in 2010. It is a 2011 requirement that all employers funded for workplace literacy and numeracy will use the tool. Our findings suggest that tutors may need further professional development in assessment for them to use the tool effectively.

As well as assessing to fulfil *accountability* obligations, there are important *learning*-related reasons for undertaking initial assessments. For programmes to

align well with learner needs, tutors need to gain an understanding of what learners know and are able to do at the start of learning programmes. Early assessment can also provide insights into each learner's motivations, specific interests and goals (Looney, 2007) and hence assist tutors to make decisions about the most appropriate programme, grouping, and learning approaches.

Initial assessment can include specific tests and/or informal interviews. The term 'assess' comes from the Latin (*as + sidere*), which literally means 'to sit down beside' (Alverno College, 1994). Assessment is more than testing—it involves 'using careful judgement based on the kind of close observation that comes from "sitting down beside"' (Alverno College, 1994, p 1). Assessing learner capabilities involves identifying *what* someone knows (that is, the knowledge and skills they *possess*) and also how they are able to *use* that knowledge. Ongoing assessment is integral to effective learning programmes. Where there are clear goals, tutors and learners can share responsibility for tracking learning achievements. For example, if a learner's goal is to speak up more at meetings, data showing their contributions to meetings can be tracked. Self, peer, and tutor assessment all contribute to an ongoing culture of learning, which allows learners to develop control over their learning and recognise their achievements. It also provides for ongoing feedback to (and from) the learner about progress and next learning steps, and fosters self-awareness and active approaches to learning. This type of assessment provides information to the tutor about the success of their teaching, and signals when teaching approaches should be modified.

An undertone in comments made by some tutors suggested they perceived assessment for adult learners as potentially damaging, perhaps because of threats to learners' self-esteem. Tutors who held this view were more likely to want to 'protect' learners, by avoiding referring to the programmes as literacy programmes, calling them instead 'a [provider's name] course'. As Hipkins (2010, p 27) notes, 'The underlying assumption appears to be that poor literacy skills in adults are something to be ashamed of and kept hidden, rather than a learning opportunity not yet realised, for whatever reason'. Whatever the reason, this belief can itself act as a barrier to adult learning. When assessment is a secret that is withheld from learners, they are positioned as needing protection rather than as active decision makers with authority to name their own goals, and contribute to decisions about how to achieve them. Greater transparency would enable learners and tutors to jointly determine and monitor learning—and foster greater learner agency. In the schooling sector Ministry of Education (2010) policy spells out that assessment results should be out in the open and their meaning for ongoing learning should be the focus of discussions about future learning—practices that would also support adult learning.

Tutors who were ambivalent about assessment also tended to view assessment as more of an accountability mechanism than as an integral component of effective teaching and learning. This perspective may have contributed to some tutors' limited familiarity with, or use of, the assessments made by their provider companies.

The study suggests that the assessment knowledge and skill level of the tutor is critical to learning and subsequent transfer. Those with stronger assessment knowledge could talk about learner strengths and needs and show how these were being addressed in the programme. Assessment is more than a technical exercise—it requires strong understanding of what is being assessed so that an assessor is able to interpret it and use it to build on learner strengths and needs.

Goal setting based on the needs assessment

Internationally there is emphasis on the importance of goal setting to support meaningful adult learning. As Looney (2007, p 378) points out:

Policies in several countries emphasize that teaching and learning in adult LLN programmes should be relevant to the learner's needs and goals ... The [individual learning plan] is typically negotiated between instructor and learner. It may include descriptions of the learner's interests and motivations, short- and long-term goals, and preferred way of reaching those goals.

Goal setting is required in programmes funded by the Workplace Literacy Fund. Literacy and/or numeracy goals are intended to be relevant to learners and to their work. Individual learning plans are meant to specify measurable goals, the steps towards their achievement, and how they will be assessed — particularly how they would be assessed in a workplace context. We saw few clear specifications of what learners were working on or their short- and longer-term goals— these may have existed, but tutors and learners generally were not using them as road maps for their programmes.

As transfer is unlikely when learners are unaware of what it is that they are intended to transfer, this study suggests a need for greater use of processes to assist learners to identify and articulate their work and personal goals. This would support more intentional learning and help develop greater learner control and awareness of how their learning might be used in other contexts. Useful frameworks for developing individual learning plans and tracking progress are now available from the Tertiary Education Commission (2010, pp 59–61).

Practice

Practice is essential to develop learner capability. Studies of expertise indicate that 'ten thousand hours of practice is required to achieve the level of mastery associated with being a world-class expert—in anything' (Levitin, 2006, reported in Gladwell, 2008, p 40). For mastery of foundation LLN skills learners must engage with what is being learned on many occasions before they have sufficient control over the learning to be able to use it effectively in similar contexts. In learning to read, novices have to read lots of 'easy' texts (where they are able to read around 96 percent of the words independently) before they develop fluency. Only one programme provided a range of interesting reading resources for learners to read in their own time. This is a recognised way to build vocabulary knowledge and fluency, and also assists with developing strategies for decoding new and unfamiliar texts.

More transfer of learning occurred and was more likely to be sustained and extended when tutors, learners, and workplaces collaborated in seeking out situations where learners could practice new learning and receive feedback at work. Rather than being left to chance, practice opportunities could be identified in individual learning plans.

Programme length and intensity

Comings (2007) reports 100 hours of instruction as the minimum required for adults to increase one grade level on a standardised test of reading comprehension. Given that 'even 113 hours of instruction is only about a tenth of the time that [school students] spend in class during a year' (Comings, 2007, p 25), an achievement of a grade level would seem to be significant. His review of the research supports 100 hours as the 'benchmark for an effective programme' only after which 'the majority of adult education students are likely to show measurable progress' (p 25). In addition, he claims that adult learners' goals commonly require hundreds if not thousands of hours of instruction to achieve and that the intensity of learning is also important.

Programmes were between 37–40 hours long, and most had been completed in November at the time of our second visits. The literature suggests this is insufficient time to lift literacy skills in most adults. Programmes needed to be long enough for their intended outcomes to be achieved. Forty weeks appeared to be long enough for some types of learners (those further along the adult literacy learning progressions) to gain desired vocational credits. Whether they used this knowledge in the workplace depended on whether the workplace required and supported the use of this knowledge. Learners who were at steps 1 and 2 of the learning progressions and who did not have a history of successful learning, were likely to require significantly more time than 40 weeks for their LLN learning to advance significantly to enable them to transfer general skills to a range of specific workplace tasks. However, if training were tightly focused on areas that were creating specific difficulties in companies (such as signing off food safety documents), it could be possible to address those areas in 40 weeks or less. It may be that shorter, more intensive training in identified areas might allow workers to gain the needed skills for those specific tasks. On the other hand, developing specific skills in a narrowly defined area is unlikely to foster skills in carrying out tasks in other areas.

In New Zealand, reading recovery programmes for young children are short (30 minutes), individual, and daily. While the adult context is different, we would contend that their progress is likely to be accelerated when they also have regular teaching as well as opportunities to engage with learning frequently in between formal learning programmes. Programmes that develop learners' persistence to invest the additional hours required to meet their goals may extend the value of workplace LLN programmes. Workplaces with supportive learning cultures were more likely to encourage workers to invest the extra time needed for skill development and continuing practice during work hours. In this way investments in training and learning can be maximised when learning continues as part of normal workplace practice.

7 SUMMARY OF FINDINGS

Table 7.1 summarises the key factors underpinning successful learning transfer identified in the literature review, the relevant findings from the case study research, and effective practices in workplace literacy, language, and numeracy (LLN) learning.

Table 7.1: Factors underpinning successful learning transfer and practical implications

Key factors for transfer identified in the literature review	Relevant findings from the case study research	Implications for effective practice in workplace literacy, language, and numeracy (LLN) learning
Learner characteristics		
Learners have sufficient background knowledge and skill to engage successfully in the learning programme.	Learners with English as a second or other language (ESOL) struggled in programmes focusing on unit standards that demanded a higher level of English than they held.	There is a good match between the LLN skill levels of the learners and the requirements of the programme.
Learners believe in their ability to learn and have motivation to learn.	Most learners in the study were intrinsically motivated to learn and positive about their programme. There were differing levels of commitment to investing non-work time to practising skills.	Learners participate voluntarily and understand the potential benefits of the programme for their work.
Learners perceive the programme content to be useful.	Most learners in the study saw the programme as useful. However, in some situations the programme was not well matched with learner or workplace needs and this hindered learning and transfer.	Learners understand the relevance of the programme to their work or outside lives. Individual learner plans are targeted at individual learner roles and needs.
Other life circumstances do not overwhelm learners' ability to benefit from the programme.	This did not seem to be a major issue as attendance was generally high. Many providers offered flexible delivery to accommodate shift work or work demands. The learners in our study did not appear to be constrained by overwhelming personal issues.	The training is provided at times and places that enable full participation. Expectations for practise at home or in the community take into account what is realistic for each learner.
Programme characteristics		
Programmes are relevant to learner LLN needs and are seen by learners to be relevant.	Assessment practices varied. In some cases tutors did not have access to the assessments of learner skills and needs that were undertaken before the programme started, or did not use the information provided by those assessments.	The workplace needs analysis ensures programmes are targeted at and relevant to individual learner LLN needs and that appropriate tutors are assigned to the programme. Learner skills and needs are accurately assessed at the start of programmes. Meaningful learning goals are agreed with each individual learner, and the teaching promotes their progress towards these goals.

Key factors for transfer identified in the literature review	Relevant findings from the case study research	Implications for effective practice in workplace literacy, language, and numeracy (LLN) learning
<p>Programme content is focused on the intended learning outcomes.</p>	<p>In some cases, the programme goals emphasised the completion of unit standards or vocational qualifications rather than relevant LLN content, and this impeded LLN learning.</p>	<p>LLN programmes focus primarily on LLN skills. Agreed programme goals are known by managers, supervisors, tutors, and learners.</p> <p>There is a good alignment of teaching material (level, complexity) with the knowledge of learners.</p>
<p>There is sufficient time for learning and practising the intended LLN learning outcomes.</p>	<p>The length of programmes was sufficient in some instances — where learners had good literacy or where there were straightforward skills that required direct transfer of a skill from the LLN programme into the work context. It was not sufficient when learners’ needs were greater or where concepts intended for transfer were very complex.</p> <p>The intensity of learning was also an issue. One hour per week appeared insufficient for ESOL learners to make much progress but could be sufficient when learners had good literacy or there were straightforward skills that required direct transfer.</p>	<p>The time (length of time and intensity of programming) required will vary, depending on the skill levels of the learner and the goals of the programme.</p>
<p>Learning experiences are well designed and implemented to support learner understanding, so that it is more likely that learners will remember and use what they are learning in other contexts</p>	<p>Assessment practices varied. Some tutors did not assess or track the LLN progress of learners. Others assessed progress against learning goals regularly and adjusted their teaching and programmes in response to this information. Where learners were working towards unit standards for a qualification, there was less likelihood of learning experiences being designed around learner needs.</p>	<p>Teaching approaches are active and encourage learners to increasingly take responsibility for their own learning.</p> <p>Learning progress is assessed regularly and the findings are used to guide teaching.</p> <p>The tutor understands about teaching and learning—tutors who understand that the learner is central to programme design and teaching are more likely to promote transfer.</p>

Key factors for transfer identified in the literature review	Relevant findings from the case study research	Implications for effective practice in workplace literacy, language, and numeracy (LLN) learning
<p>Learners and tutors agree on approaches that work best for participants and enable learners to make connections between past, current and new learning</p> <p>Learners are taught self-assessment strategies and provided with opportunities for reflecting on their learning.</p>	<p>Most tutors attempted to incorporate relevant workplace material into the programme, although this objective was hampered when the focus of the programme was on achieving specific unit standards or qualifications. Some tutors incorporated out-of-work activities in their teaching, but in general more could have been done to encourage and support learners to make use of external learning opportunities.</p> <p>Individual learning plans were rare and most learners were not able to articulate their specific learning goals.</p>	<p>The tutor understands the LLN skills that learners need to use at work and incorporates relevant material into the programme, using authentic work tasks.</p> <p>The tutor encourages activities likely to promote transfer, such as reading outside work.</p> <p>Learners know what they want to learn and have a voice in determining and tracking their own progress towards achieving their goals</p>
Workplace characteristics		
<p>Employees receive support and opportunities in the workplace to attend their training programmes regularly—from their peers, tutor, supervisors, and employers.</p>	<p>Attendance was not an issue at the workplaces studied, although occasionally work conditions, shift work and other factors interfered with attendance.</p>	<p>Supervisors enable and encourage learners to attend LLN programmes.</p>
<p>There is open communication among learners, tutors, and managers to identify problems and barriers that could hinder learning.</p>	<p>There was clear support for the training programme in all workplaces studied.</p>	<p>A priority is placed on learning by the organisation and learners are actively encouraged to participate. Problems that impede attendance or full participation are resolved.</p>
<p>Employees are encouraged to use the skills that are intended to be transferred—by their peers, tutor, supervisors, and employers. They are provided with feedback on the use of these skills.</p>	<p>Some supervisors encouraged transfer by providing transfer opportunities and reinforcing learning. In other workplaces, supervisors could have done more to provide feedback and opportunities to practise.</p> <p>Transfer was negatively affected if a learner’s job offered few opportunities for practicing oral and written communication. It was supported if the learner’s job involved considerable oral and written communication.</p>	<p>Supervisors encourage transfer by giving workers useful feedback and additional opportunities to practise.</p>
<p>Employees are encouraged to solve problems independently or with their peers and to work alongside more experienced workers.</p>	<p>Transfer was supported when learners were given responsibility and encouragement to try new skills.</p>	<p>Tutors work with company personnel to ensure learners are involved in work situations that allow for growth of independent learning and ability to tackle increasingly complex tasks in line with learners’ new skills and knowledge.</p>

Questions raised by this research

This research raises questions about how well current approaches to enhancing the LLN skills of employees are achieving their intended purposes.

- Does the Workplace Literacy Fund reach those employees who are likely to show most benefit from a 40-hour workplace literacy programme?
- Is the standard 40-hour package appropriate for all groups of potential learners? (That is, would some learners benefit from shorter or longer programmes depending on desired outcomes?)
- How effective are the processes used to monitor the effectiveness of programmes, and how is effectiveness defined?
- What robust evidence is there of learner LLN gain from workplace literacy programmes?
- To what extent do programmes provide the inputs required for learning to transfer to the workplace?
- What will be the impact of the new Literacy and Numeracy for Adults Assessment Tool on learner achievement and transfer to the workplace?

Further research

Research that might address some of the questions posed by this and other studies includes investigations into:

- tutor knowledge and use of the adult literacy learning progressions and the Literacy and Numeracy for Adults Assessment Tool
- the differences between ESOL teaching and the teaching of adults with low literacy, and the outcomes of these approaches for learners and workplaces
- the tutor characteristics and teaching qualities needed within workplaces and varied contexts
- how best to support alignment among government needs, company needs, and learner needs.

APPENDIX A: COMPANY 1 – MANUFACTURING

Company 1 is a large international company in the manufacturing industry. According to the factory manager, the company views itself as a market leader in what it produces and, 'We pride ourselves on our upskilling and retaining staff and ensuring that we provide the safety required for people to do their daily work'. He sees the company as 'recovering' from the economic turndown, which had a small to medium impact on the company.

The company operates in a highly competitive field and the managers determined that to remain competitive, there needed to be improved communication between the different groups of workers: production managers, leading hands, and operators. The work requires people to rely on each other, and to have the confidence to work together productively. Literacy, language, and numeracy (LLN) problems usually show up in the area of oral communication—people do not always provide the feedback that is needed for good functioning. There has been a view that some of the workers do not like to expose their lack of understanding of what is asked of them because they do not want to be laughed at by fellow workers or to lose their jobs.

The company wants to develop workers who can 'cross-function' and this requires good communication skills. It wants workers who can be proactive about recognising and solving problems. The manager described this as being able to 'bring back the solutions to issues' rather than simply reporting problems.

The company approached the provider to deliver training in lean or competitive manufacturing for about 20 employees. A workplace needs analysis was conducted in 2009 by the provider and an unspecified sample of employees was assessed in verbal skills and language, general reading skills, reading workplace forms, understanding of health and safety requirements, basic writing skills, and mathematics skills. The workplace needs analysis was made available to the researchers. The analysis of results showed that there was a group of workers with 'average' levels of competency on the workplace assessment and a group who would need a lot of LLN support. The first group was offered the level 2 competitive manufacturing training and the second group was offered an embedded LLN programme.

Four of the five employees in the second group were assessed as at or below step 1 on the adult literacy learning progressions for the six areas assessed. The participants in the LLN programme were employed as packers and machine operators. Most of their job roles required basic LLN skills such as reading work orders, putting their name and the date on labels, and identifying numbers to enable packing. However, some of the communication requirements were more complex. Workers needed to be able to communicate with the people on the next shift. One worker described how she had to alert the next shift about machine problems, 'Sometime it's coming short and flash and sometime it's distorted, and sometimes the product is cracked on the bottom'.

The factory was noisy and workers wore ear plugs, which exacerbated communication problems such as 'when the boss speaks fast and I can't hear properly'. The company's goal for this group of learners was to develop their LLN

skills sufficiently to enable them to 'step up' to the competitive manufacturing certificate training.

There were six learners in the LLN programme. It is unclear whether they included the five people who were assessed in the workplace needs analysis although this seems likely. The tutor was contracted for 4.5 hours per week for 37.5 weeks, which was usually divided into three sessions of 1.5 hours a week with two learners in each session.

The two female and four male participants were all Pasifika. Five were born overseas and spoke English as an additional language. They ranged from 20 to 60 years of age with a mean age of 48. Two had primary level schooling or less, and three had three or fewer years of secondary schooling. One had studied towards a professional qualification in her country and hoped to complete this in New Zealand once she had the necessary LLN skills. Four participants had been in New Zealand for less than 10 years and two for over 25 years.

The programme provided work on 10 unit standards at level 1. All six learners attended regularly. Tutor records show that most of the learners gained five unit standards including 3501 (listening), 9797 (workplace communication – demonstrate knowledge), and 25060 (independently read texts to gain knowledge). None of the learners was able to talk about the credits that they had gained. Although the learners were able to articulate their own goals to us they had no knowledge of any individual learning plans. Their goals were expressed in general terms relating to improving their English skills, for example:

Improving my English- talking and understanding writing.

[Our] company needs a person to work hard and smart. They know that I work hard, but they need people who speak English.

One participant's personal goals for the programme were to improve his understanding of spoken English (so that he understands instructions at work) as well as improving his ability to explain things to others. He was described by the factory manager as quite versatile, with the ability to operate several machines. Improving his communication skills would allow him to share his expertise with others.

The tutor tried to contextualise the learning by using workplace documents. In our view the language used in some of these documents was especially challenging for learners with English as a second or other language (ESOL). There was considerable emphasis on vocabulary development in the programme. The session that we observed was addressing health and safety in the workplace. Words such as 'harm', 'hazard', and 'eliminate' were introduced and explained by the tutor. This related to unit standard 497, health and safety in the workplace.

Our observation of the teaching session raised questions for us about the appropriate instructional level of programme materials for this group of learners. The complex language required the tutor to devote much of the instructional time to explaining what the materials meant rather than facilitating learners' LLN skills. The programme appeared to prioritise gaining unit standards, although the tutor had identified the processes and core vocabulary used within the workplace

and used this in her programme. She also provided additional teaching for one learner on a one-to-one basis in her own time.

Although the participants enjoyed their programme, and were positive about their tutor's commitment and dedication, not all saw the relevance to their work. One learner considered that he knew how to do the job already and would have liked more intensive teaching of English.

Learners had differing levels of personal commitment to their learning. Some of the learners took their programme workbooks home and worked independently on them or with the assistance of their children. Others worked together in the lunch breaks. One of the male workers shared new vocabulary with his wife. He gave the example of the word 'gossip', which he and his wife enjoyed. Another worker used her initiative to practise her vocabulary. She reported that she occasionally reads a community newspaper in English and she writes down the words that she does not understand.

Evidence of transfer

Transfer at work

While most learners claimed that the programme was helping their learning in general, they were not able to provide much evidence of transfer to their work. This may have been because of the emphasis on completing unit standards, and the fact that the LLN needs of their work were not high. As they were all ESOL learners, interviewing them in English is likely to have detracted from their understanding and the clarity of their responses.

A female employee explained how she was now able to fill out health and safety forms when previously she would report orally and her supervisor would complete the form. A manager also reported that the supervisor had fewer forms to complete now that some workers were able to do this for themselves. He said that it was easy to underestimate the time that this saved. The same female employee also thought that she was better at communicating, 'It is easier to understand the boss. The words and vocabulary helped my understanding'.

Another worker thought that he was 'a little better' at speaking English, using a calculator, doing basic maths, and filling in forms.

A male employee reported that he found the focus on understanding vocabulary quite helpful (for example, learning the difference between 'accident' and 'incident').

Another worker reported that she was already able to do the mathematical processes taught in the programme and while her job required her to calculate 'the percentage of the master batch to mix for the colour' she could already do this before the programme. Therefore, although she gained a unit standard for solving number problems, this was not new learning. However, the training enabled her to explain how to work with processes such as percentages and she is able to use this knowledge in helping her daughter with her mathematics homework (she did not have the vocabulary to communicate her knowledge before the programme). At this stage, for this learner, the ability to explain to others has been transferred to home but not to the workplace, possibly because she had not been required to explain to others. It is possible that this knowledge

and skill could transfer from home to the workplace if and when she is required to teach another worker.

Transfer in other settings

One of the female employees is a motivated learner and an active agent in her own learning. She reads the *New Zealand Herald* every day and keeps a list of words that she does not understand ('slain' was an example). During the programme she brought these words to the tutor to explain. Now that the programme is over she does not have a strategy for learning the meaning of unfamiliar words. It would be useful for her to have access to a dictionary and to learn how to use it, if her vocabulary development is to continue to develop.

One learner said that she had applied for a visa form by herself, something that she would have been unable to do before the programme.

A male participant said that he now helps his 12-year-old daughter to use a calculator. Although he could use a calculator himself before the programme he did not know the right mathematical vocabulary to use to explain the processes to her.

General comments

Transfer could be more readily achieved if training materials and workplace forms were suitable for the particular learners. When the provider does the needs analysis, the appropriateness of workplace documentation could be included as part of this analysis.

Some of the learners were below the first step of the learning progressions. For them to make sufficient progress to be able to transfer LLN learning to the workplace would require longer and more intensive LLN programmes.

The programme could have been strengthened by involving the participants more in

- understanding the learning goals they were working towards
- knowing what constituted 'success'
- understanding both the 'how' and 'why' of learning
- understanding themselves as learners—their strengths and weaknesses
- seeing where they had got to and where they needed to go next
- determining how they were going to practise new learning.

The first factor that influences successful transfer is the degree of mastery of the learning. There was no follow-up assessment of learners' LLN skills so this data is not available. The provider acknowledged that this was the case and said that now that the assessment tool is available pre- and post-assessments will be integral to all LLN programmes.

The time allocated to the training appeared to be sufficient to make a small impact on learners' ability to transfer new LLN skills to their work and to other contexts. It is unlikely that the literacy levels of these learners would be sufficient to undertake the lean manufacturing programme at this time.

While there were aspects of the programme with the potential to be used on the job, the links may have needed to be more specifically made. Role plays of handover meetings, involving the team leader and even the factory manager who often attends these meetings would help to provide authentic contexts for practice and to foster generalisation. For example, the tutor could also observe workers at a handover meeting and then use this experience back in the classroom. This would make a stronger connection between the social contexts in the workplace and the formal classroom learning.

APPENDIX B: COMPANY 2 – MANUFACTURING

Company 2 is a manufacturing firm with 40-50 full-time employees.

For several years workers have been recruited internationally because of a shortage of skilled labour. As most international workers have English as an additional language they need support to adjust to New Zealand culture and work practices, in addition to English as a second or other language (ESOL) training and literacy, language, and numeracy (LLN) training. Some of the job roles require advanced levels of foundation skills, including communicating effectively to other staff, understanding and giving directions, and completing workplace forms and reports. Other job roles do not require significant LLN skills.

The company has worked with the same provider for a number of years, accessing a range of training programmes. The current training programme has been operating for 2 years with the same group of learners. A needs analysis conducted in October 2008 was provided to us by the programme tutor. The analysis showed that difficulty with spoken English was an issue for the company. International workers had to concentrate to understand spoken English and reported that New Zealanders spoke very fast. They had difficulty responding appropriately to open-ended questions and actively managing a conversation. The analysis recommended listening, speaking, and discourse experience to assist learners to manage the range of formal, informal, and evaluative situations needed for work and career progression. It appears that the first programme in 2009 was focused strongly on LLN and English language skills, so that learners would be better able to undertake other training. Stronger attention to gaining New Zealand Qualifications Authority qualifications was evident in 2010 than in the previous year.

The six programme participants in 2010 were all male and aged between 25 and 55 years, with a mean age of 37. They had been in New Zealand for between 18 months and 8 years. The participants were taught as a group, for 90 minutes once a week. The group setting provided opportunities for meaningful participation in LLN activities especially in developing their oral language skills. The wide range of ability levels made this process quite challenging for the tutor.

Learners included three men from overseas who were recruited for their technical experience. Two other learners were also born overseas. The workers who were recruited for their technical skills were all educated beyond secondary school with qualifications such as trade certificates and the equivalent of level 3 mechanical engineering. The other participants had less school education or previous workplace training.

All learners were fully assessed at the start of the programme and this data was shown to us. They had diverse needs. Three scored quite highly on the initial assessment, although there were issues with communication and relevant English vocabulary, and three had significant LLN needs with difficulties in understanding instructions and safety symbols used in the factory, reading comprehension, and writing.

The learners who had higher entering levels of LLN skills saw the training as a way to get ahead professionally and socially, and they demonstrated considerable initiative and self-direction. For example, one learner put all his

work drawings into AutoCAD at home to keep his skills up although he was not required to use this software program in his work. These workers had opportunities to use their LLN skills at work. Those with less-developed entering LLN skills were not required to use reading and writing skills as much in their work, but communication skills were still very important.

There were no written learner records available to us, although records of learner progress are uploaded to the provider's intranet to enable both the programme manager and tutor to access them. Tutor and supervisor reports of the impact of the programme were positive and learners were also enthusiastic about the programme and how it had helped them at work and outside of work. Although not all of the learners used computers at work the tutor had helped them to buy and set up computers at home, as he believed that information and communications technology was 'a normal part of everyday communication now', as well as being a support for continuing literacy development.

Evidence of transfer

Transfer at work

All of the learners considered that the programme had helped them at work. Those in more skilled positions with stronger initial LLN skills reported that they were now better able to communicate with their 'Kiwi' workmates, and understand about life in New Zealand. They found people easier to understand and they were now better able to joke and participate socially at work and in the community. One participant who supervised others reported that he was now better able to 'read' people, recognise when they were bothered about something, find out what the problem was, and help to solve it. Several were committed to advancing their qualifications and learning further.

Those who had less-developed LLN skills at the start of the programme reported that they were better able to understand health and safety practices, complete key forms, and understand their supervisors. A driver reported he was better able to read maps and could now go into a service station to ask for directions when lost.

Supervisors were also positive about the impact of the programme and believed that it had contributed to greater initiative and confidence. A supervisor reported that before the programme one of the participants did not have the confidence to query when a drawing was incorrect and would go ahead and make the part anyway. Now he is consulted about the feasibility of the drawings and will point out errors. He is also now able to work with seven other people who all give him work to do. 'He is able to understand what they want and do it.'

The factory owner noted that productivity has steadily improved over the past few years, although factors additional to LLN provision are also likely to have impacted on productivity.

Transfer in other settings

Outside of work one participant was helping his church to convert files so that they were able to be used by church workers in New Zealand. Others reported reading local newspapers and overseas newspapers on the internet, and emailing

friends and government departments. The worker who was able only to say his name at the start of the programme was able to fill in parts of an application for a driver's licence.

The participants demonstrated strong commitment to the company and were grateful for the learning opportunities and considerable personal support provided. It appears that this programme went beyond functional literacy for work purposes, but promoted active citizenship and social practices, particularly in its first year. The second year had a narrower focus on gaining New Zealand Qualifications Authority credits, although the less formal computer support continued outside of the programme.

General comments

This is a company that is proud of its commitment to training, and there is a strong belief that it makes a difference. It is unclear if the company would be able to continue with LLN training without government support.

The workers who primarily had ESOL needs and who were successful learners in their first languages appeared to be better able to transfer their learning to their work and to take more responsibility for their ongoing learning. They were able to build on principles that they already had in their first and/or other languages and became independent more quickly. They were demonstrating their worth to the company by being able to work off-site for the company. This experience also helped other New Zealand workers to appreciate the complexities involved in working in another culture with people who spoke a different language.

Issues

The tutor had considerable knowledge about learner knowledge and skills, but did not keep data on learner progress. It would have been useful to have access to data about increases in LLN capability.

There was a tension between meeting the LLN needs of participants and gaining unit standards in the time available. The ESOL skill levels of some of the learners required more support for them to engage readily with level 2 unit standards, which has meant that progress had been drawn out.

The time frame appeared to be insufficient for the numbers of standards that were planned to be achieved.

APPENDIX C: COMPANY 3 – RESIDENTIAL CARE

This case study was situated in a residential care centre for the elderly. All unqualified caregivers on staff are required to gain a workplace-based aged care education (ACE) qualification. The literacy levels required to engage successfully in ACE training are above the literacy levels of some staff, particularly those from the Pacific Islands with English as an additional language, and those with foundation level literacy, language, and numeracy (LLN) skills.

Three LLN issues were identified at the care facility: literacy, communication in English and computer literacy.

Many of the Pasifika caregivers doing the ACE qualification required additional training in writing and reading English. Some of these care staff did not communicate that they had not understood all instructions in English, which meant that other staff were confused when they did not carry out directions.

Other issues with people who had low English literacy skills were errors in paperwork and health and safety reporting.

Computer literacy was high on the care facility's priority list for staff learning, especially for professional staff as resident care plans are now computerised.

The provider offered to deliver workplace computer training to the staff. The manager also asked the provider to give customised LLN support to the care workers on the ACE programme and to two registered nurses.

The desired outcome for the caregivers was to provide them with the literacy skills—particularly reading and writing—to enable them to complete the ACE modules and pass the requirements for the ACE certificate. For those who had already completed the certificate the aim was to increase their digital literacy.

The desired outcome for the learners with English as a second or other language (ESOL) was to increase their confidence in using the English language, especially in understanding and speaking English, so that they could communicate better with residents and other staff. The programme was intended to enhance the English written skills of the registered nurses so that they could pass the New Zealand registered nurses exams, which would lead to greater career options for them.

Forty-one employees took part in the LLN training. Of the five participants in our evaluation, four were in the LLN programme, and one was in the computer literacy programme. Three staff on the LLN programme were also engaged in the ACE programme. The supervisor/trainer of the ACE programme was also a participant in the computer literacy programme.

The LLN participants were aged between 35 and 60 years with an average age of around 40 years. Three participants were born in the Pacific and had been in New Zealand for a number of years. A fourth participant was New Zealand born but spoke English as a second language. The fifth participant was a registered nurse who did not have specific LLN needs, apart from computer skills. Most of these LLN participants had previous successful experiences as learners and three had some tertiary education. There were considerable LLN demands in their work including:

- reading and writing client profiles, notes, and care plans
- measuring fluids or urine
- weighing clients and recording weight
- communicating in English with clients and staff
- ordering food, signing order forms and delivery documents, filling in timesheets
- gaining basic computer skills (creating folders, creating files, saving, using a word processing programme).

There were 40 weeks of 1-hour sessions per person (often in a group, but with some individual lessons). The provider made a suite of around 10 computers available for a full year in a dedicated learning space.

The provider's programme coordinator interviewed and assessed each learner before the programme began. The Literacy and Numeracy for Adults Learning Progressions were used to guide the assessment of the LLN learners, as well as writing and speaking assessments. The tutor developed individual learning plans for each participant based on their specific needs and job requirements. The learners and management staff contributed to goal setting. The tutor had specific capability in teaching information and communications technology and management as well as having the National Certificate in Adult Literacy. She was active in continuing her own professional learning and had attended several workshops. She was proactive in accessing useful online literacy activities for specific learners.

Assessment was ongoing throughout the programme and the facility manager was given data on learner progress. The tutor also carried out formative assessment with learners each week, in the form of exercises and homework, which she marked individually and then gave written feedback. She observed the computer class do various procedures and techniques and then gave verbal feedback and demonstrations. She talked to all learners each week about what they had learnt as a review and gave them verbal feedback.

The tutor used the adult literacy learning progressions to ascertain the step level on which each LLN learner appeared to be at the end of the programme. She used checklists for the computer group. Learners also wrote short reports or stories about themselves or work they did in their jobs. This contextualised their learning and the tutor provided written feedback.

The tutor assessed all the learners in July and again in December, wrote progress reports, and at the end of the programme put together an end of year portfolio for each student.

Evidence of transfer

Transfer at work

At work, participants reported:

- being more confident to talk with residents about their lives
- having greater confidence in written documentation

- gaining confidence in expressing themselves orally and in writing and in exploring different modes of communication through working on the computer.

One participant was able to give a talk in English to other care staff about client respect. She also gave an unprepared eulogy at the funeral of a client for whom she had cared.

Transfer in other settings

Participants variously reported:

- having an improved ability to assist children with homework (for example, one worker and her six children did their homework together after the evening meal)
- taking books home from the course and reading these with the children
- being able to fill in forms for school trips
- reading English newspapers
- using the computer at the public library
- using a dictionary to look up an unknown word and using this word in a written sentence to consolidate the meaning
- using the computer at home to compile family history, use Trade Me, or produce notices for the church
- working independently on further computer unit standards.

Having the computers onsite was an opportunity for workers to practise in their own time. This generated opportunities for both individual practice and peer learning, with employees sharing their learning with others. This contributed to what a supervisor described as a 'learning culture':

A learning culture has rubbed off on all courses—[name] feels like a learning organisation. The tutor can be on the computer and the ACE girls are in the same room working with her and they can talk about each other's learning.

The management staff at the care facility reported that many computer students were making better use of the computer in their work, while the LLN learners were 'less shy' and 'gaining in confidence to express themselves and to explore all modes of communication'. The caregivers were applying their learning to the care they were providing as well as now having the goal of gaining a recognised qualification.

The training also impacted on the knowledge and skills of the in-house ACE trainer who reported that she became more aware of effective teaching approaches such as the importance of giving simple definitions. In the first module in the ACE programme there was a difficult section on the patients' rights code. She observed how the tutor helped the learners get interested in this section by devising a quiz that helped them learn the definitions and then make the links between the theory from the module and the practices of the rest home. Before this, the ACE trainer said, when doing the ACE modules, she and the care givers would have gone to the seminar room and watched the DVD, and she would have told them to read the book before they came. Now she realises

that this was too difficult for them and as a result of watching the tutor introduce the learners to the new words and meanings, and get them familiar with the ideas of patient rights, she had found this section much easier to teach. She has since devised other quizzes to introduce new concepts in the programme. This is a good example of how a skilful tutor can have impact beyond the immediate teaching situation, and how the idea of 'transfer' can be applicable to others involved in the learning context.

General comments

This case study illustrates how flexible, well-designed workplace programmes can strengthen a learning culture across an organisation as well as providing specific benefits to individual learners.

This programme appears to align well with guidelines for an embedded approach to LLN provision in that it:

- is built into the achievement of other core workplace requirements (computer literacy, completion of essential workplace qualifications, and specific LLN needs)
- is a partnership between the facility, the provider, and the learners
- places learner needs at the heart of the programme
- tracks learner progress throughout the programme and adjusts learning activities
- provides ongoing formative assessment to learners
- provides opportunities for learners to work together and collectively build understandings
- has a tutor who is engaged in her own professional learning
- makes effective use of technology.

APPENDIX D: COMPANY 4 – STORAGE

Company 4 is a warehouse facility with both permanent and casual staff. All of the permanent staff we spoke to began as casual workers, sent by an employment agency. Many of the staff carry out multiple roles. The manager had been with the company for many years. His philosophy of encouraging people to improve and to take the opportunity to learn, drives the learning and working culture in the organisation. Previous workplace learning for staff has included gaining a driver's licence and forklift driver's licence, first aid, a breathing apparatus course, a computer course, and a business course.

The provider conducted a needs assessment for the company. This consisted of a reading, writing, speaking and listening, and numeracy assessment for each participant. The provider's policy is to design the needs assessment around the workplace goals and link these to the Literacy and Numeracy for Adults learning progressions. Key skills required by learners are mapped to SMART programme goals (specific, measurable, achievable, realistic, and time specific) and the learning progressions to form a learning programme that addresses the business expectations of the company.

The main literacy, language, and numeracy (LLN) issues for the staff, as identified by the needs analysis (not seen by us) on the programme were related and included:

- communicating with people face to face and by phone, including aspects such as register and appropriateness, assertiveness and open communication, listening, and responding
- clear written communication, including language and text features, spelling, punctuation, and sentence construction
- writing for a specific purpose and audience, including writing reports, emails, instructions, assignments, and e-certificates
- reading work-related documents with understanding, including policy and procedures, contracts, business documents, and programme documents.

The company expectations of the programme were that participants would develop the skills to become supervisors. The main intention for the programme was for participants to complete the level 3 National Certificate in Business (First Line Management) and that the tutor would address specific LLN needs at the same time. Their expectations were that the programme would result in improved communication skills, greater initiative, and more learners becoming interested in taking on a supervisor role.

The five participants on the programme were all male; three were Māori and two were Pākehā. They were aged in their late 20s. One participant had gained a school qualification (school certificate) and most had gained some unit standards towards certificates.

While the five staff members were all engaged in study for the same qualification, they were working at different speeds and had different LLN needs. The tutor worked one on one with each person and tailored each session to the individual. Learners worked with the tutor for between 45 minutes and 2 hours a week, with some group work organised as appropriate. The tutor reported that he made the programme material accessible by working with the manager to

provide authentic work contexts. He also used examples from outside of work, for example family budgeting, to unpack concepts some of the learners found to be abstract. He provided a monthly written report to the manager on learner progress. There was limited contact between the tutor and the supervisor, who did not receive direct feedback on the programme or get to read the training reports, so was unclear about the progress and learning needs of the participants.

The programme appeared to consist of the tutor working through the manuals for the first line management qualification with each person, helping them to complete these manuals. He reported that he had to do a lot of unpacking and contextualising of the manual for the people on the course for them to understand it. There was also specific training on relevant workplace tasks, such as report writing skills, graphs, punctuation, giving clear directions, speaking appropriately on the telephone to clients, and responding to emails.

Assessment

The tutor reported that there was a follow-up assessment of learner LLN needs 4 weeks into the programme at which the learner's individual learning plan was confirmed and the learner's skill level estimated against the learning progressions,⁵ another halfway through, and a final assessment where the learner's achievement was re-estimated and progress described. The tutor described the process as 'subjective' but estimated that learners would be around steps 2 and 3 of the learning progressions. Learners were also assessed on the unit standards that they completed during the programme.

Most of the people we interviewed said that they were able to practise their learning back on the job. Some of the skills in the management programme such as budgeting and interviewing were not relevant to learners' current work roles, so they were not able to use them at work. If their supervisor had been better aware of their learning goals, she might have been able to provide more meaningful practice opportunities.

While the participants were positive about the programme and very positive about the tutor, two felt it was quite long and time consuming. Some had struggled with the programme, especially completing the assessment modules and finding the time to do this, while others set aside the time to work methodically through them. Without data on the LLN levels of the participants it is difficult to understand if all of them had the prerequisite skills for a level 3 qualification.

⁵ The Learning Progressions are not assessments but provide broad descriptions of what a learner should be able to achieve at particular steps along the progressions. Skilled tutors can estimate where learners are most likely to 'sit' on the progressions. The new Literacy and Numeracy for Adults Assessment Tool, which is aligned to the progressions, will enable tutors to accurately describe a learner's achievement and progress.

Evidence of transfer

Transfer at work

All participants were able to identify some learning that they had been able to transfer into their work. Examples were:

- working more effectively in teams
- writing better reports, including using graphs
- speaking more confidently to groups
- giving directions more confidently to casual workers
- giving and receiving feedback more effectively
- coordinating work and delegating responsibility better
- thinking more strategically about workplace problems and coming up with solutions.

The manager and supervisor saw little evidence of transfer, and were disappointed as the programme was in its second year (the same people were doing the training this year as the previous year). They considered that only one person doing the programme had made the progress that they had expected. They attributed the lack of transfer to a lack of motivation on the part of the participants to take on extra responsibility. In their view the responsibility to transfer resides with the participants.

The learner who the manager and supervisor believe has improved now asks questions about why things are done in certain ways and the reasons behind company decisions. They attribute this change to the success of the programme. The supervisor believes that this particular learner may be doing well because he has a good work ethic—what learners get out of a programme and whether or not they make the most of it comes down to their personality.

Transfer in other settings

One participant considered he had been able to use the learning outside work. He felt that he now had more confidence when speaking with people he did not know.

A possible reason for transfer to have occurred at work but not elsewhere is that the focus of the training was on skills needed for the workplace, not on broader skills that would enable the programme participants to become more effective learners in general.

Summary

There has been a considerable investment in time on behalf of the company, with the learners reporting that they have been able to transfer some new skills and approaches learned in training to their work. Their perceived transfer to workplace practices was not generally recognised by others in the workplace. While the supervisor and the manager may have not recognised that learners were using new skills, the workers might have had a different view, or even have been using new skills in ways they did not recognise as being new.

It appears that there is scope for the transfer environment to be strengthened by clearer communication between the manager and the supervisor, relating to communication with the tutor (or between the tutor and the supervisor). Because the manager and the supervisor have both completed the level 3 National Certificate in Business there is potential for them to assist learners with transfer. More effective communication within management about learners' goals and progress may assist expectations of the learners to match their progress.

The learners were primarily engaged in obtaining unit standards towards a management certificate, and while there were efforts by the tutor to contextualise their learning to workplace requirements, a more explicit focus on LLN content might have promoted more transfer.

There was limited evidence from the company's perspective of transfer of the learning from the programme to the workplace. It would appear that some of the programme content was potentially well aligned with the workplace demands of the learners. We are unable to identify why it was that learner reported transfer was not noticed by managers and supervisors.

The gaps in the data limit our appreciation about which factors supported or hindered LLN transfer. However, there are indications that there may have been issues to do with the entering skill levels and goals of some of the programme participants, the nature of the programme and the specificity of programme goals, and communication between the tutor and the supervisor.

APPENDIX E: COMPANY 5 – MANUFACTURING

This case study was set in a well-established manufacturing company. The site we visited is the head office where more than 100 employees are based.

The company has a culture of workplace training. During their annual performance reviews employees have a chance to say what training they would like to do. The company tries to accommodate their needs and provides input into the training they think their employees need. Over the past 2 years around 60 percent of employees have had some sort of training.

The company was approached by the provider asking if it would like the provider to run an literacy, language, and numeracy (LLN) programme. The programme was targeted towards those in supervisory positions, and entailed one-to-one sessions with each of five learners. All learners were New Zealand born and educated. The learners had a range of qualifications including qualifications in workplace assessment, a management certificate, and some level 3 workplace qualifications.

The provider conducted a needs assessment for the company. This consisted of a reading, writing, speaking and listening, and numeracy assessment for each participant. The provider's policy is to design the needs assessment around the workplace goals and link these to the Literacy and Numeracy for Adults Learning Progressions. Key skills required by learners are mapped to SMART programme goals (specific, measurable, achievable, realistic, and time specific) and the learning progressions to form a learning programme that addresses the business expectations of the company. After 4 weeks another assessment is completed with the learner and the learner's individual learning plan is confirmed. The learner's skill level is estimated against the learning progressions,⁶ and then at the end of the programme is re-estimated and progress described.

From our interviews with programme participants two people identified some written language literacy needs, but most sought to improve their people management and communication skills. The main focus from the perspective of the company was on developing communication skills that would be useful in management positions. The participants had been promoted from the factory floor and the programme was designed to help them develop greater expertise in people management and associated paperwork. The training was developed for each individual based on the company expectations for the individual and the individual's identified needs. Learners were also able to get help with other unit standard qualifications from the LLN tutors.

⁶ The Learning Progressions are not assessments but provide broad descriptions of what a learner should be able to achieve at particular steps along the progressions. Skilled tutors can estimate where learners are most likely to 'sit' on the progressions. The new Literacy and Numeracy for Adults Assessment Tool, which is aligned to the progressions, will enable tutors to describe a learner's achievement and progress.

Evidence of transfer

Transfer at work

Because learners were working on tasks that were well aligned with their job requirements they saw a purpose for their programme and were able to practise what they were learning on the job. For example, reported outcomes included:

- learning about negotiation skills and using these skills in negotiating a pay increase (a good example of transfer)
- have a better ability to deal with 'difficult people', noticing and rewarding positive behaviour rather than focusing on negative behaviour
- being able to better use computer applications such as spreadsheets
- applying the SMART acronym (making goals specific, measurable, accurate, realistic, and within a time frame) to work tasks; for example when a participant had to design and implement a cleaning procedure, she set herself a goal and met this, and found that SMART helped her to stay on track
- practising MS Excel, advanced graphs and formulas; one participant reported that the company uses an issues table for production, and is now able to put this information on a table and produce a graph
- dealing with 'people with different personalities' rather than just telling them what to do
- being better able to communicate positively as well as accurately in writing (notes and emails)
- having more awareness of how to work productively in teams; for example since doing training, a manufacturing coordinator uses a notice board to communicate with staff
- having confidence in ability to continue with further learning opportunities and preparedness to take on greater leadership roles.

The supervisor considered that the programme had positive impacts on staff morale and that the programme members had learned more constructive ways of communicating. One person had expressed an interest in applying for a supervisory position because of added confidence and skill. Another participant was doing more with the computer and this was benefiting the company. It appears that improved skills enabled participants to deal with others more effectively, which in turn reportedly had positive impacts on morale and productivity. One person commented that a Best Workplace Survey indicated that more people are now happy with their learning and development opportunities.

Transfer in other settings

Impacts beyond the workplace were also reported by participants.

One participant has bought a dictionary and is teaching her niece to look up words that she does not understand. She is also learning to praise her niece when she does well (which she would not have done before).

Another participant reported that when she is shopping she finds it easier to work out percentages and make estimates. She is also more confident using new words, dealing with difficult personalities, and 'letting go' of things that do not matter.

One person had previously purchased greeting cards for people with messages inside so that she needed only to sign her name. Now that she is more confident about writing a message, she buys blank cards and writes in them at some length.

General comments

The participants were beyond foundation levels and were not low-skilled workers. The training appeared to be well targeted to the needs of each worker, and relevant to the needs of the workplace. There are indications that the right people were on the programme (prior knowledge, personality, motivation to learn), the training was well designed and delivered, and because the content of the learning was well aligned with workplace demands, learners were able to practise their learning in the workplace. Given that these learners were in supervisory roles they had greater autonomy to create the conditions for their own continuing learning, particularly with regard to the 'soft' skills that they required to work effectively with others. In a sense the learning from the programme may have strengthened their learning dispositions as opposed to their merely applying what they had learned in their programme. This makes it more likely that gains will be continued and built on, and that they will foster the learning of others with whom they work.

APPENDIX F: COMPANY 6 – MĀORI HEALTH CARE PROVIDER

This case study overviews the learning transfer experiences of literacy, language, and numeracy (LLN) workplace programme participants at a Māori health care provider (the hauora). It also identifies factors that contributed to successful learning transfer.

The hauora provided health and wellbeing services to Māori in its local community, and ran specialist programmes for kuia and koroua (elderly women and men) and for tangata whaiora (people with experience of mental illness). The organisational vision was to provide and support 'total wellbeing'. At the time of the research there were two full-time staff and six part-time staff, most of whom were Māori and affiliated with the hapū of the area. Many were involved in marae committees and wider community activities. For both staff and clients, the hauora was another turangawaewae—a place of belonging—and a strong whānau atmosphere prevailed in the workplace.

The key skill requirements for staff were oral and written communication skills, knowledge of and access to relevant community resources and networks, and an understanding of the experiences, aspirations, and needs of their client groups. Staff needed to be able to develop and run client services and programmes and to communicate effectively with clients. They also needed to write up case notes and contribute to writing quarterly reports to the regional district health board and other funding agencies in a timely and professional manner. Some staff needed to be able to represent the hauora at regional hui and report back to the organisation.

Workplace learning was highly valued at the hauora. Skill development, training, and further education were part of staff job descriptions and performance reviews. Staff were encouraged by management to be involved in learning activities to enhance the quality of the organisation's services and programmes, and to also expand the staffs' future employment opportunities beyond the hauora. Further, workplace learning was encouraged as a means to develop and build the skills and capabilities of staff as members of the local community, and as members of whānau, hapū, and marae.

The hauora was contacted by the workplace literacy coordinator at the local polytechnic as part of an initiative to develop the literacy skills of Māori health provider employees in the region. The hauora was keen to participate given that there were identifiable gaps between the organisation's LLN needs and the current LLN levels of some staff, particularly in relation to written literacy skills. An initial workplace needs assessment showed that development of LLN skills would enable employees to be more effective at work and in the roles they played at home and in their local communities.

The LLN programme ran for 20 weeks and the general manager either requested or recommended that employees participate. An individual learning plan was developed for each participant at the outset of the programme via the construction of a learner profile, which enabled the tutor to identify learner strengths, needs, and goals. Sessions took place in the central office space and included real world tasks. The programme was strongly learner directed and drew on Māori views of literacy and learners' own experiences. Indeed, the

programme began with discussions of how literacy might be defined and understood, which incorporated the literacies of a Māori worldview. These early discussions on defining and understanding literacy enabled learners to feel included in the sessions, as some had felt that a LLN programme was only relevant to those who could not read or write at all.

The tutor continued to develop her understandings of learner strengths and progress by observing them in the programme and as they carried out their tasks at work. Thus, assessment was informal, but strongly related to what participants were able to do in real life contexts. Learning was assessed, for example, by comparing documents written by programme participants before, during, and after the programme. The tutor reported that all learners had made progress with most making very good progress.

Learners were appreciative of the supportive learning environment provided by the tutor as well as the support and encouragement shown by the general manager and other colleagues. They felt valued as Māori learners, and made particular mention of the quality of the relationship they had with the tutor. The learners were also appreciative of the opportunity to learn in small groups or one on one, where their learning needs were prioritised.

Evidence of transfer

Transfer at work

Individual learners, as well as the general manager and LLN tutor, reported numerous examples of learning transfer at work as a result of the workplace LLN programme. These included:

- improved written work that was more organised, focused, correct, and professional, so staff were better able to:
 - write detailed and informative client case notes
 - contribute to report writing
 - develop high-quality client programmes
 - assist other staff with their professional writing
- improved oral presentation skills where presentations were more professional, so staff were better able to:
 - work with and lead their client groups
 - support work colleagues in their roles with client groups
 - represent the hauora at external hui
 - interact and communicate better with work colleagues and clients.

As a consequence of these changes, learners told us that they felt more motivated and focused at work and had more initiative with work tasks. The general manager of the hauora reported that these changes meant work tasks were completed in a more timely manner and to a higher standard, and that he was able to give staff greater responsibilities in their roles. The manager also reported that staff were more accountable and transparent in their work tasks because their paperwork was completed more thoroughly.

Transfer in other settings

There were also numerous examples of transfer to contexts outside of work, including:

- assisting whānau with their LLN learning, including helping tamariki and mokopuna with their homework
- reading at home
- contributing to hapū and marae by, for example, helping with writing marae learning programmes
- becoming a member or more active member in community organisations
- having the confidence to enrol in tertiary education.

Factors that contributed to transfer included the 'whole organisation' approach to the LLN programme, where learners were supported by the general manager, programme coordinators, and each other. The whanaungatanga of the workplace provided optimal conditions for learning.

The programme focus on real workplace tasks meant that learners were able to practise what they were learning, facilitating learning transfer. Further opportunities to practice learning and to take on new responsibilities were made available as learners progressed and showed initiative. This was also made possible by the small, busy nature of the hauora.

There was close alignment of the LLN programme content to workplace literacy needs and the learning goals of participants. This made the learning more relevant and enhanced opportunities for transfer. The learner-focused, strength-based teaching and assessment approaches valued programme participants' prior learning and experiences and enabled them to determine their own learning. There was also close alignment between the way in which literacy was defined—by including and recognising Māori understandings—and the cultural context of the workplace and the learners. This helped support learners' aspirations to transfer learning to whānau and community contexts.

Learners had opportunities to transfer their learning beyond the workplace to their whānau, hapū, marae, and communities, and were encouraged to do so by the tutor and the general manager. As a result, they were able to further embed their learning gains and transfer their learning to others and contribute to building LLN capacity in their whānau and communities.

While the smallness of the organisation helped facilitate learning transfer, it also posed some initial difficulties for the learners and tutor in terms of timing and attendance. Smaller groups and one-on-one sessions on different days were arranged to address this. Another factor affecting attendance was that the programme participants initially found it difficult to extricate themselves from work they cared about and to prioritise their own learning. This was resolved as they started to experience the benefits of the programme and transfer learning to their work roles. The general manager noted that, in future, this could be mitigated by meeting with participating staff before the start of the programme to discuss the work and personal benefits that result from LLN learning.

APPENDIX G: VIEWS OF LEARNING – IMPLICATIONS FOR TRANSFER

A key factor in how providers, tutors and workplaces designed and implemented LLN programmes, was how learning was conceptualised. The different views of learning with implications for teaching and transfer are shown in Table A1.

Table A1: Views of learning and implications for transfer

View of learning	Implications for training/teaching	What this can look like in practice	Implications for transfer to other contexts
Learning as acquisition by repetitive strategies (behavioural)	<p>Break learning into manageable steps and teach and assess each step</p> <p>Acknowledge and reward learning</p> <p><i>A phonics approach to reading would be a behavioural approach</i></p>	<p>Emphasis on 'covering' set tasks (such as workbooks)</p> <p>Focus on 'ticking off'</p> <p>Unit standards used for assessment.</p> <p>Learners tend to follow same programme</p> <p>Use of practice exercises</p>	<p>Skills learned tend to be task specific</p> <p>Assumes that learners will recognise same task demands in another context</p> <p>Responsibility for transfer resides with the learner</p>
Learning as process of construction by the learner (constructivist)	<p>Find out what learner already knows and build on this</p> <p>Create links between training programme and 'real world' tasks</p> <p>Assess in meaningful contexts</p> <p><i>New Zealand approaches to teaching reading in meaningful contexts reflect constructivist views of learning.</i></p>	<p>Ongoing assessment enables teaching to be aligned with learner skills</p> <p>Learner involved in goal setting</p> <p>Teacher models how to approach activities</p> <p>Observation of learners and feedback on progress</p> <p>Assessment allows for differing qualities of responses</p>	<p>Expectation that programmes will alert learners to transfer opportunities</p> <p>Acknowledges that transfer requires learner to perceive same or similar task demands in new context</p> <p>Responsibility for transfer resides with the learner</p>

View of learning	Implications for training/teaching	What this can look like in practice	Implications for transfer to other contexts
<p>Learning is a process of construction that occurs in a social context, by participating with others in relevant activities (sociocultural/co-construction)</p>	<p>Find out what learner already knows and build on this</p> <p>Provide support and feedback in the context where learning occurs</p> <p>Create links between contexts (intercontextuality). Assist learners to seek opportunities to practise and develop new skills in other contexts</p> <p>Assess in contexts like those where knowledge is to be used</p> <p><i>New Zealand approaches to teaching reading in meaningful contexts reflect sociocultural/co-constructivist views of learning.</i></p>	<p>As for constructivism plus:</p> <ul style="list-style-type: none"> • learning resources are selected to be relevant to the learner and their background • modelling by teacher is followed by joint construction of task or activity with learners to transfer responsibility • learner encouraged to take increasing responsibility for direction and tracking of achievements 	<p>All participants seek to create and maintain an environment where people have ongoing opportunities to access and build new knowledge and skills</p> <p>Responsibility for transfer is shared—possibilities are modelled and discussed</p> <p>Learners are encouraged to be metacognitive, that is to be conscious of their learning strategies</p>
<p>Learning transforms people to 'see the world through new eyes' (or to see themselves through new eyes) (transformative)</p>	<p>Develop 'agency', assist learner to act on what is important to them in their work and other contexts</p> <p>Foster greater control of learning and learners' lives</p> <p>Foster critical thinking and decision-making in relation to authorship, purpose and construction of texts</p>	<p>Learning programme largely determined by learner goals and then supported by appropriate teaching and assessment practices from across the above range ('horses for courses')</p> <p>Learners encouraged to discuss personal understandings of texts/context</p> <p>Learners encouraged to take increasing responsibility for direction and tracking of achievements in collaboration with tutor</p>	<p>As for sociocultural plus:</p> <ul style="list-style-type: none"> • learners seek out and act on multiple possibilities for transfer (now that they see things differently new possibilities open up)

APPENDIX H: EXAMPLE OF INFORMATION SHEET AND CONSENT



NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH
TE RŪNANGA O AOTEAROA MŌ TE RANGAHAU I TE MĀTAURANGA

The transfer of literacy, language and numeracy (LLN) skills in the workplace Project (information for employers)

The New Zealand Council for Educational Research (NZCER) understands your company has agreed to be a case study as part of a research project that we are conducting for the Department of Labour. The Department of Labour wants to find out more about the factors that support workers' use of skills gained in workplace literacy programmes (LLN) in their day-to-day work.

NZCER is an independent research organisation based in Wellington that is committed to improving educational outcomes for all New Zealanders. We aim to provide accessible and relevant research based information to educators, including those involved with industry training, policy makers, and the public.

The research process

We would like to visit you and observe at least one LLN training session and spend a little time observing to get a feel for the work that LLN learners are doing. We would also like to interview people undertaking the LLN programme, the programme tutor, and their supervisors. We would like to have two researchers visit you for the first time period (2–3 days) in June 2010, and later in the year in October or November for another 2 days. Programme participants would be interviewed for about 40 minutes on these two occasions. We would appreciate it if each participant was able to be released from their duties to be interviewed during the time that we are on-site. Your help in organising the visit and interviews would also be appreciated.

It is important for the research that all the people we interview are volunteers and feel happy to talk to us. We have strict ethical codes of confidentiality and anonymity so people can feel safe. We explain these ethical codes later in this information sheet.

Your interview

We would like to interview about the sorts of literacy, language and/or numeracy skills that are needed in your organisation, and any particular challenges you face.

The interview will take about 40 minutes. We will digitally record the interview but only as a backup to our note-taking (nobody else will listen to the recording).

We will ask you to sign a consent form saying that you agree to be interviewed. You can change your mind and withdraw from the research up to 7 days after the interview. If you do this, you do not have to give a reason.

Confidentiality and anonymity

None of your employees, colleagues, or people at other divisions, or anyone outside your organisation will know what you say in your interview. The only people who will know this are the researchers working on this project and they will not tell anyone else.

We will not identify you or any of your staff individually in any written reports or articles, or in any presentations made.

For very small workplaces, this will be added: We realise that your workplace is small and that we need to be especially careful to protect your identity and the identities of your staff, and keep everyone's interviews confidential. We will discuss how best to do this with you.

Reporting the research

We will write a report about this research for the Department of Labour. It will be about all the workplaces we visit and will highlight what we have learned about literacy learning in them. We will send you a copy of the report when it is finished.

We will also give you a short report what we have learnt about how your employees on LLN programmes are developing the skills that they are working on. You may find this useful for future programmes.

The researchers

We have six researchers in our team: Marie Cameron, Jenny Whatman, Karen Brooking, Alex Neill, Dominic Maddell, and Sally Robertson. One of us will interview you.

If you have any questions or want to talk about any of this, please feel free to get in touch with Marie.

Marie Cameron
Senior Researcher and Project Leader
New Zealand Council for Educational Research
Email: marie.cameron@nzcer.org.nz
Phone: 09 6385108 or 021 184 8770

Thank you for your time. We will be in touch to confirm arrangements for the visit and interviews.



NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH
TE RŪNANGA O AOTEAROA MŌ TE RANGAHAU I TE MĀTAURANGA

Transfer of literacy, language and numeracy (LLN) skills in the workplace

Consent Form for Employer

I have read the Information Sheet and I agree to our company being part of the research.

I agree to be interviewed.

I understand that I may sign this consent form but later change my mind anytime after signing until the report is being written up and not be part of the study, and that I do not have to give a reason.

I understand that the company will not be named in anything written about the research.

I agree that members of the company who agree to participate, can be interviewed, and that they will have up to one hour release from their regular work to participate.

Name: _____

Signature: _____

Company: _____

Email: _____

Phone number: _____

Date: _____

Thank you very much for your help.

Please fax this form to Sally Robertson Fax: 04 384 7933.

APPENDIX I: INTERVIEW SCHEDULES



P O Box 3237, Wellington 6000
New Zealand
Education House
178-182 Willis Street
Telephone: +64 4 384 7939
Fax: +64 4 384 7933

Learner Interview questions time 1

General background questions

Name:	_____	Date of Interview:	_____
Company/site:	_____	Current role:	_____
Gender:	_____	Ethnicity:	_____
Age:	_____	Country of birth:	_____
[if born outside NZ and ESOL] Years in New Zealand:	_____	First language:	_____

Background

- 1 Please tell me a little bit about yourself — where you come from, your education and learning in your life.

Probe suggestions

- *What was school like for you?*
 - *How long did you have at secondary school? (When did you leave school/how old were you when you left school?)*
 - *Why did you leave school?*
 - *Did you get any qualifications when you were at school?*
 - *Have you done any tertiary courses since you left school?*
 - *Did you complete it/them? What is the qualification?*
- 2 Please tell me what you were doing before you came to this job, how you came to get here.
 - 3 Please tell me more about your job here, what you actually do, and what your responsibilities are.
 - *Possible probes:*
 - *What do you really like about your work?*
 - *What don't you like about your work?*
 - *What do you find hard?*

4 Who do you have contact with day-to-day at work?

Possible probes:

- *Who is your immediate boss?*
- *Do you work mostly on your own or with others?*

For the next 4 questions follow up with probes so that you get an understanding of what LLN practices are needed for this person to do their work, and how well they think that they are able to carry out these work tasks. Also if they have problems is there anyone who helps them?

5 Do you have to use reading in your work?

6 Do you have to use writing in your work?

7 Do you have to use maths or number in your work?

8 Do you have to talk with others in your work?

9 Please tell me about the learning or training course that you are doing now?

[Note that it might be an 'embedded literacy course' so learners might report a management course for example. You will know this before the interview because you will have interviewed the tutor first]. Possible probes:

- *How did you find out about the training course (who and how?)*
- *What did people tell you about the course? (e.g. what you were going to get out of it)*

10 How is the course going so far?

Some possible probes:

- *What are you learning? Are you enjoying it?*
- *Does anything make it hard for you to learn in this course? (If yes can you explain what that is and how it makes it hard?)*
- *Do you think this is (will be) useful to you so far in your work?*
- *Are other people interested in what you are learning? Who are these people? How do they show it?*

11 Do you get a chance to practice what you are learning? Can you tell me about that?

12 Is there anything else you want to tell me about your work or your learning/training?



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FIRST MANAGEMENT INTERVIEW

Company: _____	Branch: _____
Name of interviewee: _____	Role: _____
Phone: _____	Email: _____
Best time to contact _____	_____
Date of interview: _____	_____

Company profile

- 1 Could we start by getting an overview of this company and how it operates [very brief, will need just a few key points, really just a warm up activity]

Main activities/products/services	
Size	
Company vision (Could get this from the interviewee, or may be on company website)	
Current situation	Expansion status quo contracting
Impact of economic crisis	Large medium small

- 2 Can you give me an idea of who works for the company? [This could be completed in advance]

Role	Total	Percent female	Percent Māori	Percent Pākehā	Percent Pasifika
Managers					
Supervisors					
Office staff					
Crew/shop floor					
Maintenance					

- 3 Does the company have a policy on worker learning or training programmes? Are there any learning objectives in annual company plans or targets?
- 4 Over the past two years what percentage of the workforce would you say have been involved in some formal learning? (*probes: what sort? Which kinds of workers have been involved*)
- 5 What workplace literacy training has been made available over the past year?

Programme	Provider	Number of workers	Type of worker	Total number of hours	Outcomes

- 6 If company has had previous LLN training
Tell me about any previous training programmes. Did you notice any impact on workers or on the company performance?
- 7 Are the outcomes of training programmes (not just literacy programmes) measured and reported on? How do you decide whether the training was worth it?
- 8 Why did you decide to run this programme?
- 9 Why did you select the provider that you are using for this programme?
- 10 Were there any barriers to establishing a literacy programme? If so what were they?
- 11 How big an issue is literacy/numeracy/communication for your company?
What are the key issues that impact on productivity in your workforce?
- 12 How would you rate the significance of each issue for staff who have low LLN?

Issue	Major issue	Moderate issue	Minor issue	No issue	N/A
Rejects					
Waste					
Errors in paperwork					
Health and safety incidents					
Health and Safety reporting					
Mistakes in taking or filling orders					
Efficiency in getting things done					
Reports					
Customer service errors					
Customer service complaints					
Staff turnover					
Staff absenteeism					
Use of technology/computers					
Problem-solving					
Taking initiative					
Other					

- 13 Can you describe a situation where problems with LLN skills have had a serious impact on one of the area in the above table?
- 14 For this programme, how did you select people to participate?
- 15 What were they told about the programme? How well did this process work?
- 16 How is the programme organised? (time off /during work; group or individual learning: sharing between learners and other workers?)
- 17 What is the general attitude of other workers to the LLN trainees?
- 18 What has been the response of other managers and supervisors to the introduction of this programme?
- 19 What outcomes are you expecting from the programme?
- 20 What do you think will be the factors that will contribute to these outcomes?
- 21 What do you think might get in the way of it achieving these outcomes?
- 22 Is there anything else you want to say about workplace learning/training – here or in general?



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FIRST SUPERVISOR INTERVIEW

Company: _____ **Branch:** _____

Name of interviewee: _____ **Role:** _____

Phone: _____ **Email:** _____

Best time to contact _____

Date of interview: _____

- 1 Please tell me a little about yourself, and what your role is in this company?
- 2 What do workers have to know and be able to do in terms of reading, writing, maths and communicating to do their work?
- 3 What has been your role in relation to the literacy programme? (e.g. selecting learners, if so how, talking to learners about the programme, encouraging them to participate)
- 4 To what extent are the areas below issues with the people you work with?

Issue	Major issue	Moderate issue	Minor issue	No issue	N/A
Rejects					
Waste					
Errors in paperwork					
Health and safety incidents					
Health and Safety reporting					
Mistakes in taking or filling orders					
Efficiency in getting things done					
Reports					
Customer service errors					
Customer service complaints					
Staff turnover					
Staff absenteeism					
Use of technology/computers					
Problem-solving					
Taking initiative					
Other					

- 5 Can you describe a situation where problems with LLN skills have had a negative impact on one of the tasks in the above table?
- 6 For this programme, how were people chosen to take part? Are there any workers who should be on the course who aren't? Why is this?
- 7 Do you know what were they were told about the course? Did you get a chance to talk to those you supervise about the course and how it might benefit them? How did you get on?
- 8 What do you think about the course? (especially 'costs' for them as supervisors.)
- 9 What do other managers and supervisors think about this course?
- 10 What is the general attitude of other workers to the LLN trainees?
- 11 To what extent have you been able to talk with the course tutor about the needs of each course member, before and during the course?
- 12 Are there things that you are doing to help the learning of this group of workers? (What are they? (e. g. ensuring that they get a chance to practise new skills, talking with them about their progress, mentoring, encouraging them for participating...))
- 13 What do you want the end results of this programme to be?
- 14 What do you think will be the things that will play a part in whether this happens?
- 15 What is your role in relation to this person (or these people) undertaking the LLN programme?

Person (Participant in LLN programme)	Their main work tasks	Your role(s)

- 16 Is there anything you want to say about how people learn and use their literacy skills at work?



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TUTOR FIRST INTERVIEW

Background information

Name: _____ Provider: _____

Interview Date: _____ Worksite/region: _____

First date literacy programme
began: _____

Format of this course:
e.g. hours per week,
group or individual

Email: _____

Phone number: _____

Best time to contact: _____

Check: WNA []

Course information []

Attendance records []

Individual
Learning
plans []

About you

- 1 Please can you tell me a little about your background? (qualifications, training etc)

Setting up the literacy course

- 2 Has there been a Workplace Needs Analysis done for this company? Who did it? What do you see as the main themes coming out of the analysis? [*note: get copy of this document [with permission]*]
- 3 What does this company see as the particular LLN issues of the people who will be attending the course?
- 4 Do you see any special strengths in the way this programme has been set up? (*which means it is more likely to be successful for learners*)
- 5 Do you anticipate (or are there already) any particular challenges or issues with the course?
- 6 Can participants gain any unit standards for the course? *What are they?*
- 7 Do you think that the right people are on your programme? (*If not why not?*)
- 8 Are people able to attend regularly? If not, are you able to do anything about this?

- 9 Do you know what the company attitude to training is? (e.g. *Who gets opportunities? What's available for shop floor workers?*)

About the literacy course

- 10 What do you want your course members to walk away with at the end of your time together?
- 11 What assessment(s) do you use to find out what learners can do, and where they need further learning?
- 12 Is there an individualised learning plan for each person on the course? (*Can I have a copy of the plans of the people we are going to interview?*)
- 13 What input do learners have into their own learning goals and plans? Are they compatible with the aims of the company?
- 14 How do you make links between the knowledge and skills the learners bring to the course and what you are teaching/ what they want to learn?
- 15 In what ways do you provide feedback to learners on how they are progressing with their goals?
- 16 In what ways are there opportunities for learners to practise and consolidate skills? *Do they have 'homework'?*
- 17 What contact do you have with learners' supervisors during the course? *What do you contact them about? What do they contact you about?*
- 18 Do you know if the people in this programme are able to use what they are learning on this course back on the job? How do you know this?
- 19 Have you any information about how supervisors work with the people who are on this course?
- 20 Are you aware of the extent to which peers are able to support the learning that happens on this programme?
- 21 Do you know if the company recognises or rewards the learning that workers may achieve on this programme?
- 22 Is there anything else that you want to say that you don't think we have covered fully?



SECOND LEARNER INTERVIEW

Date:

Interviewer:

Learner:

Preparation for the interview. (Instructions for interviewers)

Make sure that you have a handle on particular learner needs and how this learner was finding the course last time, so that you can have a conversation about the things that were raised last time. You might like to note these here before the interview so you don't forget. [Note: some of the questions may not be suitable for learners who have difficulties understanding spoken English so you may need to ask in a different way]

THE INTERVIEW

Individual learning plans

- 1 Remember that we talked a few months ago about the course that you have been doing with (tutor). Can you remember what you were hoping to get out of the course?
- 2 Show the individual learning plan to the learner (if you have it)
- 3 Have you seen this piece of paper ? YES NO
- 4 Do you have your own copy of this piece of paper/learning plan? YES NO
If 'Yes' explore further with the learner about what the goals are, where these goals came from, who chose them etc

Note: if there is no learning plan available explore with the learner what they were learning in the programme

Questions about the course

- 5 How often did you get to come to the course? (If did not attend regularly try to find out the reasons)
- 6 How many other workers were usually there with you?
- 7 What sorts of things did you do on the course? (Try to find out the learner perspective on content. And try to link with his/her learner goals)
- 8 What are the three main things that you learned to do on the course? (Probe till you get a handle on specific LLN knowledge and skill and the links with the specific goals for this learner)

- 9 What are the things that (tutor) did to help you learn these things? (Try to find out about teaching methods... talking, demonstrating, workbooks, feedback on progress etc
- 10 What were the best things about the course?
- 11 What could have been better about the course for you?

Transfer questions

- 12 You have said that the things that you learned to do on the course were: (Specify and record in the first column).
- 13 For each knowledge and skill ask something like 'Were you able to use this in your work?'
- 14 In third column record example/s of positive transfer to the workplace
- 15 Ask 'Do you think that this course has helped you to become better at your work?'
- 16 Ask about whether the skills were able to be used at home outside of work and record in 4th column
- 17 Record examples of positive transfer in 5th column

Knowledge and skill	Transfer to work? (YES or NO)	If YES example of transfer to work (Try to get a 'rich' example)	Transfer to other contexts? YES or NO	If YES example of transfer to other contexts. (Try to get a 'rich' example)
	YES NO		YES NO	
	YES NO		YES NO	

- 18 If the knowledge/skill did transfer:
- 19 Thinking about the first (knowledge and skill identified) what helped you to do this at work?
- 20 How is that good for
 - The factory (or workplace)(The productivity question)
 - You
- 21 Thinking about the first (knowledge and skill identified) what helped you to do this at home?
- 22 How is that good for you/ your family?
- 23 Thinking about the second (knowledge and skill identified) what helped you to do this at work?
- 24 How is that good for
 - The factory (or workplace)
 - You

25 Thinking about the second (knowledge and skill identified) what helped you to do this at home?

26 How is that good for you/ your family?

If the knowledge/skill did not transfer explore generally what got in the way of transfer? (e.g. mismatch between the skill and opportunity to use in the workplace.....

An area to explore is practice. To what extent was the learner able to practice what was being learned in class outside the class (work and home).[If learner does not engage in out of class LLN activities then it is unlikely that outcomes will be very significant. So have a talk about the reading/writing/number that they do at work and at home....

27 What kind of learner do you think you are now? Are there ways of learning that you learnt to do on the course that you use when you do new things or have to learn something new? The ideas below are just prompts that may or may not be useful...

Knowing him/herself as a learner (what s/he is good at, where s/he wants to improve)
Setting goals for learning
Finding out from others how they are going
Working things out when doing something new
Understanding other people
Asking questions when needed
Keeping on trying when things are hard
Wanting to do more learning (Courses, extra work..)

Future learning plans

28 When does/did this course finish?

29 What would you like to do next?

- Learning /Future work plans



FACTORY MANAGER/SUPERVISOR SECOND INTERVIEW

Interviewer:

Company:

Date:

In some ways we have to play this by ear, especially if we haven't got the workplace needs analysis.

- 1 Thinking back to the last time we talked it seemed that you were saying that these things were your expectations of the LLN training: (Check your interview notes and insert below)
- 2 Did we get this right?
- 3 If 'yes' then go on to explore each one. If 'no' then note discrepancies.
- 4 Can you think of some actual examples of the impact of the training programme on particular employees (i.e. things that they couldn't do before that they are now able to do.)
- 5 Try to work at extracting real examples of what people can do now (related to the course aims) that they weren't doing before.
- 6 Do you have any records on any changes in their performance? [some hard data as well such as any tracking of things that can be measured. If the company does not collect data on what is important to it, then this will limit what we are able to learn about impact.]
- 7 Is there anything you want to add about the success or otherwise of this LLN programme?



TUTOR SECOND INTERVIEW

Tutor:

Provider:

Date:

Company:

Interviewer

Check: course evaluation [] **Attendance records** [] **Course reports** [] **Unit standards records** if appropriate [] **Any pre-post learner assessment data** []

- 1 Thinking back over this course what are your general reactions about how it worked out?
 - a. For you as tutor
 - b. The course itself
 - c. For the learners involved
 - d. For the company
- 2 If you were giving its success overall a 1–6 rating with 6 being the highest what rating would you give it?
- 3 What would have needed to have been different for you to give it a higher rating?
 - a. For you as tutor
 - b. The course itself
 - c. For the learners involved (attendance, withdrawals, personal factors...
 - d. Company issues (releasing participants, commitment of supervisors.....)
- 4 A main focus of this research, as you know, is on how well the course participants were able to learn the skills they needed to do their work well as well as actually use these skills in the workplace. What were the strategies (or things that you did) to:
 - a. Help course participants transfer their learning to the tasks they need to do in their jobs? (e.g. filling out a health and safety form)
 - b. Help course participants to use these skills when they are required to do a task that is similar to what you taught on the course, but not the same (e.g. filling out a different kind of form)?
- 5 Do you have any results from follow-up LLN testing of this group of learners? Are you able to talk about these with me?

- 6 For each of the people we would like some specific information on how well the course impacted on their work and on the ways that they approach new learning tasks.

First name	Specific areas addressed in the programme	Their commitment to learning (e.g. Doing 'homework', practising at home...)	Impact on their work now (What can they do now that they couldn't do before?) Specific example if possible	Other impacts (e.g. home/ community)	How do you know this? (sources of evidence)

What would have improved their ability to use what they had learned in your course outside the class?

- 7 Do you have any other information on the impact of this course on learners, their work or the company?
- 8 Is there anything else you would like to say that we haven't talked about?

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