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COLLEGE OF EDUCATION
Te Kupenga o Te Mātauranga

Organisational factors that affect delivery of adult literacy, language and numeracy provision

A review of international literature

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Executive summary

This literature review drew on research, policy and theoretical papers, including literature reviews, primarily from the United Kingdom, Australia, Aotearoa/New Zealand, the United States and Canada. It had two focal points: embedded literacy, language and numeracy (LLN) and the organisational factors that impact on embedded LLN provision. The Skills for Life Development Centre (2006, p. 8) gives the following definition of embedded literacy in vocational contexts, which underpins this literature review:

> Embedded teaching and learning combines the development of literacy, language, and numeracy with vocational and other skills. The skills acquired provide learners with the confidence, competence and motivation necessary for them to succeed in qualifications, in life and work.

The review identified four major strands in the literature: vocational LLN, English as an Additional Language (EAL) and biliteracy, LLN practice, and critical literacy/New Literacy Studies (NLS).

Several findings relevant to vocational LLN were identified: there is no single, perfect model of embedded LLN; embedding can be done in a variety of ways; it is a complex process; a whole of organisation approach is needed; LLN provision should be 'built in' not 'bolted on' to existing courses; close collaboration and teamwork between the vocational teacher and literacy specialist is essential; and professional development for staff is necessary.

Key findings that emerged from the English as an Additional Language (EAL) and biliteracy strand included: there is a vital need for EAL and biliteracy provision for adults; there are significant differences between EAL and literacy provision for English native speakers, such that separate provision is advocated or, at least, teachers who are trained in both literacy and EAL are needed; the learning involved is not just about literacy but about cultural knowledge; EAL learners bring diverse levels of literacy knowledge and have diverse needs; there is a need for bilingual tutors and professional development for tutors; there is a danger that deep embedding could

make LLN invisible to the students but embedding is still beneficial in terms of relevant and meaningful literacy learning.

The themes identified in the LLN practice strand were: there is no one ‘best’ model of practice; a ‘one size fits all’ approach is not ideal; learning needs to be contextualised and authentic; while the learner, their learning needs and interests will be central this should not produce an individualised approach as collaborative learning and group interactions result in improved outcomes; good practices are underpinned by adult education principles and constructivism; initial training and ongoing professional development for teachers is essential; adequate resourcing is necessary.

The strand on critical literacy/New Literacy Studies (NLS) identified a recent shift in theories of LLN variously described as different paradigms, ideologies, frameworks and discourses; the key differences are between what is referred to as a functional approach, which focuses on literacy skills development and contribution to the economy, and a critical/ participatory or New Literacy Studies (NLS) approach which emphasises social justice, equality, democracy and everyday life. Further, there are different understandings about benefits of LLN e.g. human or social capital perspectives, about a deficit approach and the use of power in LLN provision. Organisations need to develop a vision and state their position on these.

In the final section of the review findings from these four strands are synthesised into a set of quidelines for LLN development and delivery in organisations in Aotearoa/New Zealand.

Guidelines for the development and delivery of embedded LLN

Embedded LLN development will:

- Be ‘built into’ vocational or community provision and not ‘bolted on’ to vocational or other activities.

- Be a partnership between industry, communities and literacy specialists who pursue a ‘whole organisation’ approach with common strategic visions and values, including being learner centred regardless of differences among learners.
- Be owned by vocational or community providers while sharing planning of delivery and quality assurance with literacy subject specialists.
- Develop strategies and approaches that meet organisations’ own special circumstance and needs.
- Establish policies, procedures and practices that orientate organisational managers, board members and other stakeholders to the requirements of embedded literacy.
- Fashion supportive structures that involve partners in strategic planning and inform stakeholders about the nature of embedded LLN provision.
- Plan programmes for specific and often unique purposes and contexts.
- Place the needs of learners centrally when developing programmes.
- Build LLN programmes on teaching and learning processes that embrace adult education principles.
- Use continuous quality assurance processes to identify critical points for timely interventions and so achieve continuous improvement.
- Ensure the notion of literacy as social practice is integrated.
- Balance provision between skills building, task mastery, critical thinking and democratic participation.

Embedded LLN delivery will:

- Emphasise authentic, contextual learning using a constructivist approach and learning in groups.
- Craft learning cultures that build trust, honour diversity and develop confident learners
- Employ vocational/community teachers, literacy specialists and EAL or biliteracy specialists where relevant, who work competently and well together.
- Develop and maintain an active professional development programme that offers initial training and ongoing opportunities for development.

- Employ appropriate technology to make LLN relevant to learners' everyday working and social lives.
- Employ assessment methods that consider the readiness of learners, emphasise formative assessment and include assessment of soft outcomes.

The context of LLN provision in Aotearoa/New Zealand[1]

New Zealand's participation in international adult literacy surveys in 1996 and 2006 revealed that over one million New Zealanders may have difficulty with literacy and numeracy tasks, which are becoming increasingly complex in today's society and economy. As governments around the world became aware of how important a population's literacy and numeracy skills are for attaining their social and economic goals, they began to take a more active role in supporting the teaching of these skills to adults. However, progress was at first impeded by a lack of reliable research evidence about literacy and numeracy teaching for adults internationally.

In 2004 the Ministry of Education funded the first pieces of national research in this area which contributed to the evidence base of what works in New Zealand to assist teaching and learning of adults in literacy, language and numeracy. The current research is part of the iterative approach aiming to build evidence that will inform the sector as it improves provision.

The New Zealand government has not generally played an active role in the process of teaching at tertiary level, however the first pieces of research indicated that leadership at a national level was needed to create common frameworks for teachers and learners. By creating a national infrastructure for adult literacy, language and numeracy, central agencies are seeking to bring together diverse parts of the sector with a common language for identifying, teaching and assessing these skills. The government is creating national frameworks supported by shared resources that individual providers are unlikely to develop independently, such as learning progressions and an online assessment tool.

Previous research has underscored that literacy, language and numeracy skills are acquired when well-prepared tutors use deliberate teaching strategies. Adult literacy and numeracy tutors now have the opportunity to gain national qualifications. Sustained professional development programmes are running that focus not only on the teaching skills of individual tutors, but also aim to create learning communities in

[1] Thanks to the Ministry of Education for providing this overview.

and between organisations so that tutors can continue to learn from one another how to improve the skills of students in different learning contexts.

Research has also shown that adults learn when they see the relevance to their lives. This means that literacy, language and numeracy skills are often best taught alongside the skills and knowledge needed for a particular occupation. Embedding these skills in other qualifications is a difficult task and often means redesigning programmes, retraining staff and finding ways for specialist tutors and vocational tutors to work together. The government has recently supplied new funding to support the necessary changes within organisations.

This research is a snapshot in time, at a period in which participating providers are undertaking organisational change as part of a national strategy. A selection of providers was made from the wide diversity of provider types offering government funded approaches to raising literacy, language and numeracy skills.

Introduction

Purpose, scope and process

This literature review is nested within a wider project that asked *how do tertiary education organisations profile, develop and deliver effective literacy, language and numeracy within programmes?* The purpose of this report is to review current international literature to inform answers to the overarching question posed in the project.

The review is based on a detailed examination of annotated reports, papers and books. We employed a qualified librarian to conduct searches on library databases and the Internet to identify relevant studies. The richest databases were *Web of Science*, *PsycINFO*, *ERIC* and *A+Education*. Other databases, Index New Zealand, Academic Search Elite, General OneFile and Google Scholar also yielded some sources. She was asked to conduct a broad sweep of the data bases to scope the field of published material on literacy, language and numeracy. It proved to be a challenge to identify search words that would tap the relevant sources. Combinations of 'literacy', 'language', 'numeracy', 'embedded', 'adult', 'education', 'college' 'higher', 'community' and 'further' were used. Literature was limited to English language sources. She mined 210 items while members of the research team found another 212. Of these 422 items 71 were selected to be written up as templates for an annotated bibliography in November 2008. Since then members of the research team have identified many more relevant items. Fourteen were selected for inclusion in the first draft of this review, though not all of the 71 templated items were cited; a further 31 were added for the final version. This is an indication of the rapid increase in literature on LLN internationally. A total of 99 sources are cited here. They come from a small number of countries: predominantly from the United Kingdom and Ireland, Australia and New Zealand (24-28 items), with 16 from the United States and four from Canada. Much of the research is being done through the National Centre for Vocational Education Research (NCVER) in Australia and the National Research and Development Centre (NRDC) in the United Kingdom.

Items were selected if they met the following content and process criteria. Content criteria required that selected items informed the research about embedded provision of LLN within a learning programme, were based on an empirical foundation including literature syntheses, alternatively were solidly theoretical or provided policy information, and had impact on the research question, above, guiding this study. The selection process was confounded by a lack of large empirical studies, although it was found that many sources were potentially useful informants without being empirically based. It was therefore decided to include more work of a policy and theoretical kind than originally envisaged. As a result, the findings are based on frequency of occurrence rather than scale and effect size. This means that they are not always anchored in empirical evidence; nor do they necessarily meet criteria for evidence-based syntheses.

Process criteria also guarded selection. Items were selected by two people, one a project co-ordinator and the other the person who agreed to prepare the initial summary of the item for the annotated bibliography completed for the Milestone One report. The same content and process criteria were applied to sources located since November 2008.

Study parameters

Two concepts are key to this literature review. First, the review focuses on embedding LLN provision. There is a variety of ways of understanding embedding. In this review embedded teaching and learning refers to the development of literacy, language and numeracy in conjunction with vocational and other skills. It is understood that literacy and content learning (e.g. vocational) are integrated in programme provision, not disconnected in discrete courses. Embedding can reflect a variety of approaches to LLN. These range from a functional, skills-based, human capital orientation to a critical, new literacy studies approach that emphasises LLN as developing social capital.

Second, the review is primarily interested in organisational factors and how they impact on LLN provision. Here organisation refers to any agency delivering LLN

programmes. They include workplaces, community settings and formal educational providers such as institutes of technology and private training establishments.

This review

An analysis of the sources identified four major strands: vocational LLN, English as an Additional Language (EAL) and biliteracy, LLN practice, and critical literacy/New Literacy Studies (NLS). From these we drew guidelines for LLN practice. Each of the researchers took responsibility for the critical review of literature relevant to one of these strands and the drafting of a written report. The project coordinators reviewed the drafts, combining these into the full report. This was then sent to Dr Stephanie Doyle, the project's external quality assurer, for further review. The report was revised in response to her feedback. Feedback from the Ministry of Education resulted in further revisions for this final version, most notably updating the latest developments in Aotearoa/New Zealand and structuring the report to highlight the findings.

This literature review is organised into five parts: the first explores LLN provision in vocational settings; the second focuses on provision of EAL and biliteracy learning; the third addresses findings about the practice of embedded LLN in a variety of contexts; the fourth features findings about critical literacy/NLS and how this approach can enhance functional LLN provision. In the final section the review synthesises findings as guidelines for LLN practice in organisations.

Review of the literature

Vocational contexts

The Skills for Life Development Centre (2006, p. 8) gives the following definition of embedded literacy in vocational contexts:

> Embedded teaching and learning combines the development of literacy, language, and numeracy with vocational and other skills. The skills acquired provide learners with the confidence, competence and motivation necessary for them to succeed in qualifications, in life and work.

H. Casey et al. (2006) distinguish a four point scale of embedding: (1) no embedding: learners experience vocational training and LLN as separate activities. (2) partly embedded: LLN development and vocational studies are integrated to some extent. (3) mostly embedded: LLN is part of vocational study but activities are not always coordinated. (4) fully embedded or integrated: LLN development is an integral part of the vocational studies. Fully embedded programmes may involve two teachers timetabled to teach together, or one teacher teaching more than one subject area where the embedding is achieved through separate LLN sessions within an integrated whole. Roberts et al. (2005) also suggest that LLN programmes may be provided through an additional support programme where LLN support is an integral part of the vocational programme.

The following four factors are associated with successful embedding of LLN in vocational programmes:

1. Whole of organisation involvement and commitment (Ni Chinneide, n.d.; Skills for Life Development Centre, 2006);
2. Collaboration between vocational and LLN teachers (Barton & Pitt, 2003; Callan & Ashworth, 2004; H. Casey et al., 2006);
3. Identification of needs for learners in terms of both vocational and LLN provision (Guthrie, 2008);

4. Planning, professional development and resource development (Berghella, Molenaar & Wyse, 2006; King & Bingman, 2004; Marr & Hagston, 2007; Millar & Falk, 2002).

There is no single model of embedding (H. Casey et al., 2006; Skills for Life Development Centre, 2006). H. Casey et al. (2006) found significant differences between institutions and departments. Successful embedding was the result of the ways institutions made the programme and structure work for learners, and how well it became an integral part of vocational learning. They consider structural features such as policies and organisational arrangement as important, but embedding requires teamwork between vocational and LLN teachers, shared understandings and beliefs between all staff involved. This teamwork requires strong support and commitment from management, as the collaboration at the tutor level alone will be inadequate to fully meet the needs of students (Barton & Pitt, 2003; Callan & Ashworth, 2004).

Millar and Falk (2002) and Wickert and McGuirk (2005) attributed the success of initiatives in integrating literacy, numeracy and vocational skills acquisition to what they termed 'built-in' rather than 'bolted-on' methodologies. Integration, in workplace education, is complex, and how and where it should be approached is contested. Green (2003) is concerned with assessment and suggests a process which includes screening to identify the need for more in depth assessment, the initial assessment that identifies the LLN requirements of the learner and a diagnostic assessment that leads to identification of strengths and weakness. H. Casey et al. (2006) agree that assessments are important factors in embedding LLN.

A number of authors suggest that whilst embedded LLN in general had improved outcomes for learners they noted that there was greater success and retention in vocational courses level 2. Learners gained greater LLN qualification achievement and learners considered they were better prepared for work. Only a small amount of embedding of LLN was required for learners at level 2 but higher degrees of embedding of LLN were necessary for those on level 1 courses[2] (H. Casey et al., 2006; The Skills for Life Development Centre, 2006; Roberts et al., 2005).

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[2] Note that the levels referred to here are UK levels. The equivalent levels in New Zealand are Levels 2 and 3 on the New Zealand Qualifications Framework.

Organisational Factors

H. Casey, et al. (2006) found that the staffing of embedded programmes is crucial, requiring close collaboration. This in turn requires considerable time for vocational and LLN teachers to engage and discuss their approaches to learning. It is necessary that both the LLN teacher and the vocational teacher understand the issues facing each other. The approaches are different and it is important that each teacher recognises where their expertise impacts on and is complementary to the other. Wickert and McGuirk (2005) add that professional development in other sectors and domains should build the capacity of frontline LLN and vocational workers to assist learners with literacy needs. Successful workplace literacy programs show that educators must be willing to take up new roles when working outside of institutional settings. These new roles require a re-assessment of teacher preparation and professional development opportunities. The organisation of teaching and the learning experience of embedded and discrete LLN are significantly different (Roberts et al., 2005).

As mentioned above, a whole of organisation, strategic approach is called for in the work of Ni Chinneide (n.d.) and the Skills for Life Development Centre (2006). Callan (2004), reviewing mainly managerial literature, concludes that VET organisations, in Australia, need to be more innovative in their approaches to education and training. Wickert and McGuirk (2005) add that funding incentives for the participating agencies can then be used to stimulate collaborative approaches with high potential. In promoting a whole-centre approach for a variety of further education and training settings Ni Chinneide (n.d.) emphasise the importance of shared values. Values that focus on voluntary participation, confidentiality, respect for cultural difference, creating an environment of social interaction, informality and enjoyment, participation by students, teamwork among staff and a learner centred approach help learning.

There is no one perfect model for embedding (H. Casey et al., 2006; Skills for Life Development Centre, 2006). They identified three key features essential to the embedding process: programme ownership by the vocational department; joint programme planning by vocational and functional skills staff; quality assurance and

observation. Roberts et al. (2005) suggest that success lies in how well the processes of LLN learning are organised and designed to fit vocational objectives of learners and requires flexibility. They suggest that embedding LLN in subject teaching is also an economic way of learning since it builds specific knowledge needed to accomplish a task.

Embedding requires that LLN and vocational teachers have easy access to each other and opportunities for joint planning (H. Casey et al., 2006). This leads to LLN teachers becoming familiar with content and style of vocational teaching and vocational teachers understanding the role of LLN in learning and work for vocational areas. The report suggests supporting LLN and vocational teachers to work together. Whatever model of team work is adopted time for joint planning and professional development is required.

Embedded teaching needs to be a collaborative relationship, as successful LLN/vocational programmes require good teamwork, which they need to have opportunities to negotiate (H. Casey et al., 2006). Teachers need to be empathetic and respectful and to be mentors. However, in their small study Bates and Wiltshire (2001) found that there was hesitation among teachers to engage in team teaching. A major issue was the difference in teaching approaches of the vocational teachers and the LLN teachers. They argue for a more informed culture of literacy awareness. Benseman, Sutton and Lander (2005), writing in New Zealand, reinforce the comments of H. Casey et al. (2006) in noting considerable variations in the teaching of LLN with teachers having difficulties meeting the outcomes for both the vocational courses and the LLN material. There are also difficulties when integrating literacy and numeracy, especially in finding ways to make explicit, visible, and reportable, literacy for those not engaged in a vocational education or general education pathways (H. Casey et al., 2006).

Berghella et al. (2006) also note that LLN providers should require pre-entry qualification for new practitioners and support that includes shadowing, mentoring, resource development and the development of a professional development programme for all practitioners.

Practices for vocational LLN provision

Where teachers have responsibility for both vocational and LLN teaching learners are less successful in achieving LLN outcomes (Benseman et al., 2005; H. Casey et al., 2006). Their research demonstrates the importance of teachers with different specialisms working closely together. In Aotearoa/New Zealand the emphasis has been to have one teacher delivering embedded LLN programmes. This has usually been the vocational teacher delivering the LLN part of the programme. However, some Tertiary Education Commission (TEC) funding has supported vocational and literacy tutors working together. These reports suggest that the one teacher approach is the least useful in that it does not recognise the issues of the differing skill requirements and the complexity of the teaching process. Wickert and McGuirk (2005) go on to add that understanding possibilities for collaboration is a significant factor in developing a nationally agreed approach linked to a comprehensive literacy learning framework that can accommodate local diversity of approach and outcome. It follows that embedding LLN in vocational programmes will be demanding professionally and time consuming. It makes demands on the organisation and resources and requires that senior management provide support and have knowledge of the implications of embedding (Callan & Ashworth, 2004; H. Casey et al., 2006). Roberts et al. (2005) note that where programmes are well taught and resourced, learners learn what is worth knowing, the risks and challenges involved as well as values, and ways of communicating. There were changes in learners' attitudes as they came to see learning and LLN programmes as integral to the learning for the job.

Relevance for Aotearoa/New Zealand

The reports reviewed for this section were predominantly from the UK and Australia and rely on definitions of adult literacy that are functional whereas the New Zealand Adult Literacy Strategy, *More than Words* (Ministry of Education, 2001) takes a broader view of LLN. However, the *Action Plan* (Tertiary Education Commission, 2008) appears to be more influenced by definitions similar to those in the literature reviewed here – possibly in response to the International Adult Literacy Survey (Walker, Udy & Pole, 1996) and the Adult Literacy and Life Skills Survey (Satherley & Lawes, 2006) findings that showed people in work as the largest group with LLN needs. Few of the articles refer to indigenous issues. In addition, factors in the UK and

Australian contexts can be dissimilar to those in Aotearoa/New Zealand and findings in studies there may not transfer cleanly to the local context.

The Nunavut Literacy Council and North West Territories Literacy Council report (2007) identifies literacy as referring to the spectrum of skills that people need to share, understand and use information and so actively participate in their family, community and work. They then refer to essential skills - the basic skills people use every day in their jobs and their lives. Essential skills are building blocks to learn other skills and become more complex as people integrate skills in the work setting. Few other international reports addressed indigenous issues which are very significant for Aotearoa/New Zealand. Two studies explored aboriginal and indigenous literacies in North American contexts. They found that literacy is holistic, including spiritiual and emotional literacy (Antone, Gamlin & Provist-Turchetti, 2003) and that their paradigms are rooted in self determination and social justice (Romero-Little, 2006), providing a good fit for Māori aspirations. Nationally, the Tertiary Education Strategy (Ministry of Education, 2006) and draft Tertiary Education Strategy 2010 – 2015 (Ministry of Education, 2009) both identified Māori and Pasifika peoples as significant groups for LLN programmes, the Māori Adult Literacy Working Party (2001) presented a Māori perspective on LLN and some studies by Māori have been published (e.g. Rawiri, 2005). During 2009 the growing interest in improving Māori and Pasifika LLN has seen several reports produced (May, 2009; McMurchy-Pilkington, 2009; Mlcek, Timutimu, Mika, Aranga et al., 2009; White, Oxenham, Tahana, Williams & Matthews, 2009). These offer useful guidelines for appropriate practices in the Aotearoa/New Zealand context, including that a marae context can be important to Māori learners (Mlcek et al., 2009).

As H. Casey et al. (2006) note, embedding is a complex process and is dependent on how the programme is organised to meet the needs of the learners. This suggests that policy makers, management and practitioners when seeking to apply these findings, to the context of Aotearoa/New Zealand, read reports from overseas critically. A good starting point would be the key factors identified in the H. Casey, and Skills for Life Development Centre work and the approach of the Nunavut Literacy Council and North West Literacy Council (2007). It is important that where suggested key factors are implemented in Aotearoa/New Zealand, they have synergy with the different

contexts. Further research is required to identify what is currently happening in Aotearoa/New Zealand and the impact for learners, teachers and providers. There is also a need for more Māori and Pasifika research so that key factors for appropriate embedded LLN practice can be identified.

English as an Additional Language and Biliteracy

Adult English as an Additional Language (EAL) literacy may be delivered as a separate intensive programme, or embedded in general life-skills, work-based or vocational provisions. These provisions have been explored largely through qualitative studies (Adams & Burt, 2002), but due to the paucity of published research in this area (Hedgcock, 2005; Murray, 2005; Burt, Peyton & Adams, 2003) further small scale ethnographic studies of good practice, are needed (Barton & Pitt, 2003). This fits with the current investigation of organisational issues in adult EAL literacy provision which opens up a fresh area of EAL research.

There is a vital need for appropriate adult EAL literacy provisions, as many newly arrived EAL adults have low levels of English literacy (White, Watts & Trlin, 2001; Wignall & Bluer, 2007) and even those extensively engaged in oral interaction may still need to access written information (Eskey, 2005). Current literature emphasises the long-term consequences of not providing appropriate support for these adults, as English language literacy levels are strongly aligned with social benefits such as living in the community, and access to further education and employment opportunities (Barton & Pitt, 2003; Burt et al., 2003; Eskey, 2005; Orem, 2005; Wiley, 2005; White, Watts & Trlin, 2001; Wignall & Bluer, 2007).

Calls for a generalised approach to adult literacy and numeracy, including both native and non-native speakers (e.g. Suda, 2002), have tended to overlook the significant differences between these learners. EAL students may require both EAL and literacy assistance (Barton & Pitt, 2003) so require additional separate provisions or teachers trained in both areas (Wright, 2008). Teaching needs to take account of scripts and cognitive patterning that may be dissimilar to English (Barton & Pitt, 2003). While positive transfer of knowledge can occur between languages, multiple contextual factors, including cultural beliefs about the relative value of oracy, literacy and biliteracy, may aid or impede EAL literacy development. Nonetheless, adult EAL learners are frequently described as highly motivated creative learners (Roberts et al., 2004), and embedding literacy in vocational programmes such as 'Skills for Life' has been found to increase perceived benefits (Barton & Pitt, 2003; Roberts et al., 2005).

As literacy skills are culturally constructed and shaped by social practice, EAL adults need to go beyond decoding skills to learn new cultural values, understandings and competencies (Pitt, 2005). At work this may include proficiency in communication, teamwork, problem-solving, initiative and enterprise, self-management, learning, and technology (Wignall & Bluer, 2007). Embedded EAL literacy in well taught and resourced vocational courses offers the opportunity to acquire not only practical skills, but also a new professional identity and a new community of practice (Roberts et al., 2005). Victoria University of Wellington's Language in the Workplace project (see Holmes, 2009; Holmes & Stubbe, 2003) demonstrates how providing sociocultural and sociolinguistic knowledge has improved the success of EAL workskills courses for migrants and refugees (see Riddiford & Joe, 2006). A pre-conference event on 'English for Work and the Workplace (E4WP) in the 21st Century' in Cardiff (2009, March) also reveals heightened interest in this field, with key note speakers from African nations, United Kingdom, Oman, Brazil, Angola and New Zealand focusing on English for service industries, industrial work, as well as technical and medical professions.

Organisational factors

The development of any adult EAL literacy course will generally involve debates about curricula focus, programme evaluation, learner needs, government agendas, assessment, ideologies about EAL delivery, various stakeholder agenda, the perceived relationship between literacy and EAL, and approaches to assessment (Murray, 2005). Discussions may also include decisions about the balance of individual and group learning; the types of pedagogic practices that are effective in helping learners move from classroom to workplace or community; and the professional development needs of teachers (Barton & Pitt, 2003). These factors, along with consideration of whether, when, how and where literacy may be embedded, are all potentially important influences on the delivery of adult EAL literacy provisions.

Since students can never learn English for every context, embedded courses may be an *economical* way of learning EAL (Roberts et al., 2005). The nature of language practice in these programmes is qualitatively different from in those courses that focus on general English language/literacy in that it centres on real life needs (Barton &

Pitt, 2003; Murray, 2005). The inclusion of authentic, interactive opportunities contributes significantly to adult EAL fluency (Coghill & Gubbay, 1988; Ellis, 2005; Norton & Toohey, 2001).

EAL instruction should ideally focus on developing rule-based competence as well as meaning (Ellis, 2005), so the timing, duration and nature of embedded and/or intensive English language input may be a key determinant in the effectiveness of adult EAL literacy provisions. Intensive EAL literacy programmes may incur a lower level of student drop-out (Barton & Pitt, 2003), but it takes longer than a six month intensive course to learn another language (Norton & Toohey, 2001). Decisions about *when* to embed literacy in a vocational programme are therefore critical. Although some might view embedding literacy as the ideal (e.g. Roberts et al., 2005), many EAL adults require a preliminary level of basic, functional vocabulary before they can effectively participate in and/or benefit from content-focused study (Nation, 2008; Shameem et al., 2002) and should be seen as part of the lifelong learning process that provides a bridge to the future for adult EAL students (Orem, 2005).

Caution is needed to prevent EAL literacy instruction becoming so deeply embedded that it is invisible to the students. A balance also has to be achieved between general and work-specific English language, and topics ideally need to be negotiated between teacher and student (Barton & Pitt, 2003) as this contributes positively to learning (Slimani, 2001). However, it may prove problematic if EAL adults have not been accustomed to being consulted about their learning (Roberts et al., 2004). Culturally aware staff and interpretation services will also be required to enable the effective implementation of a negotiated, needs-based and student-centred EAL literacy curriculum.

Ramm's study (1992, cited in Shameem et al., 2002), of low literacy Australian learners with minimal education, recommended that "learners should be placed in classes with others of a similar educational background" (p. 41), and "until they acquire formal learning strategies that will enable them to access other learning options" (p. 42). This may prove challenging for providers as most embedded EAL literacy provisions need to cater for multiple levels (Adams & Burt, 2002; Barton & Pitt, 2003; Burt et al., 2003). Adult EAL learners may arrive at different times, and

with a wide variety of needs and goals. Therefore, it is often difficult to place them into homogeneous class groupings with economic staffing ratios. Some adult EAL learners have professional qualifications with high literacy levels and numeracy in their home language, whereas others may not read and write in any language; some may be recent arrivals, while others may have lived here their entire lives (Orem, 2005). Differences in first language literacy levels, educational background and second language characteristics result in different EAL literacy progression rates due to differing ability to activate relevant schema (Adams & Burt, 2002; Barton & Pitt, 2003). One key organisational implication for providers of EAL literacy is that assessment strategies and appropriate entry levels for programmes may need to be identified, designed and implemented. However, it should not be assumed that this will obviate the need for additional support where needs of individual learners vary widely. In smaller regions where there are fewer EAL students the diversity of needs may have ramifications for staff-student ratios as groups may include just one or two learners (Haworth, 2008).

A number of articles (e.g. Orem, 2005), identify increased self-study and e-learning provisions as a way of catering for the diversity of EAL learners. However, such approaches may be best seen as supplementary rather than stand-alone provisions. Independent learning may provide short-term assistance for tutors catering for multiple levels within EAL literacy classes, individualisation is not a total solution since significant adult EAL learning takes place in group interactions (Roberts et al., 2004). Green and Howard (2007, p. 17) suggest “it is personalisation rather than individualisation that works in many cases; that is, learning that is tailored to individual needs, but does not rely on individuals working alone”.

Small-scale local educational projects, involving collaboration with the local community, have been suggested as a useful way to promote EAL literacy for some students (McDermott, 2004). Community-based courses that focus on general life skills and/or workplace EAL can provide important social support in the case of refugee students, and often assist in overcoming past trauma (Barton & Pitt, 2003). A broad range of alternatives may need to be considered; for example, in one study Cambodian mothers reported feeling more comfortable when their children were included in the class (Adams & Burt, 2002). If community-based EAL literacy

courses are to be effectively established and maintained, practical issues including child care, transport, timing (day-time or night-time, full-time or part-time) and locating acceptable and accessible venues may need to be taken into account (McDermott, 2004).

New Zealand research has identified a growing need for EAL workplace provision (Wright, 2008). In Australia, there has also been a call for more integrated language and vocational skill options for EAL adults (Miralles, 2004). Any one-size-fits-all approach is clearly not a total solution. Wignall and Bluer (2007) note that there is "a need to provide learners from a non-English speaking background with linked programmes that tackle literacy from a number of fronts – as a component of language acquisition (English language serviced), and as a social practice learned in different contexts over time (community and workplace learning options)" (p. 7).

The employment of bilingual assistants is a crucial factor at beginner EAL levels as students need to utilise their first language in learning another language (Roberts et al., 2004; Shameem et al., 2002). Although the availability of teachers with bilingual/biliteracy skills often does not meet existing demands (Orem, 2005), employment and ongoing training of bilingual assistants is viewed as critical to the successful implementation of vocational EAL literacy provisions (Barton & Pitt, 2003; McDermott, 2004; Pitt, 2005; Shameem et al., 2002). English Language Partners New Zealand (2009) points out that, although bilingual assistants are often very busy with many community tasks, they appreciate being included in the teaching team. Some may, however, have recently arrived too, so may require additional professional development to introduce them to the New Zealand cultural context and assist them in undertaking the role of being "sharers of knowledge about systems" (Shameem et al., 2002, p. 43).

EAL tutors often lack professional status, full-time tenure and visible pathways for career progression (Orem, 2005). Professional development is nonetheless a vital consideration as EAL literacy teachers require experience in working with adults, communication skills, and understanding of workplace culture, as well as literacy, numeracy and English language knowledge (Wignall & Bluer, 2007; Wright, 2008). Vocational EAL tutors also need to be empathetic and respectful mentors who are

adept in negotiating collaborative relations with students and colleagues (Roberts et al., 2005). In addition, as many are white, female, middle class and do not live in the areas where adult immigrants cluster, they may need assistance to make relevant links with the experiences of their students (Orem, 2005). Some effective strategies include sharing resources between institutions, and access to team teaching situations (Barton & Pitt, 2003).

EAL tutors may also need to overcome common misperceptions such as the negative interference of other languages and the dependence of literacy on prior oral language proficiency (Barton & Pitt, 2003; Haworth, 2008; Wiley, 2005). Professional development for EAL literacy tutors therefore needs to acknowledge that "becoming literate in one's first language is not the same as becoming literate in a second or third language" (Murray, 2005, p. 79; also see English Language Partners of New Zealand, 2009, p. 7).

Shameem et al.'s (2002) study of low-level and pre-literate learners in New Zealand highlights the importance of providing professional development for all teachers; recruiting more bilingual tutors; enhancing the effectiveness of self-assessment methods; encouraging first language literacy skills; utilising a curriculum that is responsive to student needs; and providing progress and achievement reports at the end of the programme. As in Ramm (1992), Shameem et al. stress the need to retain a minimum input of regular 12-hour weekly classes. Ingram (1981) also supports this, pointing out that low-level literacy learners require 400 hours of tuition to progress one point on the ASLPR scale; and preliterate learners will need between 800 and 1200 hours of English language tuition to simply reach survival level.

Relevance for Aotearoa/New Zealand

English Language Partners (ELP) in New Zealand (formerly ESOL Home Tutors) frequently offer literacy programmes for people with six or fewer years of schooling (Shameem et al., 2002). This service has recently developed a biliteracy programme (ELP New Zealand, 2009) for adult EAL students who have to engage not only in learning another language but also in learning literacy skills for the first time through the new language. For these pre-literate learners, the ideal is to initially learn literacy

in the first language, but restricted time and resources often prevent that occurring (ELP New Zealand, 2009). In this situation biliteracy approaches may be useful.

While biliteracy is common in many parts of the world (Wiley, 2005), bilingual and biliteracy programmes are generally only possible where sufficient numbers of people speak the target languages (Pitt, 2005). Despite the increasing interest in maintaining heritage languages in New Zealand, biliteracy is far less common here than in places like Europe, perhaps due to factors such as geographic location, the dominance of English language, and an increase in immigrants with insufficient educational experiences in an English-speaking environment. Ways in which biliteracy can be achieved for a greater proportion of the working population do, however, need to be explored as adults who are bilingual and biliterate will be needed for New Zealand's future participation in the global community.

In New Zealand there is an ongoing need for transitional EAL literacy programmes to assist learners entering employment or further study. EAL literacy needs may also persist after learners enter those contexts. The presence of EAL students in mainstream classes therefore raises important issues about all adult tutors' experiential backgrounds, pedagogic beliefs and professional development needs.

Reports by Miralles-Lombardo, Miralles, and Golding (2007) in Australia, as well as New Zealand reports by Shameem et al. (2002) and McDermott (2004) suggest that multicultural community organisations, where English language is embedded in work and life skills, have an important support role in linking immigrants to each other, to learning contexts and to the wider community. These EAL provisions address a broader form of cultural literacy than would commonly be found in either general literacy courses or embedded provisions intended for native speakers of English. In addition, while some large providers can offer courses at different levels or in relation to specific learner needs, it is likely that many institutions will still need to cater for multiple levels of EAL literacy, different types of language needs, and diverse learner goals, often within the same class or workplace.

Embedded LLN pedagogy

Embedded LLN practice recognises literacy, language and numeracy as an integral part of a programme or course. According to McKenna and Fitzpatrick (2005, p. 19) "literacy is developed while it is being applied". As literacy, language and numeracy are fundamental to the growth of life skills, literacy activities need to be 'built' or integrated into workplace and community practice rather than 'bolted on' as literacy programmes in isolation from other learning (Wickert & McGuirk, 2005). Learning is enhanced when content is related to day-to-day or social life and resources are tailored to learner needs. This is more apparent when provision encourages communal contribution and attachment as this promotes ownership of learning, encourages effective relationships and allows for the growth of higher level learning (Guenther, 2002).

As already highlighted above, there is no single 'best' model of practice (H. Casey et al., 2006; Skills for Life Development Centre, 2006). A number of common features, however, are frequently mentioned. Effective embedded literacy programmes emphasise authentic contextual learning (Burt, Peyton & Adams, 2003; Nunavut Literacy Council et al., 2007) in which literacy skills are taught alongside vocational or social skills (Roberts et al., 2004). Embedded literacy embraces a constructivist approach in which the learner is central (Balatti et al., 2006; McKenna & Fitzpatrick, 2005), diversity is honoured and learning is active (Derbyshire et al., 2005; Suda, 2002). Despite this concentration on the individual, teaching focuses not on the autonomous self but on building confidence as learners (Maclachlan & Cloonan, 2003). While not conceiving an overarching model, Suda (2002) offers an array of 'best practice' suggestions. These include – a concerted focus on the learner, active learning including negotiation of content and process, relevance to learners' interests and experiences, encouragement of both autonomy and collaboration and facilitation of learner self determination. Tusting and Barton (2007) found in their research that students who chose to take part did better than those who were compelled.

Organisational factors

It is not possible to identify one ideal way for organisations to deliver LLN (H. Casey, et al., 2006; Skills for Life Development Centre, 2006). Although many suggestions for effective provision have been identified, some arise after considering the difficulties faced by organisations in providing effective practice (Callan & Ashworth, 2004; Wickert & McGuirk, 2005). Comings et al. (2006) list numerous challenges organisations must meet to establish effective LLN programmes. Their list includes developing appropriate management systems to support effective LLN practice, building a congenial environment for learning in often business focused settings, organising suitable recruitment and induction processes, managing classrooms and use strategies that engage learners. Funding and developing learning resources largely influence the effectiveness of integrated LLN models (H. Casey et al., 2006). So organisations need to be adequately resourced, provide quality learning resources and create and maintain an infrastructure that supports integrated LLN models (Guenther, 2002). Suitable structures must be created (Guenther, 2002; Roberts et al., 2005; Skills for Life Development Centre, 2006). Such structures include operating collaborative strategic planning processes (King & Bingman, 2004), orientating managers and members of governing boards to understand and support embedded literacy provision (J. Casey et al., 2006) and employing vocational practitioners keen to work in tandem with literacy specialists. Policies and procedures need to support an integrated LLN model. Programme planning and delivery policies will focus on integrating LLN support throughout the programme lifecycle (J. Casey et al., 2006; Ni Chinneide, n.d.).

Developing an organisational culture to support embedded LLN provision also features in international research. A ‘whole organization approach’ in which everyone in the organization has a knowledgeable and positive attitude to literacy provision within an otherwise busy workplace is recommended by some authors (Guenther, 2002; Ni Chinneide, n.d.; Skills for Life Development Centre, 2006). Suda (2001) calls for a new vision of literacy in which communities and families become part of the whole organization learning culture. The learning culture theme is extended by Guenther (2002) and, in their small study, Bates and Wiltshire (2001) who argue that where everyone in the organization is aware of literacy issues a climate of trust can

develop. A literacy-aware learning culture places the learner at the centre of practice, creates a supportive atmosphere where learners are treated with respect within relationships of trust (Tett & Maclachlan, 2007; Tusting & Barton, 2007). Such a culture also values and honours the diversity of learners (Crowther, et al., 2003; Miralles-Lombardo et al., 2007; Nunavut Literacy Council et al., 2007). The concept of diversity includes recognising power differentials in teaching-learning relationships (Tett & Maclachlan, 2008), cultural differences (Nunavut Literacy Council et al., 2007) and approaches to and skills in learning (McKenna & Fitzpatrick, 2005). An organisation needs to be at ease with teaching and working in teams composed of vocational and literacy specialists.

Another feature emerging from the literature is the need for the organisation to provide adequate professional development opportunities to teachers to ensure effective delivery of LLN programmes (Askov, Johnston, Petty & Young, 2003; Guenther, 2002; Tett & Maclachlan, 2008; Wickert & McGuirk, 2005; Vorhaus, 2006). Embedding literacy provision takes a lot of work, knowledge and skills to be of benefit to students and society. With a complex environment, constantly changing conditions and ways of operating in the workplace the creation of a learning culture requires professional development (Berghella, et al., 2006; Haines & Brand, 2000; Johnston, 2002). A case for initial training of literacy and vocational teachers is also made as there is benefit in setting national benchmarks (Dymock, 2007; Berghella, et al., 2006). Studies report a large number of uses for professional development and initial training. The process of embedding LLN requires professional development and initial training (Haines & Brand, 2000). For example, the teamwork required by literacy and vocational teachers in embedded programmes needs support and has to be developed (Brooks et al., 2007; H. Casey et al., 2006; Johnston, 2002). Knowledge, skills and values to be developed through professional development include teaching approaches suitable for adults (Berghella et al., 2006; Crowther, 2003); increasing subject knowledge and confidence especially for numeracy (Coben, 2003; Marr & Hagston, 2007; Wake & Beamish, 2007), assessment (Dymock & Billett, 2008) and in the use of new technologies for the 21st century (Hayes, 2007; Snyder, et al., 2005; Suda, 2001). It is unfortunate that with all these needs, professional development opportunities seemed to be in decline, for example, in Australia (Castleton & McDonald, 2002). It is also worth noting that a recent New Zealand study of ESOL

workplace training showed that a “third of providers did no ESOL professional development at all” (Wright, 2008. p. 61) and that all some did was to make publications available to tutors.

Implications for practice

Derbyshire et al. (2005) suggest that the practice of embedded LLN should be based on principles of adult education. However, adult education is not a unitary construct and it could be claimed that many philosophies underpin its practice. Murray (2005) suggests that adult education practice should be based on Freirian principles. This would mean that embedded LLN practice would have a number of the following features. The focus would squarely be on learners (Suda, 2002) but with ingrained respect for different beliefs and cultural ways of being. In an environment fed by adult education principles learners would be taught functional literacy, language and numeracy skills but also to communicate effectively, think critically, solve problems, make decisions based on prior knowledge and work in teams (Nunavut Literacy Council et al., 2007). Learners would be active and expressive participants in their learning, both independent and collaborative and able to integrate literacy learning into social and work practices (Suda, 2002). Benseman et al. (2005) and Benseman and Sutton (2007) bring together a large number of suggestions for teaching practice. These include relating material to students’ interests and experiences, creating situations for learners to exercise autonomy, providing authentic learning environments and referencing learning to contexts. In terms of teaching literacy skills, McKenna and Fitzpatrick (2005), the Nunavut Literacy Council et al. (2007) and Rogers and Kramer (2008) among others identify behaviours such as developing explicit models of teaching, introducing key industry and technical language and modelling text types common in the professional discourse or industry.

Another practice that enjoys support among researchers is using collaborative learning methods (Brooks et al., 2007; Roberts et al., 2004; Suda, 2002; Tett & Maclachlan, 2008). Brooks et al. (2007), for example, found that learning improved when learners worked in groups of two or more. Roberts et al. (2004) suggest that individualisation of instruction is not always the answer and that the most significant learning takes place in group interactions. Suda (2001) envisages a new vision for literacy where the

contexts within which it is taught include families and other social groups as well as workplace settings. Tett and Maclachlan (2008) suggest that LLN programmes should be delivered in group-settings rather than one-on-one settings. With one-on-one delivery settings they found an imbalance between teacher and learner relationships, with teachers holding more power in the relationship. This relationship imbalance highlighted the literacy deficiencies amongst students. By teaching students in group-settings, students became more empowered as they came to view themselves as capable learners amongst their peers, rather than literacy-deficient learners. In order to effectively deliver such programmes, tutors need to be trained in delivering to group-settings and to assist in moving away from conventional one-on-one delivery methods. Both Snyder et al. (2005) and Hayes (2007) supplement these traditional collaborative methods by reference to the use of new technologies such as cell phones and video games as tools in embedded LLN learning.

Relevance for Aotearoa/New Zealand

There is nothing in the literature we report here that makes the ideas in this section on practice irrelevant in Aotearoa/New Zealand. However, the practices reported here rest on some major assumptions. They assume that the vocational and community contexts in which embedded literacy presently operates are ready and open to these ideas about practice, that strategic plans are in place, that enabling values are shared and that trained staff are available (Callan & Ashworth, 2004; H. Casey et al., 2006). In short, to work, these ideas from international research and policy work require that organisations have the necessary financial and human resourcing to apply these ideas (Wickert & McGuirk, 2005). While some contestable funding is available through TEC, the jury must be sceptical that sufficient resources will remain available, particularly at this time of economic recession.

There is a danger that embedded literacy, language and numeracy becomes the only recognised form of provision, an orthodoxy. As Roberts et al. (2005) suggest, there are two main approaches to LLN: discrete or non-embedded LLN as well as embedded provision, with variants within these main types that allow for overlaps. The research evidence is firm that embedded literacy provision can work and is working here. But there is evidence too that multiple, not unitary, approaches to

provision work best, that more flexible patterns of participation are needed (Vorhaus, 2006), that a ‘one size fits all’ approach is not the best (Rogers & Kramer, 2008).

Critical literacy/new literacy studies

The last two decades have seen a significant shift in theories about literacy (Maclachlan & Cloonan, 2003): from a focus on functional approaches to one that espouses a critical, integrated, social practice view, sometimes referred to as new literacy studies. In new literacy studies literacy is understood as situational, taking its meaning and impact from the social context within which it is embedded and configured by the institutional life of organisations that shape such everyday activities, the ideologies and social relations that frame them (Hamilton, 2006; Māori Adult Literacy Working Party, 2001). This shift is sometimes seen as competing conceptual paradigms, functional and critical/participatory (Rogers & Kramer, 2008); as an ideological divide, between frameworks that attempt to develop functional literacy primarily for competence in the workplace and Freireian approaches to literacy that attempt to use literacy as a means for people to liberate themselves from oppression (Murray, 2005). The shift is also seen as two literacy discourses – one technical and concerned with providing vocationally relevant literacy; the other regarding literacy as a social practice based in a specific, everyday context and promoting active citizenship (Crowther, Hamilton & Tett, 2003). McCaffery, Merrifield and Millican (2007) identify four concepts: literacy as skills, as tasks, as social practice and as critical reflection. They argue that the four "can be seen not so much as alternatives but as circles that nest inside one another. All four approaches are part of the process of literacy learning, with the emphasis on each varying at different times and for different purposes" (p.41). Demetrion (2005) calls for a 'third way'. Rogers and Kramer (2008) respond, identifying an emergent framework made up of two constantly shifting continua that intersect. At one end of the literacy practices continuum are accelerative and emancipatory practices; at the other, functional and traditional practices. On the second continuum, called critical practices, the ends are identified as value laden, ideological and 'non-critical', value free. The intersection of these continua produces four quadrants or fields: accelerative/critical; traditional/critical; traditional/non-critical; and accelerative/non-critical. Similar to McCaffery et al. they hold that teachers move in and out of fields and along continua. They also argue that "classifying approaches to literacy education as either participatory or functional is too simplistic …" (p. 23).

Central to the concept of critical literacy/new literacy studies is the notion that a literate person is "able to critically evaluate and intervene in the social and economic texts of everyday life" (McKenna & Fitzpatrick, 2005, p.19); to "reflect on their situation, explore new possibilities and initiate change" (Derbyshire, O'Riordan & Phillips, 2005, p. 3). It "includes a critical analysis of social structures and aims at raising critical consciousness of both the teacher and the student, which ultimately leads to social action" (Rogers & Kramer, 2008, p. 21). Linked to new literacy studies is the notion of powerful literacies and a critique of a deficit approach to literacy, language and numeracy (Crowther et al., 2003). In a deficit view the focus is on the individual learner, their 'learning problem' and 'deficits' (Bates & Wiltshire, 2001; Maclachlan & Cloonan, 2003). The learner is blamed for their perceived lack of skills and constructed as childlike rather than capable, independent adults. Learners "enter the learning situation not as equal, capable adults but as marked unequals who are positioned in the power hierarchies lower than 'normal' adult learners" (Tett & Maclachlan, 2008, p. 664). The goal is "the acquisition of a body of standardised reading, writing and mathematical skills" (p. 663); to climb the literacy 'ladder' (Crowther et al., 2003). In contrast powerful literacies are grounded in a social and ecological context, part of people's everyday life. They question dominant forms of literacy and the social distribution of literacy, position learners in more equal social and political relationships, are critical and political, based in social justice, equality and democracy and everyday life rather than a narrow, functional approach focused on the needs of the economy (Crowther et al., 2003).

Some studies locate literacy learning in a human capital model (Reio, Wormley & Boyle, 2005), particularly in vocational contexts (Millar & Falk, 2002) and basic skills programmes (Tusting & Barton, 2007). Here the focus is on functional skills and qualifications. In contrast, some studies explored social capital outcomes (Balatti, Black & Falk, 2006; Crowther et al., 2003; St. Clair, 2008). New literacy studies promote social capital outcomes, understood as "the networks together with the shared norms, values and social trust that facilitate co-ordination and co-operation for mutual benefit, within and between groups (Tett & Maclachlan, 2007, p. 151) and, further, as "the network of enabling social relationships widely accepted as a precursor of learning and poverty reduction" (St. Clair, 2008, p. 84). St. Clair

identified four types of social capital: within the family; within the community; organisational; and as a factor in retention of people in family literacy programmes. Tett & Maclachlan (2007) identified two types of social capital: bonding links like-minded people; bridging builds connections between heterogeneous groups. Several studies highlight the social capital benefits for literacy learners (Ballatti et al., 2006; Dymock & Billett, 2008; Hamilton, 2006; McDonald & Scollay, 2009; Wickert & McGuirk, 2005). Some studies acknowledged the role of both human and social capital in student outcomes (Balatti et al., 2006).

Organisational factors in critical literacy

A variety of provision needs to be available, including that for non-accredited courses (Dymock, 2007). The studies reviewed indicate several key factors that need to be taken into account by LLN providers. First, each organisation needs to have a vision for LLN provision: "a distinctive, strategic way of thinking about provision" (Hannon, Pahl, Bird, Taylor & Birch, 2003, p.14; Suda, 2001); it is "a vision of possibility" (Rogers & Kramer, 2008, p. 33). The vision underpins and directly informs practices. A second important factor is the need for a statement of the organisation's position on the contested views of the meaning of literacy: the ideological divide (Murray, 2005); different discourses (Castleton & McDonald, 2002; Crowther et al., 2003); the four concepts of literacy (McCaffery et al., 2007) - literacy as skills, as tasks, as social practice and as critical reflection, potentially nested inside one another and viewed as "part of the process of literacy learning, with the emphasis on each varying at different times and for different purposes" (p. 41). The organisation's position will directly influence practice, informing approaches to the learning and teaching of literacy. Is provision to focus on functional literacy skills, preparing individual learners for the workforce (Crowther et al., 2003; Murray, 2005; Rogers & Kramer, 2008) by focusing on "the acquisition of a body of standardised reading, writing and mathematical skills" (Tett & Maclachlan, 2008, p. 663); on a social practice approach (Berghella et al., 2006; Derbyshire et al., 2005); on critical literacies (Hayes, 2007; Rogers & Kramer, 2008), new literacy studies (Hamilton, 2006; Maclachlan & Cloonan, 2003; Tett & Maclachlan, 2008) and powerful literacies (Crowther et al., 2003), preparing learners to question and critique their world, to be active citizens who struggle against inequality and injustice. Is the

focus to be a combination of these, a nested approach (McCaffery et al., 2007) as relevant to the learners' context? Related to this factor is a third – an organisation's position on human capital (Reio et al., 2005) and social capital approaches (St Clair, 2008) to LLN provision.

A fourth organisational factor is the 'deficit' approach to literacy. Studies reviewed highlight the dangers of this approach to LLN provision (Crowther et al., 2003; Tett & Maclachlan, 2008). Organisations need to raise awareness of deficit approaches and use practices which result in inclusive and enabling literacies (Maclachlan & Cloonan, 2003) rather than deficit thinking. Linked here is a fifth factor - an organisation's position on the use of power in its approaches to LLN provision (Crowther et al., 2003; Tett & Maclachlan, 2008). Practices may emphasise 'power-over', 'power-with' and 'power-from-within'. Ideally organisations will be aware of these power states and want to share power and encourage students to exercise power when learning (Crowther et al., 2003). A sixth factor that emerges from the studies is that it is essential for organisations to provide ongoing professional development for staff, whatever their LLN teaching context (Berghella et al., 2006; Dymock, 2007; Sticht, 2000). Appropriate professional development is particularly necessary in organisations moving to a different position on any the factors outlined above.

Practices for critical literacy

Many suggestions for LLN practice are evident in the reviewed literature; these are discussed in the section on guidelines. In this section findings are confined to those relating specifically to critical literacy practice. Literacy teachers' practice is central to the LLN learning process: "We emphasize the teachers, rather than the programs, as the site of critical literacy instruction" (Rogers & Kramer, 2008. p. 33). Ideally teachers will have sound knowledge about the different LLN approaches open to them – functional, critical, nested, third way. They will be aware of the concepts they hold about critical literacy and their decisions about which approaches are relevant in their context (McCaffery et al., 2007). They will be aware of different ways to use power – 'power-over', 'power-with', 'power-from-within' – and want to share power and encourage LLN learners to exercise their own power; to use a powerful literacies approach (Crowther et al., 2003). They will be aware of how their attitudes and

beliefs about both LLN and students influence their practice (Bates & Wiltshire, 2001); of how flexibility (Coben et al., 2007; Tusting & Barton, 2007), responsiveness (Rogers & Kramer, 2008), the use of multiple teaching and learning approaches (Hedgcock, 2005) and the positive, respectful relationships they build with students (Coben et al., 2007) impact positively on LLN learning. They will provide for both social capital and human capital outcomes, particularly as social capital outcomes are generally a pre-requisite or co-requisite for human capital gains (Balatti et al., 2006). They will engage in ongoing professional development to extend their knowledge of LLN theory and practice as well as their subject knowledge (Berghella et al., 2006; Snyder, Jones & Lo Bianco, 2005).

Relevance for Aotearoa/New Zealand

Findings from this review of literature suggest that critical literacy/new literacy studies have a place in LLN provision in Aotearoa/New Zealand. Fundamental to this is the essential place of Māori as tangata whenua. In addition the views and needs of the growing Pasifika and Asian populations must be taken into account. Provision of new literacy studies raises potential issues with some current LLN policies (e.g. Tertiary Education Commission, 2008) which, arguably, focus primarily on the development of functional literacy skills (Rogers & Kramer, 2008) especially for the workplace. Statements in the Action Plan (e.g. Tertiary Education Commission, 2008, pp.6-7) can, again arguably, be linked to the labelling of people as deficient because they haven't attained specified levels of literacy, such as those in adult literacy surveys (Crowther et al., 2003) and are deemed to have 'very low' or 'low' levels of literacy. The strategy to target priority groups, such as adults who need to increase their LLN skills (Ministry of Education, 2009), could also be interpreted as labelling those people as deficient. While social capital (St. Clair, 2008) may be referred to, human capital, arguably, is prioritised over social capital within the Action Plan (Tertiary Education Commission, 2008). However, it is important to note that Tett and Maclachlan (2007) warn of a 'dark side' to social capital: it can be used to exclude some people and make an established community seem to be 'not for them'. Issues such as these will need to be addressed if programmes based on notions of 'powerful literacies' (Crowther et al., 2003) are to be widely provided, a 'third way' found (Demetrion, 2005) and approaches best suited to specific contexts made available

(McCaffery et al., 2007). We also need to heed a caution from Scottish research. Tett & Maclachlan (2008) found that "traditional constructs of ALN teaching still frame literacy as the acquisition of a body of standardised reading, writing and mathematical skills that can be formally assessed and compared within and between nations" (p. 663). While the developers of the assessment tools here do not intend them to be used as standardised skills, already there is an indication that they could be: "as a consequence it [the assessment tool] will give results comparable between learners and institutions, and over time (Deacon, 2009). Many studies also suggest that multiple approaches to provision are ideal; that, as noted above, a 'one size fits all' approach is not appropriate (Rogers & Kramer, 2008). While embedded literacy is an important addition to literacy provision in Aotearoa/New Zealand it is also important to continue to resource a variety of provision, including 'stand alone' and those tailored to specific contexts, for example, marae-based, church-based and union-based options.

Embedded literacy: Summary and guidelines for practice

There is no perfect way to embed literacy provision (H. Casey et al., 2006; Skills for Life Development Centre, 2006). However, as already discussed, reports repeatedly find that embedded literacy is "built in, not bolted on" to programmes (Millar & Falk, 2002; Wickert & McGuirk, 2005). The focus of delivery is on students and their needs with programmes attempting to build both social and human capital (Balatti et al., 2006; Crowther et al., 2003; Tett & Maclachlan, 2007; Tusting & Barton, 2007). Consequently embedding involves the participation of communities, industries and literacy specialists as key stakeholders and partners (Callan & Ashworth, 2004; H. Casey et al., 2006; Guenther, 2002). As previously discussed, both Ni Chinneide (n.d.) and Skills for Life Development Centre (2006) recommend a "whole organisation approach" binding together key stakeholders in shared strategic visions, values, respect for cultural differences, team work among staff and learner centredness. Programmes are "owned" by the vocational or community sectors but they are planned, delivered and quality assured in partnership with literacy subject specialists (Skills for Life Development Centre, 2006). Embedded literacy programmes emphasise authentic contextual learning using a constructivist approach (Benseman et al., 2005; McKenna & Fitzpatrick, 2005; Roberts et al., 2004). Team teaching between teachers with industrial/ social content knowledge and literacy expertise is central to an embedded model of delivery (Bates & Wiltshire, 2001; H. Casey et al., 2006). Teaching honours diversity and provides for active and expressive learning (Derbyshire et al., 2005), preferably in groups (Brooks, Burton, Cole & Szczerbinski, 2007) focusing not on the autonomous self but on building confidence as learners (Maclachlan & Cloonan, 2003).

Organisational factors

Research offers many ideas and suggestions to organisations about running embedded literacy programmes. Again though, a definitive "best practice" organisational approach is lacking (H. Casey et al., 2006; Skills for Life Development Centre, 2006). Indeed suggestions seem to flow often from a need to overcome inherent problems in establishing embedded literacy provision in organisations. Programmes are difficult to

establish and maintain, tend to be expensive and time consuming and often lack initial profitability (H. Casey et al., 2006; Callan & Ashworth, 2004; Wickert & McGuirk, 2005). Creating a suitable infrastructure is also difficult, particularly in regional centres and when access to technology infrastructure is an issue for learners (Guenther, 2002). Partnerships between vocational/ community organisations and providers of literacy services, while very important (Millares-Lombardo et al., 2007), are also difficult to establish and maintain (Callan & Ashworth, 2004). Guenther (2002) suggests that successful embedding requires positive cultural and structural surroundings for learners. Cultural issues range from establishing learning cultures that encourage community and family involvement (Suda, 2001) to building trust (Bates & Wiltshire, 2001; Tett & Maclachlan, 2007) and honouring diversity (Ni Chinneide, n.d.; Maclachlan & Cloonan, 2003). The importance of supportive structures is mentioned repeatedly (Guenther, 2002; Roberts et al., 2005; Skills for Life Development Centre, 2006). Such structures range from operating collaborative strategic planning processes (King & Bingman, 2004; Skills for Life Development Centre, 2006) to orientating managers, board members and other stakeholders to embedded literacy provision (J. Casey et al., 2006) and to employing enthusiastic and capable vocational/community practitioners who can work in partnership with literacy teachers (Callan & Ashworth, 2004). Most cultural and structural requirements discussed here call for extensive and effective professional development. This was a vital matter mentioned in a number of reports (e.g. Bates & Wiltshire, 2001; Berghella et al., 2006; Coben, 2003; Marr & Hagston, 2007).

Implications for practice

Reports often offer quite detailed practical suggestions for implementing embedded literacy provision. While we found no one perfect way to develop embedded literacy programmes (Skills for Life Development Centre, 2006), a number of suggestions offer ways to plan and deliver effective ones. The Skills for Life Development Centre (2006) emphasises that the learner needs to be central to the planning process. This is strongly supported by others: those who want to ensure the learner is placed in active learning networks (Balatti et al., 2006); offered programming that is responsive to learner needs (Grief, Myer & Burgess, 2007); flexible (Tusting & Barton, 2007); and creates opportunities for learners to exercise autonomy in constructing meaning for

themselves (Benseman et al., 2005; McKenna & Fitzpatrick, 2005). Effective programmes plan for intensive integrated vocational/social and literacy learning (Barton & Pitt, 2003), often in groups (Brooks et al., 2007; Roberts, et al., 2004), integrate team teaching where vocational/community and literacy specialists know, trust and support each other (Bates & Wiltshire, 2001; H. Casey et al., 2006). Snyder et al. (2005) suggest that programmes could usefully include technologies that enable learners to e-mail, chat electronically and text message on mobile phones. These are part of learners' everyday lives and have their own distinct literacy practices.

While there is not one correct instructional strategy, a number of authors (Crowther et al., 2003; Derbyshire et al., 2005; Maclachlan & Cloonan, 2003; Tett & Maclachlan, 2007) emphasise the value of building instructional practices according to adult education principles. Maclachlan & Cloonan (2003), for example, suggest that planning on adult education principles will lead to programmes that are inclusive, enabling, leaving learners in a position to rewrite their deficit views of themselves as learners. There is also some material on assessment and evaluation. Dymock & Billett (2008) and Brooks, Heath and Pollard (2005) tested a variety of formal assessment instruments used in the UK and Australia. They found that none was suitable in embedded literacy settings. Both sets of authors found that formal tests were not suitable for beginning learners, that language must be tailored to the stages the learners are at (Dymock & Billett, 2008), that soft outcomes should be considered for testing and that formative assessment was often more useful than summative (Brooks et al., 2005). Evaluation should be ongoing (Skills for Life Development Centre, 2006) in order to achieve continuous improvement (King & Bingman, 2004), identify critical points of intervention and tailor monitoring to suit the context within which programmes operate (McKenna & Fitzpatrick, 2005; Skills for Life Development Centre, 2006).

Relevance for Aotearoa/New Zealand

These guidelines and the literature that gave them birth, tend to prioritise functional literacy – reading, language and numeracy necessary for employment purposes. Similarly, recent policies (Tertiary Education Commission, 2008) have given priority to literacy for employment - in response to findings from international adult literacy

surveys (Satherley & Lawes, 2006; Walker et al., 1996) and in addition to existing literacy provision. The draft Tertiary Education Strategy 2010-2015 (Ministry of Education, 2009) targets priority groups such as adult learners who need to improve their literacy and numeracy skills to move into skilled employment or higher level study. In contrast, an emerging theme in some research reports espouse notions of new literacies, critical literacy and powerful literacies (Crowther et al., 2003; Hamilton, 2006; McCaffery et al., 2007). Derbyshire et al. (2005) claim such literacies go beyond the technical skills involved in reading, writing and numeracy for employment to include literacies as a social practice. This generates social capital, widely accepted as precursor of learning and poverty reduction (St Clair, 2008). Powerful literacies recognise the deficit power relations inherent in functional literacy and a consequent absence of democratic practices and relationships (Crowther et al., 2003; Tett & Maclachlan, 2008). McCaffery et al. (2007) organise various literacies into four functions: skills, tasks, social practice and critical reflection. None is prior to the other, with the primacy of each varying at different times and for different purposes. It is our view that currently the weight of the literature comes down on functional skills and task. In our summaries we have included evidence that explores the contributions of new and powerful literacies. Funding for social practice and critical literacy provision needs to be continued, even extended, in Aotearoa/New Zealand, in recognition of the important role they play in both work and wider society.

We are mindful that since we wrote the first draft of this report TEC has published a theoretical framework (Tertiary Education Commission, 2009a) and a series of sets of guidelines for embedded literacy in different contexts e.g. institutes of technology and polytechnics, Industry Training Organisations, Private Training Establishments (Tertiary Education Commission, 2009b, 2009c, 2009d). The guidelines below are based on the sources we located. We note some similarities and differences between our findings and the TEC guidelines. Similarities include the 'whole of organisation' approach. Differences include the promotion of the embedded LLN in vocational training as "**the** most effective and efficient way to provide direct, purposeful instruction …" (TEC, 2009a, p. 4, emphasis added) whereas our review suggests that there is no 'one size fits all' approach.

Guidelines

This summary suggests the following guidelines for an embedded approach to LLN provision.

Embedded LLN development will:

- Be 'built into' vocational or community provision and not 'bolted on' to vocational or other activities.
- Be a partnership between industry, communities and literacy specialists who pursue a 'whole organisation' approach with common strategic visions and values, including being learner centred regardless of differences among learners.
- Be owned by vocational or community providers while sharing planning of delivery and quality assurance with literacy subject specialists.
- Develop strategies and approaches that meet organisations' own special circumstance and needs.
- Establish policies, procedures and practices that orientate organisational managers, board members and other stakeholders to the requirements of embedded literacy.
- Fashion supportive structures that involve partners in strategic planning and inform stakeholders about the nature of embedded LLN provision.
- Plan programmes for specific and often unique purposes and contexts.
- Place the needs of learners centrally when developing programmes.
- Build LLN programmes on teaching and learning processes that embrace adult education principles.
- Use continuous quality assurance processes to identify critical points for timely interventions and so achieve continuous improvement.
- Ensure the notion of literacy as social practice is integrated.
- Balance provision between skills building, task mastery, critical thinking and democratic participation.

Embedded LLN delivery will:

- Emphasise authentic, contextual learning using a constructivist approach and learning in groups.

- Craft learning cultures that build trust, honour diversity and develop confident learners
- Employ vocational/community teachers and literacy specialists who work competently and well together.
- Develop and maintain an active professional development programme that offers initial training and ongoing opportunities for development.
- Employ appropriate technology to make LLN relevant to learners' everyday working and social lives.
- Employ assessment methods that consider the readiness of learners, emphasise formative assessment and include assessment of soft outcomes.

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