Working Together

Integrated Language, Literacy and Numeracy Support in Vocational Education and Training

Stephen Black and Keiko Yasukawa
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Table 1 Professional role and state/territory breakdown of interviewees

Acronyms in the main text

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ACSF</td>
<td>Australian Core Skills Framework</td>
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<tr>
<td>ADHD</td>
<td>Attention Deficit Hyperactivity Disorder</td>
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<tr>
<td>AQF</td>
<td>Australian Qualifications Framework</td>
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<tr>
<td>CALD</td>
<td>Culturally and Linguistically Diverse</td>
</tr>
<tr>
<td>CAVSS</td>
<td>Course in Applied Vocational Study Skills</td>
</tr>
<tr>
<td>COAG</td>
<td>Council of Australian Governments</td>
</tr>
<tr>
<td>DEEWR</td>
<td>Department of Education, Employment and Workplace Relations</td>
</tr>
<tr>
<td>ESL</td>
<td>English as a Second Language</td>
</tr>
<tr>
<td>ESOL</td>
<td>English to Speakers of Other Languages</td>
</tr>
<tr>
<td>LLN</td>
<td>Language, Literacy and Numeracy</td>
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<tr>
<td>NESB</td>
<td>Non-English Speaking Background</td>
</tr>
<tr>
<td>NSW</td>
<td>New South Wales</td>
</tr>
<tr>
<td>NVEAC</td>
<td>National VET Equity Advisory Council</td>
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<tr>
<td>RTO</td>
<td>Registered Training Organisation</td>
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<tr>
<td>TAA</td>
<td>Teaching and Assessment</td>
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<td>TAFE</td>
<td>Technical and Further Education</td>
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<td>VET</td>
<td>Vocational Education and Training</td>
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<tr>
<td>WELL</td>
<td>Workplace English Language and Literacy</td>
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Executive summary

This report investigates language, literacy and numeracy (LLN) teachers and vocational teachers ‘working together’ to deliver LLN support to students that is ‘integrated’ with the students’ vocational courses. With the exception of specific workplace LLN programs, this form of provision has been little researched in Australian VET, and yet in the current ‘skills crisis’ environment, and with the federal government’s ambitious targets for increasing the tertiary qualifications of adults, it assumes much greater significance. In this report, we describe current pedagogical practices in programs involving integrated LLN in VET courses, outline the perspectives of key participants, mainly LLN teachers, vocational teachers, managers and students, and then suggest recommendations to improve provision.

Courtenay and Mawer (1995:2) explain that ‘integration’ involves concurrently developing LLN and vocational competencies ‘… as interrelated elements of the one process’. That is, LLN are taught not as separate or discrete skills, but contextualised or ‘situated’ within the process of learning vocational skills. The term ‘integrated’ equates with ‘embedded’ LLN, a term preferred in the UK for VET provision which ‘provides learners with the confidence, competence and motivation necessary for them to succeed in qualifications, in life, and at work’ (Roberts et al 2005:5). In providing a theoretical framework for our study, we refer to some research from the higher education sector on ‘academic literacies’, which resonate with the issues in our study. In particular, in this study we draw on Lea and Street’s (1998, 2006) three models of academic support provided in higher education which they refer to as: ‘study skills’ - a deficit approach focused on ‘fixing’ the problems for individual students; ‘academic socialisation’ – an approach inducting students into the new culture of their chosen disciplines; and ‘academic literacies’ – an approach which views LLN as social practices, and academic disciplines as dynamic and contestable.

The study involved a national email ‘scan’ of LLN providers, in-depth, recorded and transcribed interviews with a total of over 50 LLN teachers, vocational teachers and managers in VET, and three case studies of different pedagogical approaches to integrated LLN in VET, which included student perspectives.

Overall, we find the current picture of integrated LLN in Australian VET to be inconsistent, patchy and ad hoc. Each state and territory has a different mix and extent of provision, and different nomenclature to describe it. A significant focus in this study is on public VET – TAFE Institutes, which deliver the great majority of publicly funded VET accredited courses. Commonly, study centres of various kinds provide LLN support, and there are special ‘stand-alone’ LLN classes available for a range of specific purposes e.g. maths for nurses or improving essay writing skills. Team teaching between LLN and vocational teachers is common in some jurisdictions but not others. There is an almost complete absence of policy driving this provision, and thus the type and extent of many programs depends largely on the motivations and influence of local managers and heads of teaching sections.

Perspectives on the benefits of integrated LLN support in VET are many and significant. They include improved success rates in terms of course completions in VET courses, but also acknowledgement that equity interests are being served by enabling success for many individuals and groups of students who have traditionally encountered barriers to success in VET. Respondents indicate that many students become better workers and students improve their self efficacy and their relations and networks with others. Although improving VET pedagogy is not the main purpose of integrated LLN provision, there is evidence that both vocational teachers and LLN teachers change and improve their pedagogy when they work together. Students also improve their formal literacy
and numeracy skills when they are learning in a context where they can see some direct vocational relevance for these skills.

There are many issues and challenges confronting LLN and vocational teachers in this provision. Deciding how to assess students for their LLN skills for example, varies from online generic LLN testing to informal discussions with students while they are enrolling in their courses. In the Course in Applied Vocational Study Skills (CAVSS), a LLN support course developed in Western Australia, there is a deliberate policy not to assess the students for their LLN skills. How to establish a working relationship between LLN and vocational sections/teachers is an issue, together with deciding what type of support to provide (e.g. withdrawing students or team teaching to the whole class), and LLN teachers trying not to pose a ‘threat’ to the vocational teacher. Professional development is another issue, as virtually no participants (apart from those teaching the CAVSS) had received professional development to assist them in their role – mostly they learnt on-the-job and through trial and error. Always an issue and a challenge for LLN teachers is the extent of the vocational knowledge they need to assist vocational students, and also finding the time to plan how to work together given the casualised status of many VET teachers, and the curriculum pressures to cover more content in less time.

Students are unanimous in indicating the benefits of LLN support, but their experiences vary. For some, the benefit is purely in terms of helping them to get through the difficult ‘theory’ work in their course and the written exams. In other cases, the LLN teacher and the vocational teacher working together is central not only to their success in the course, but to their entry into and motivation to stay in the course.

In regional and remote sites, flexibility is required to respond to the patterns of student attendance in VET courses, and travel costs are a major factor for teachers and students. In some regional and remote sites, two or more organisations work in partnership to provide the vocational training and the LLN support for that training. Indigenous mentors who act as cultural ‘brokers’ between the learners and the teachers are engaged in some cases.

In general we conclude that currently LLN support in Australian VET courses falls within a deficit approach. That is, students are identified to be ‘in need’ of LLN support based on initial LLN assessments at the beginning of courses, and they are then provided with special support – it may be in a study centre, a special class, or the LLN teacher assisting in the vocational classroom. There is an assumption that students who do not demonstrate competence in the kinds of LLN skills examined in these initial assessments will struggle in their vocational studies. In a lot of team teaching cases LLN teachers ‘hover’ to assist needy students in the vocational class, while the vocational teacher delivers in the regular way. This pedagogical model resembles the ‘study skills’ approach in higher education (Lea & Street 1998, 2006) with a focus on ‘fixing’ the LLN problems that some students experience to enable them to pass their course.

We refer to the CAVSS because this model shifts from a deficit model focusing on students with problems to obligatory team teaching in which the vocational and LLN teacher jointly plan and deliver lessons. No students are assessed to identify who has LLN ‘deficits’, and thus the focus is on the whole student groups and not just those with LLN problems. The CAVSS teacher has a role in both the theory and practical workshop sessions of the course, thus ensuring LLN practices are made explicit as students learn to become members of their occupational community of practice. The CAVSS provides an example of a model that accords with Lea and Street’s (1998, 2006) ‘academic socialisation’ model, and which we refer to as the ‘vocational socialisation’ model. That is, the students and the LLN teachers are inducted into the culture of the workplace occupational
community as presented by the vocational teacher's pedagogy, and the students and LLN teachers are required to ‘fit in’ to this vocational pedagogy and discipline.

We also outline a ‘shared-delivery’ model in which culturally and linguistically diverse (CALD) students are enrolled in two courses concurrently, a vocational course and an English as a Second Language (ESL) course. The vocational teacher and LLN/ESL teacher deliver their own courses, but work together as a team, planning and sharing responsibility for the same group of students. In this model the two teachers share an equal role and this encourages them to change their pedagogy to better meet the needs of their students. For example, LLN teachers can become heavily involved in the work placements of students, and one vocational teacher changed from a ‘telling, leading sort of style, to more interactive’. Two teachers with an equal role can share and critique each other’s pedagogy. In a number of respects this model accords with Lea and Street’s (1998, 2006) ‘academic literacies’ model, in so far as the respective pedagogies and the disciplinary knowledge (epistemology) of the LLN and vocational teacher can be challenged. We refer to this as the ‘vocational literacies and numeracies’ model.

We propose a model for integrated LLN in VET that features: a fully integrated model of VET, in which LLN is ‘built in’ to organisational strategic plans, funding, teacher training, professional development and VET ‘products’ including training packages; a focus on pedagogical change which accords with the need for a dynamic, changing VET system to meet changing workplace needs and student demographics; LLN teachers and vocational teachers as equal partners, rather than the LLN teacher providing a secondary, ‘support’ role; a focus on LLN practices embedded in workplace practices, rather than student skill deficiencies thus making explicit LLN practices related to workplace practices for the benefit of whole classes; and a focus on drawing on the students’ own resources, highlighting their positive contribution rather than focusing on what they don’t know.

We recognise, however, that the realities of Australian VET currently hinder the achievement of such a model. These realities include: contestable funding models which discourage the more costly LLN support provision; funding criteria which focus exclusively on course completions; a largely casualised teaching workforce (both LLN and vocational) who are not supported in time and working arrangements to undertake joint planning and delivery; and currently inadequate teacher training and professional development to enable the effective working together of VET teachers for a changing and dynamic VET system.

We make recommendations in three main areas. At the VET policy level we seek recognition that integrating LLN in VET courses is a significant dimension of the VET system, and that it be addressed in VET policy renewal in terms of: teacher training, ongoing professional development, tender specifications for delivering VET courses, improving equity and social inclusion outcomes, improving retention and completion rates, improving employment outcomes for VET graduates, teaching and curriculum development approaches, and VET evaluation and research. The delivery of integrated LLN in VET courses also needs to be recognised as a specialist pedagogical role related to, though distinct from, the delivery of ‘stand-alone’ LLN provision, and be incorporated in the full range of AQF level courses.

For VET pedagogy we recommend that greater focus should be placed on practices which require the LLN and vocational teachers to work together in an equal role, avoid deficit approaches to teaching, ensure workplace LLN practices are addressed as well as academic practices, and in a spirit of critical enquiry, continually improve pedagogical practices to meet the changing needs of students, workplaces and vocational disciplines.
For VET professional development we recommend induction programs for new teachers, professional forums for the exchange of ideas, opportunities for LLN teachers to develop their understanding of the LLN practices needed in workplaces through approaches such as workplace visits or placements, and the promotion of practitioner research to explore good practice models for integrating LLN in VET courses.
Context

Introduction

In this report we are concerned primarily with the ‘working together’ of vocational teachers and language, literacy and numeracy (LLN) teachers to deliver LLN support to vocational students that is ‘integrated’ with their vocational studies. As the literature review indicates, LLN support provided to vocational students in their studies has long been a feature of Australian VET systems, and especially in the public TAFE systems. Yet despite the longevity of this form of provision, it has been largely neglected in a research sense in Australia, or at least, in mainstream VET provision. Integrated LLN support has provided the model for workplace programs funded under the federal government’s Workplace English Language and Literacy (WELL) program for the past couple of decades, but these programs have been better documented (e.g. Woods et al 2006) than mainstream LLN support programs in VET, and thus are not the main focus of this current project. The intention in this report is to describe current pedagogical practices in integrated LLN in VET, outline the perspectives of key informants, mainly LLN teachers, vocational teachers, managers and students, and then suggest recommendations designed to improve provision.

In this introduction to the report we explain some aspects of the terminology and abbreviations used. We refer to language, literacy and numeracy (LLN) teachers throughout, when in fact many such teachers do not use this terminology. In the public VET Technical and Further Education (TAFE) systems, for example, there have long been distinctions between adult literacy and numeracy teachers and English as a Second Language (ESL or ESOL - English to Speakers of Other Languages) teachers (e.g. Hammond et al 1992). For the purposes of this project, we have collapsed these distinctions into the one LLN category, except where we consider it is important to make the distinction. We also refer to vocational teachers and LLN teachers, because there is the need to differentiate them in this study, even though technically most of them are VET teachers. For a similar reason we refer generally to vocational students rather than the broader term VET students.

The broader political and economic context

To explain why the focus on integrated LLN in VET currently has particular significance, it is necessary to briefly outline the broader political and economic context. There is a national concern over a skills crisis (e.g. Gillard 2009), and the government has set ambitious targets to increase the qualifications of Australian adults by 2020 (Council of Australian Governments [COAG] 2008). Low levels of adult literacy and numeracy skills, as measured by national surveys (Australian Bureau of Statistics 1997, 2007), are considered key factors to be addressed because they are linked with the success of the new focus on skills and national qualifications targets (COAG Reform Council 2009:15-18). Industry groups and agencies advising the government are also focusing much of their attention on low levels of literacy and numeracy in the workplace, making correlations with their negative effects on productivity, employment participation and other indicators of economic development (Australian Industry Group 2010, Industry Skills Councils 2011, Productivity Commission 2010, Shomos 2010, Skills Australia 2010a,b, 2011). The federal government’s response to date has included additional funding for workplace and jobseeker LLN programs (Australian Government 2010, 2011) and the development of a new National Foundation Skills Strategy (with LLN as key elements of ‘foundation skills’).

The focus on skills development and increased qualifications has lead to VET receiving renewed government attention, with new alignments proposed between VET and higher education (Australian Government 2008). There is a heightened concern for improving student completion rates, and funding is becoming increasingly contingent on achieving completion targets (Skills Australia 2010b:54-
However, many students, often those seen to fit within various ‘disadvantaged’ categories, are not completing their studies successfully (National VET Equity Advisory Council [NVEAC] 2010). ‘Embedding and contextualising foundation skills development across all AQF [Australian Qualifications Framework] levels in VET’ has been recommended as one strategy to improve equity outcomes in VET (NVEAC 2010:14). This embedding and contextualising we refer to as ‘integrated’ in this project, and as we have suggested in another forum, it is an additional aspect of LLN provision that we believe should be addressed in the National Foundation Skills Strategy (Black & Yasukawa 2010).

What is meant by ‘integration’?
The concept of ‘integrating’ LLN in VET became popular from the mid 1990s, following in particular a publication from Courtenay and Mawer (1995) in which they explain that conceptually, integration involves concurrently developing LLN and vocational competencies ‘… as interrelated elements of the one process’ (p.2). In other words, LLN are taught not as separate or discrete skills, but contextualized or ‘situated’ within the process of learning vocational skills. Usually this concept finds form in various team teaching strategies, and it also stands in contrast to ‘stand-alone’ LLN provision in which the primary focus is improving LLN skills which may or may not be linked to the vocational contexts of learners. In the integrated LLN model in VET, the primary focus is vocational learning. We need to be careful to distinguish between the ‘delivery’ of integrated LLN provision in the classroom/training room, which is the focus of this project, and other forms of integrated LLN, such as the ‘built in not bolted on’ approach to integrating LLN in the training packages (Wignall 1998) which underpins what is taught in Australian VET. Currently there are calls to further develop the built in models of training packages and also the integration of LLN in other areas of VET, such as teacher training and professional development (National Quality Council 2010).

Conceptually, integrated LLN is very similar to ‘embedded’ LLN, which is the preferred terminology in the United Kingdom (Roberts et al 2005, Casey et al 2006, Latham 2010). Roberts et al (2005:5) explain that embedded LLN:

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 at work.

What is of interest to us in this definition is that it indicates broad ranging program outcomes that go beyond helping students to simply pass vocational courses.

In UK studies, a distinction is made between ‘embedded’ and ‘discrete’ LLN provision (in Australian contexts, the latter is sometimes referred to as ‘stand-alone’ provision). The UK researchers point out, however, that there is overlap between embedded and discrete forms of LLN support, and they maintain there is a role for the latter in vocational learning ‘providing it is integral to the delivery of the vocational curriculum and done by teachers who have close links with the vocational classroom’ (Roberts et al 2005:10). We follow this line of argument in this study, and while we discuss further the concept of integrated LLN support in the implications and conclusions section of this study, for the main part, we do not attempt to draw a distinct line between what we refer to as integrated and stand-alone provision. Provided, that is, the main focus of the stand-alone LLN provision is vocational learning. This pragmatic and broadened perspective is necessary because, as we discovered early in our research, few practitioners or managers working in the VET field use the term ‘integrated’. To focus solely on an integrated concept of LLN that few practitioners refer to in practice (and some may have difficulty in clearly conceptualising), would have been unnecessarily limiting in this study. We found, for example, in some early interviews respondents were initially confused over what was being integrated. Was it literacy with numeracy, or literacy and numeracy with VET? Thus, as a broad working...
understanding, we researched perspectives on LLN support programs that were established primarily to assist vocational students with their studies.

**Literature review**

In this literature review we focus briefly on Australian-based studies followed by some developments overseas, and then in the section that follows we consider theoretical frameworks, starting with an explanation of a deficit approach, and then contrasting it with an approach we favour, a social practice approach.

LLN support for vocational students has long been a feature of TAFE college provision, going back more than thirty years (Wickert et al 2007:251). While this began as ‘stand-alone’ provision, with the developing concept of integrated LLN, Australia was seen at one stage to have led the world (Australian National Training Authority 2003:3). As we indicated in the introduction to this report, integrated LLN provision is the norm in workplace programs conducted under the federal government’s WELL program, and is considered to be a key factor in the success of these programs (Woods et al 2006:14-16). To date, integrated LLN provision has received most attention in workplace programs (e.g. Seflon et al 1994, Woods et al 2006, McKenna and Fitzpatrick 2005), though the concept has also been promoted as the basis for community programs featuring cross-sectoral partnerships (Wickert and McGuirk 2005).

There are various ways of providing LLN support for vocational students, including individual and small group tuition in study centres, ‘stand alone’ LLN classes, and team teaching. The latter provision is of main concern to us because it is usually associated with the concept of integrated LLN support. In some state jurisdictions such as New South Wales, team teaching has been established and documented as ‘good practice’ for many years in TAFE colleges (e.g. Randazzo 1989, Glossop 1990, Black 1996, Access & General Education Curriculum Centre 2005). Also, from as long ago as 1990 in TAFE NSW, professional development programs were developed which encouraged the ‘working together’ (TAFE NSW 1990) of vocational and LLN teachers (which partly prompted the title of our project report).

While some other states have also promoted integrated LLN delivery (e.g. Queensland – see Foley 2002), one model of integrated LLN delivery, the Western Australian developed Certificate in Applied Vocational Study Skills (CAVSS), has been particularly influential, being delivered in a number of states and territories in the past decade. In the CAVSS, explained in more detail later in this report, vocational and LLN teachers work closely together, often as ‘tag teachers’, delivering to the whole class in both theory and practical sessions (Bates 2004).

As we have indicated, in the UK the term ‘embedded’ is used to describe integrated approaches, and embedded LLN support has been found to lead to improved student retention and higher success rates (Casey et al 2006). The implication in the UK research is that ‘discrete’ LLN provision relates to deficit approaches (described below), while ‘embedded’ provision facilitates the acquisition of LLN skills in the process of students becoming socialised ('apprenticed' – see Lave & Wenger 1991) into membership of their new occupational community. Embedded LLN support is provided usually in a team teaching mode in all aspects of the course, including when students are carrying out the practical tasks of their course (Roberts et al 2005:8). A possible ideal would see LLN integrated in all aspects of the VET system, a ‘whole organisational approach’ as proposed in recent research and policy documents in Ireland (Hegarty & Feeley 2009, National Adult Literacy Agency 2009) and New Zealand (Tertiary Education Commission 2008, Whatman, Potter & Boyd 2011). This would include LLN integrated in college strategic plans and professional development, in addition to the delivery of courses.
Theoretical frameworks

To date there has been little documented discussion in Australia over the theoretical foundations of LLN support in VET. Primarily, the focus seems to have been on the practice of VET, guided by the apparent common-sense rationale of providing LLN support to students identified as being ‘in need’. In workplace programs, this idea of providing special assistance only to those in need, was identified by McKenna and Fitzpatrick (2005:29) as a deficit model, and this model characterised early workplace programs to the mid 1990s, but not the ‘integrated’ programs that followed. In fact, implicit in the notion of ‘integrated’ LLN provision, especially that involving team teaching, seems to be the assumption that it avoids a deficit approach, though as we will indicate later in this report, it is a false assumption.

We use the term deficit approach in this report which amounts essentially to the process of ‘blaming the victim’ (Valencia 1997:x). In other words, people are held responsible for their own failures rather than any structural inequalities in society. Rogers (2006:129) views the dominant (or orthodox) paradigm of lifelong learning to be a deficit one. He explains that the cause of inequalities conceptualised in this paradigm, ‘is that some people lack resources which others possess, a matter which can be remedied by the provision of inputs’. Typically, special programs are set up for the less well educated, ‘those who are in deficit’, in order for them to ‘catch up’. It is quite easy to see how some forms of LLN support for vocational students can be considered to fall within this deficit paradigm – including special after-hours (‘stand-alone’) LLN classes, ‘remedial’ classes, and attending a study centre for one-to-one or small group LLN assistance. One of the significant outcomes of deficit approaches, especially in the field of adult LLN, is the sometimes negative and debilitating effects they can have on people’s self image, their identities. This has been documented for more than thirty years in adult literacy and numeracy studies (e.g. Jones & Charnley 1978, Grant 1987, Barton et al 2007). Another significant outcome is that it focuses on a pedagogy designed to ‘fix’ the problem, and often this leads to a view of literacy and numeracy as discrete or atomised (‘autonomous’) skills which can be taught in isolation from their contexts of use. The assumption in the deficit approach is that once these ‘basic’ or ‘functional’ skills have been mastered (i.e. ‘fixed’), often involving the use of repetitive exercises (drills), they can then be transferred across to all other life contexts. Such an approach is contested by a social practice approach.

By understanding literacy and numeracy as social practices, we recognise there are many literacies and numeracies that people use in the different domains of their lives (e.g. Barton 2007). Some of these might involve the formal academic literacies and numeracies associated with schooling, but many more relate to people’s everyday lives, and have been termed vernacular literacies (Barton & Hamilton 1998). All literacy and numeracy practices are patterned by social institutions and power relations, and some practices become more dominant and visible than others. In formal learning contexts, such as the VET context of this study, it is usually the formal academic literacies and numeracies that dominate. Most everyday literacy and numeracy practices are not formally learnt, but are acquired through self discovery, help from friends or modelled from others in the process of one’s changing life circumstances, needs and motivations. Teaching from a social practice approach takes account of students’ lives and draws on their familiar everyday literacy and numeracy practices, rather than focus on what they can’t do in terms of the formal academic literacies and numeracies (see Appleby & Barton (2008:5).

Recent research in the UK on ‘literacies across the curriculum’ in further education (e.g. Ivanic 2009, Ivanic et al 2009) adopts a social practice perspective that directly challenges deficit approaches in VET, because it challenges the established pedagogical practices which serve to identify students as deficient. They provide examples of how vocational teachers can change their pedagogy, including assessment practices, by drawing on the rich variety of everyday literacy and numeracy practices of their students to make learning more meaningful to students. Miller and Satchwell (2006), also researchers in the same
research team, indicate that by drawing on the everyday literacies and numeracies of students, teachers’ views of their students’ capabilities are raised, which in turn enables students to achieve more from their courses. Ivanic et al (2009) also analyse the literacy and numeracy practices of different vocational courses and attempt to link these more appropriately with the actual practices required to work in their disciplinary areas. In some cases, more formal, abstract course assessment tasks, such as essays, were found to have little relevance to the actual work practices in the jobs for which these students were being trained. Hence, such literacy and numeracy practices, which can be seen as part of an overall ‘academic drift’ in VET (see Edwards & Miller 2008), needed to be questioned. The social practice approach to LLN research is significant for indicating that potentially, LLN teachers have a role that goes beyond the deficit notion of simply helping students to pass exams, to actually changing VET pedagogical practices.

To help our understanding of how vocational teachers can integrate LLN in their pedagogical practices, it is useful to draw on higher education studies of ‘academic literacies’, especially in view of the blurring of boundaries between VET and higher education in Australia following the Bradley review (Australian Government 2008). It also needs to be recognised that there are dual sector institutions featuring both VET and higher education programs. Most higher education institutions have ‘study skills’ provision, which provides academic LLN support to individual students within an approach which largely fits the deficit paradigm. That is, students attend study skills centres because they are perceived to lack the generalised (i.e. de-contextualised, ‘autonomous’) LLN skills needed for success across all academic disciplines. An increasing number of researchers are now questioning this approach, in some cases proposing ‘doing away’ with study skills (Wingate 2006), or at the very least, including an additional ‘social practice’ approach which is seen to be more effective for student learning because it draws directly on the specific LLN practices used in the disciplines (e.g. Jacobs 2005, Boughey 2006, Haggis 2006, Lea & Street 1998, 2006, Lawrence 2009). Much in the way that a vocational area in a VET context has its own conventions and ways of operating (i.e. discourses - ways of being), involving a range of different LLN practices, so too with academic disciplines in the higher education sector.

A social practice approach enables learners to acquire the literacies and numeracies of their academic discipline in the process of learning that academic discipline, that is, in mainstream classes through an integrated approach which in some cases involves team teaching between academic literacies teachers and discipline experts. The social practice approach draws largely on theories of social learning, and the concepts of situated learning (Lave & Wenger 1991) and communities of practice (Wenger 1998). Lea and Street (1998, 2006) add further distinctions by differentiating between what they call the ‘academic literacies’ approach, and the ‘academic socialisation’ approach. An integrated LLN approach may equate strongly with the academic socialisation approach insofar as it involves ‘acculturation into disciplinary and subject-base discourses and genres’ (Lea & Street 2006:369) which are relatively stable and uncontested. The academic literacies approach (i.e. social practice) on the other hand, recognises the dynamic and political nature of what represents a discipline, and introduces the potential to challenge both the epistemological assumptions of that discipline and the identities of the student in becoming a member of a new academic community.

Jacobs (2005) provides an academic literacies example from a higher education context in South Africa which resonates particularly with the VET contexts in our study. Drawing on Gee’s (1990) concepts of Discourses, Jacobs explains that students and academic literacies teachers are ‘outsiders’ and discipline experts are the ‘insiders’ of the academic discipline (Discourse) to be mastered. By team teaching, the presence of the academic literacies teacher may well cause the discipline expert to view their own teaching practices differently, more as an ‘outsider’ would, and thus make adjustments and possibly teach more explicitly in order to increase the understanding of students who are not yet a part of the
discourse community of their chosen academic discipline. As a team teaching discipline expert explained:

… just working with a language person, you suddenly realise that you’re veering way into the discipline, like talking out from the discipline rather than bringing people in with you … the notion of discourses is that when you’re inside one and you’ve been inside one for a long time, you forget what it’s like to be out of it … (Jacobs 2005:487)

These discussions are important for our study of integrated LLN support in VET because they indicate a social practice approach, particularly that which embraces the literacies approach, may be seen to encourage a pedagogy for change. It is an active approach likely to cause existing pedagogical practices to be questioned and improved. A study skills or deficit approach by contrast can be seen to be one which aims to accommodate students to the pedagogical status quo. These higher education studies, and other work on social practice approaches, form the theoretical framework for much of our discussion, implications and recommendations in this report.

Research questions
This project aims to provide the beginnings of an Australia-wide study of integrated LLN support in VET. It provides some baseline data on what provision currently exists in mainstream VET provision, before examining some of the main pedagogical issues, implications and recommendations for action. There are five research questions:

1. What is the extent and type of integrated LLN support provided in the state and territory VET systems for students undertaking accredited courses?
2. What do vocational and LLN teachers consider are the main benefits of integrated LLN support and what are the main pedagogical issues and challenges for working together?
3. How do vocational students respond to, and change as a result of, the provision of integrated LLN support?
4. How do varying contexts, for example, different vocational areas, geographic areas and student demographics, influence the provision and outcomes of integrated LLN support?
5. What are the recommendations for VET policy, pedagogy and professional development for effective integrated LLN support on accredited VET courses?
Methodology

Design and methods

There were four interlinked, but nevertheless distinct, research phases in this study, with the final phase comprising recommendations.

Phase 1 was an environmental scan of each of the Australian states and territories. The scan was not designed to provide a definitive picture of LLN support in VET, rather, to provide an idea of the range and types of support operating around the country. The scan used the database of LLN providers held by the operators of the Reading Writing Hotline. This database is the only 'national' database of LLN providers and has been used successfully in previous studies (e.g. Balatti, Black & Falk 2009). LLN providers on the database were contacted by email, and they were asked to respond online to a set of closed and open-ended questions on a Survey Monkey platform. These questions mainly addressed research question one of this study, seeking information from providers on whether LLN support was provided, and if so, the nature of this support. The survey also informed the researchers of the location of key informants and respondents for phase 2 of the research.

Phase 2 featured semi-structured interviews with key informants, mainly LLN and vocational teachers and their line managers involved in integrated LLN support. The interview respondents were selected (purposive sampling) across most states and territories partly from those programs identified in the environmental scan as providing LLN support, and also through referrals from state adult literacy and numeracy councils. The interviews were a mixture of face-to-face and telephone interviews, and all interviews were taped and transcribed in full. Focus questions were developed (see Appendix) which enabled the interviews to explore in depth the issues involved in providing integrated LLN support on vocational courses, and the main pedagogical issues and challenges for working together (addressing mainly research questions two and four). Interviews usually took between 45 minutes and one hour to complete.

Phase 3 featured three case studies of integrated LLN support in VET. The aim of the case studies was to provide a more detailed ‘in practice’ account of LLN support, including student perspectives in three diverse learning contexts. The three case studies included: a ‘whole organisational’ approach in a VET campus in which all students were informally assessed at enrolment time and literacy and numeracy support was available in all vocational areas; a ‘shared delivery’ model in a VET college in which students received parallel provision by ESL and vocational teachers; and a case study in two remote areas featuring mainly Indigenous workers receiving LLN support while undergoing training in a mining company. All three case studies were undertaken over a longer research period of several months. The case studies included taped semi-structured interviews with managers, teachers, and students which were later transcribed in full. In one case study there was an additional, taped focus group forum involving approximately ten LLN and vocational teachers, and a series of classroom observations and reflection sessions by teachers. In another case study, a vocational class and a LLN class were observed and student comments were recorded. Phase 3 provided data to answer research questions two, three and four.

Phase 4 developed recommendations for effective integrated LLN support in VET courses for policy makers, managers and practitioners. The recommendations drew on data from all research phases to address the final research question five.
Samples
In research phase 1, the email database of all LLN providers in Australia provided by the managers of the Reading Writing Hotline comprised 1000 email addresses. A response rate to the emailed request for providers to complete the Survey Monkey was not possible to determine however, because an estimated fifty percent of those email addresses were either incorrect, and thus did not reach their intended personnel, or the personnel were no longer working at the email address provided. Further, in most cases only those providers who did in fact provide LLN support on vocational courses in their organisation made the effort to respond. In total, there were 128 responses to the Survey Monkey, though not every provider completed a response to each question. Of the 121 respondents who responded to the question about what type of educational provider they were, 61% (74 providers) said they were public providers. The remainder were a mix of private Registered Training Organisations (12%), community agencies (11%), libraries (3%), independent consultants (2%), volunteer agency (<1%), and unspecified others (11%).

Of the 125 respondents who indicated in which state they were based, the overwhelming majority were from New South Wales (58), followed by Victoria (31), Queensland (21), South Australia (11), Western Australian (9), Australian Capital Territory (3), Tasmania (3) and Northern Territory (1).

In total, 53 taped interviews were undertaken with teachers and managers in the combined phases 2 and 3 of this research. The professional roles of the interviewees, according to the state and territory breakdown, are shown in Table 1.

<table>
<thead>
<tr>
<th>State/ territory</th>
<th>Number of LLN teachers</th>
<th>Number of vocational teachers</th>
<th>Number of managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Capital Territory</td>
<td>0</td>
<td>0</td>
<td>1 (F)</td>
</tr>
<tr>
<td>New South Wales</td>
<td>11 (all F)</td>
<td>5 (F:3, M:2)</td>
<td>1 (F)</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>0</td>
<td>1 (M)</td>
<td>2 (both M)</td>
</tr>
<tr>
<td>Queensland</td>
<td>3 (F:2, M:1)</td>
<td>0</td>
<td>2 (both F)</td>
</tr>
<tr>
<td>South Australia</td>
<td>0</td>
<td>0</td>
<td>2 (both F)</td>
</tr>
<tr>
<td>Victoria</td>
<td>12 (F:7, M:5)</td>
<td>4 (F:3, M:1)</td>
<td>3 (all F)</td>
</tr>
<tr>
<td>Western Australia</td>
<td>2 (F:1, M:1)</td>
<td>1 (M)</td>
<td>3 (all F)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>28 (F:21, M:7)</strong></td>
<td><strong>11 (F:6, M:5)</strong></td>
<td><strong>14 (all F)</strong></td>
</tr>
</tbody>
</table>

State/territory breakdown of respondents (F – female, M – male)

In one of the case studies, observations of a team teaching class in a trade section were undertaken each week for one hour for a period of seven weeks, and involved approximately 15 students (all male) and the trade and LLN teacher. Two students from this class and six students from another vocational course were interviewed (three male students and five female students). In another case study, brief interviews were conducted with 15 students (all male) during an ESL class, and these same students in their vocational class were observed for two hours and recorded.
Findings and discussion

The extent and type of integrated LLN support

This section briefly addresses the first research question: What is the extent and type of integrated LLN support provided in the state and territory VET systems for students undertaking accredited courses?

No national consistency

Even allowing for limitations in the sample size and that this study sought only a ‘scan’ of LLN support in VET courses around the country, the first comment we make is that there is no ‘national’ picture in terms of overall consistency of provision. Each state and territory has developed provision differently and with a different nomenclature, and even within the states and territories there is little consistency. The public VET systems, mainly TAFE Institutes, show some degree of consistency in terms of how they describe this support and the types of programs they offer, but the fragmentation of TAFE Institutes in most states into relatively autonomous statutory organisations has further differentiated provision. In fact, one TAFE manager specifically viewed her Institute’s particular approach to the provision of integrated LLN support on VET courses as a case of ‘market differentiation’ from other TAFE Institutes. In other words, she saw their provision as representing a competitive advantage in the VET marketplace.

A variety of types of provision

In TAFE NSW, the largest VET system in the country, LLN support on VET courses is termed ‘learner support’, and for many years previously it was termed ‘tutorial support’. These terms resonate with some other states and territories, but not others. Often the provision involves one-to-one or small group tuition in a ‘study centre’, but which goes by a variety of other names, including ‘individual learning centres’, ‘flexible learning centres’, and ‘drop-in centres’. In a dual sector campus in one state there is a mentoring program in which final year students assist first year students, though this provision appears to be more extensive in the higher education courses. Team teaching is referred to a lot, but what it actually entails may differ between providers. In some cases it may mean a LLN teacher co-planning and co-delivering with the vocational teacher to the whole class, while in other cases (most cases) LLN teachers provide assistance in the class only to those students assessed as needing it. In one state there is provision called ‘shared delivery’, in which students are enrolled in both a vocational course and a LLN course which are run concurrently. In other states similar courses are termed co-delivery. In some states the term ‘embedded’ LLN is used in preference to ‘integrated’ provision. These terms are problematic however, and while this study is primarily concerned with ‘integrated’ LLN support, in practice, as we indicated earlier, few providers use the term ‘integrated’ to describe what they do.

Most states and territories offer a variety of LLN support for VET courses, and this includes study centres, team teaching, special ‘refresher’ sessions in maths or English often at the start of courses, and withdrawing students assessed as ‘in need’ for special ‘stand alone’ LLN classes. Sometimes these classes are provided as ‘additional’ (called ‘adjunct’ classes in one organisation) for students, either before or after their scheduled vocational classes or by appointment with LLN teachers. In one state TAFE Institute, students not meeting the entry requirements for vocational courses are referred to stand-alone LLN programs where they are required to reach a requisite level of LLN skills (to Certificate II level) before they are permitted to enrol in a vocational course. We can refer to this as a traditional ‘front-end’ approach to providing LLN support, that is, attempting to ‘fix’ the LLN problems before students start the course. One area of provision we have not specifically focused on in this study is flexible delivery.
While some aspects of this study do relate to flexible study modes (such as access to study centres), we have focused primarily on mainstream, college-based study modes.

The responsibility for LLN support provision usually rests with the LLN section in the college (referred to variously as access, adult basic education (ABE), adult literacy and basic education (ALBE), literacy and numeracy (L&N), ESL (English as a Second Language), ESOL (English to Speakers of Other Languages), general education, foundation studies, adult foundation education, vocational access and other similar descriptors). Usually also in TAFE systems, the funding of LLN support is drawn from the LLN section’s budget, and hence this provision competes with other LLN program priorities. In one state TAFE system, provision of LLN support is provided by the student services section as part of a suite of other support services, including counselling. In some colleges within a state TAFE Institute, LLN support on VET courses is the only LLN provision available, with ‘stand alone’ provision being no longer funded, or having been deemed the responsibility of just one college or another organisation. In other Institutes and colleges there is hardly any LLN support of any kind.

Quantifying the extent of LLN support is thus highly problematic. At best, we can say that a variety of types of provision exist in most TAFE systems, but provision is patchy and ad hoc. The extent of provision appears to be largely a measure of the motivations and personalities of individual heads of teaching sections and the managers to whom they report, and their ability to argue the case for priority funding. If there is congruence between the motivations of these personnel (as in two of our case studies), fairly extensive support can be provided, but this is very much the exception. In private registered training organisations (RTOs) we know very little of the LLN support they provide. Due to the resource implications of providing this support, the likelihood is that provision overall is relatively sparse.

**Lack of policy**

Very few respondents in our study indicated their LLN support was driven by policy, and it is rare to find this type of provision documented, and at best, it may be a local, undocumented policy. In Western Australia the CAVSS is well documented, and there are guidelines on how the course is to be delivered. However, it is not a policy to deliver the course, rather, it is entirely dependent on local teachers recognising the need and requesting it. In one TAFE institute, featured in one of our case studies, LLN support was ‘built in’ to their organisational strategic plans, but we found no other examples of this. In another TAFE college in a different state jurisdiction, however, it was an understood, but nevertheless undocumented policy, that all new students in the college were informally assessed to determine their LLN support needs.

Many LLN providers have delivered integrated provision under the WELL program, which is well documented, and has a well developed policy, funding and pedagogical base, but as we indicated earlier, this current study is concerned with VET provision more generally, which is usually (but not necessarily) VET college-based rather than enterprise-based. Overall in the states and territories, integrated LLN support in VET lacks policy direction, priority funding for programs and research, and consistent pedagogical approaches. It has developed ad hoc according to local needs and the motivations of local teachers. It is an area of VET pedagogy which has considerable value, as we indicate in the next section of this study, but it has been neglected as a distinct disciplinary area.
Main benefits of integrated LLN support

The following paragraphs address the first part of research question two: *What do vocational and LLN teachers consider are the main benefits of integrated LLN support?*

**Improved success rates**

Overwhelmingly in the many interviews undertaken with teachers and managers, the view was expressed that the key benefit of providing LLN support to vocational students was their improved success rates in completing their studies. This provides the basic rationale for many VET practitioners in providing this support, and the idea that without it, many students would drop out or fail their vocational courses. One trades teacher who regularly team teaches with a numeracy teacher commented, when asked what would happen if no numeracy support was provided, ‘You’d have a higher failure rate, a very, very high failure rate … I would hate to think how long it would take some of these guys to finish their trade’. Another teacher, recounting the effects of a LLN teacher in another trades course with a particularly difficult group of students, commented:

… she got them through … (she’s) legendary in automotive and people still talk about her over there. I was in a meeting just recently, and they said without (name of teacher) there is no way those kids would have got through.

Many other similar comments were made by interview respondents that are too numerous (and repetitive) to document in this report.

We made no attempt in this study to substantiate these beliefs about improved success rates with quantitative data because the resources required to do so would be extensive, requiring large samples of control and experimental groups for valid comparative data. In the UK, one such study in further education colleges indicated a 26 percent higher success rate for courses in which LLN were ‘embedded’, compared to those that weren’t embedded. Student retention was 16 per cent higher too (Casey et al 2006:5).

**Equity**

The second main benefit, which many respondents inferred rather than specifically stated, concerned equity, the fact that LLN support is provided for individual students and groups who, through various life circumstances, experience difficulties in accessing, participating, and achieving successful outcomes in VET. One of our case studies involving a ‘shared delivery’ program provides a good example of this, including an automotive servicing (Certificate II) class that was established, along with a parallel ESL class, to meet the needs of a group of culturally and linguistically diverse (CALD) students, including Sudanese, Afghan, Turkish and Vietnamese speakers. Referring to these students and other groups in the college, a vocational teacher said that without the program of LLN support many of them would have been excluded from even enrolling in a course, or would have dropped out, ‘purely because of their English or literacy and numeracy skills, basically’. In another program, a head teacher of adult literacy and numeracy stated that if LLN support was not provided, ‘some of the teachers in the vocational areas would be less inclined to attend to equity issues in their class’. She then went on to provide a cross-cultural example: ‘It’s about having perhaps Asian students increasingly in our classes and … they (vocational teachers) don’t think they have the language skills to engage with them’. This comment was made in the context of the vocational teachers’ need to cover so much curriculum content in a limited period of time, and not having the time or the skills to address the specific LLN needs of students. One LLN teacher explained, ‘they’re so driven to get through things’, and as a vocational teacher stated, ‘I don’t have time to spend on one student … explaining every technical term and so forth’.
It is primarily from an equity perspective that one significant national report has recently recommended that LLN support be embedded in all vocational courses (NVEAC 2010).

**Employment and better workers**

The case was made by a number of respondents that providing LLN support went beyond the aim of improving course completions to making for better workers. This was because a number of LLN teachers saw their role in the practical application of workplace skills, and not just in theory classes and in preparation for exams. In the shared delivery model mentioned previously, one LLN teacher on an aged care course took an active role in organising work placements and visiting students during their placements, and the teacher became fully versed in the aged care work curriculum. This teacher stated that, ‘in the end, what we’re really on about is making these people successful in getting a job’. Another LLN teacher in the same college, working with an automotive teacher, actively assisted students in their attempts to establish a small automotive business in the area. In the CAVSS model, there were examples of LLN teachers spending up to half of their programmed teaching time on practical work in the trade workshops. The point was made by one LLN teacher that the aim was to improve work skills, and the best place to do this was in the practical workshops. He stated:

> It is ... as if people don't speak or read or talk or do geometry in a workshop. It is like the world does not understand what a vocation is or what a vocational person does ... what happens in the classroom is extremely important, but it all happens again in the workshop.

**Students’ improved self efficacy and better relations with others**

Less tangible benefits from LLN support programs were also expressed by interview respondents, such as students improving their self confidence and belief in their own abilities, and improving their relations with teachers and others. It is an accepted and documented outcome of adult literacy and numeracy pedagogy that students improve their self efficacy and their social relations with others, which we refer to as social capital (Balatti, Black & Falk 2006, 2009). There is no reason why vocational teachers should not also promote social capital outcomes, but frequently in the course of our study we were told of the increasing pressures on vocational teachers to do more with less, including reducing the duration of their courses and at the same time maintaining or expanding the level of curriculum content. This heavy focus on getting through the course content can come at a cost to the relationships vocational teachers develop with students. The role of the LLN teacher can be seen to mitigate this to some extent. For example, one LLN teacher providing support to young students on an automotive trade course said (with exaggeration and metaphorical jest): ‘It’s a real double act, I mother them, he slaps them down, I pick them back up’. The point to be made is that adult LLN teachers are well practiced in focusing on the relational aspects of pedagogy (see Balatti & Black forthcoming). Working with small groups of students or one-to-one encourages LLN teachers to have a closer relationship and to get to know more about their students’ lives, including what might be affecting their students’ performance in the classroom. Vocational teachers, however, may have less opportunity to engage with students in these ways. An example of this was provided by a mature-aged male student about to complete a hairdressing course, who said he had suffered for many years with ‘dyslexia and ADHD and stuff’. He said it was the weekly one-to-one support from a LLN teacher that gave him the confidence to start the course in the first place, and to manage to work his way through it. He said there was ‘no way in the world’ he could have managed the course without the support of the LLN teacher, whereas for vocational teachers, ‘somebody like me they just don’t understand, they just don’t get it’.
Improved VET pedagogy

The issue of whether providing LLN support, especially in the form of team teaching, improves the pedagogy of vocational teachers is controversial because it suggests that LLN teachers are the pedagogical experts. In the CAVSS course one teacher specifically stated, ‘I always tread very carefully … I’ll go to any lengths for a vocational lecturer not to think that I am some sort of superior being …’ This teacher expressed considerable respect for vocational teachers and made it clear he wasn’t there to judge the pedagogy of vocational teachers. However, by the same token, he was aware that working as a team teacher with vocational teachers had the potential to change teaching practices. As he stated:

I can see various teaching skills that some lecturers I’ve worked with pick up and use. Various adult teaching principles … simple things, like just doing some group work in the classroom for example, which might take away a little bit of the competitiveness in the classroom and encourage a little more working as a group, working as a team to meet an outcome. Things like that.

Other respondents were more direct in indicating that the LLN support teacher could directly influence vocational pedagogy. In one TAFE college, the manager of the college explained how experienced trade teachers had benefited from working with LLN teachers: ‘It opened their eyes to a whole lot of things. Classroom management changed, I mean, a whole lot of strategies …’ She also said it was the college practice to ‘buddy up’ newly qualified vocational teachers (‘brand new people from industry, never taught before’) with experienced LLN teachers in team teaching situations as a way of introducing vocational teachers to good practice teaching.

The aim of providing LLN support was not to improve the pedagogical skills of vocational teachers, but many examples were provided of how vocational teachers have nevertheless been influenced in their teaching practices. The automotive teacher in a shared delivery program, for example, had learnt a great deal about how to teach CALD students through joint planning and working closely with the LLN teacher who was embedded in the automotive section. His teaching with this group of students was ‘completely different’ to the traditional ways of teaching which were based on written assessments. As he explained, ‘I’ve gone from a telling, leading sort of style to more interactive, I want feedback. I want the students to be involved. I want them to have more hands-on. My style has changed’. Another LLN teacher working with aged care students thought that one of the main changes in vocational teaching which resulted from working with LLN teachers was greater awareness of:

the way they speak or deliver, because sometimes if you use a lot of idioms in your delivery, they tend to just go over the top of the heads of the students … and some of the teachers might have gone a bit quick or spoke too quickly in their delivery.

Of course, the other aspect to improved VET pedagogy was the way LLN teachers improved their pedagogy as a result of working with vocational teachers. It was a two-way process. Some LLN teachers on the shared delivery program, for example, indicated how their pedagogy had changed (and improved) to accommodate the specific vocational practices of the discipline they shared their program with. In particular, the idea that their pedagogy should incorporate visits to the worksites of their students during work placements, was a marked departure from their regular LLN pedagogy.

Improved literacy and numeracy

Discipline-specific vocational learning is the priority in LLN support programs, and most respondents in our interviews neither measured, nor were they primarily concerned with the improved LLN skills of
students, except in the context of their vocational course. Undoubtedly, however, many students improved their LLN skills in a formal academic sense in addition to acquiring the LLN practices associated with their vocational disciplines. One of the CAVSS teachers provided a good example of how this learning 'in context' worked:

I've had a number of students over the years say to me, 'do you know I never ever was able to do maths or even understand maths until you came into the class and started tying what we're doing in our trade, our vocation, to the maths, and then it all started to make sense and kind of pennies dropped'.

In the shared delivery model in which students are co-enrolled in both the vocational course and the LLN course which in turn was linked to the vocational course, students received quite an explicit focus on LLN as they would in any 'stand-alone' LLN class, and their LLN skills improved accordingly.

A new legitimacy for LLN in VET

A final benefit we discuss here is the potential for elevating and legitimising the role of LLN in VET. We have already mentioned that in one college, the LLN support provided was used as ‘market differentiation’ in the competitive VET marketplace. For a number of years LLN teaching sections, as traditional ‘access’ sections with a heavy focus on ‘stand-alone’ provision, have had difficulty maintaining their role and their funding in VET systems due partly to the perception that they are not directly vocationally relevant. LLN support provision on the other hand is seen to be directly related to vocational outcomes. This provision can also be profitable in a fee-for-service sense. One college manager applauded the literacy and numeracy teaching section as the ‘biggest earner in terms of commercial dollars’ due to a major contract with a company supporting Aboriginal students for an apprenticeship test. The LLN support was crucial to the success of the program which had run for a number of years, and according to the manager, ‘we’ve lost one apprentice in that time’. A further factor which makes LLN support central to VET, is the shift to outcomes-based funding. As the same manager noted, ‘to get full funding, the person has to complete’, and it’s the LLN support that helps to ensure more students complete their vocational studies. These shifts in VET policy and the new government focus on foundation skills present opportunities for LLN, and caused one head teacher to comment, ‘It’s our day; our day has arrived’.

Pedagogical issues and challenges for working together

The second part of research question two asks: *What are the main pedagogical issues and challenges for working together?* In addressing this question, we focus on a number of aspects, and in particular on the relationship between LLN teachers and vocational teachers which is the key to understanding integrated LLN support in VET. While there is general acknowledgement that LLN teachers and vocational teachers working together depends on mutual respect and building trust, how to establish this relationship can be quite problematic, and there are a number of issues to contend with as we discuss below.

*How (and whether) to assess students for LLN?*

Most LLN support programs are dependent firstly on the identification of groups of students in need of LLN support. Unless the need can be established it may be difficult to justify funding for the support. Thus, the first relationship aspect is between LLN sections and vocational sections assessing in some form the students who need assistance.

Nearly all TAFE systems have these initial testing/assessing mechanisms, though they vary considerably, and they can be seen to fit along a continuum ranging from formal, decontextualised testing at one
extreme, to informal chats with students at the other. In one state TAFE system, for example, a formal test exists at course enrolment time, managed by the Admissions section, which effectively screens out those students deemed likely to experience difficulties in passing the course due to LLN problems. As a respondent explained, if people do not have the minimum entry requirements to get into a course:

… they will sit a TAFE admissions basic skills test … It is totally multiple choice, requires no extended writing, and against this people then get scored, and they can or can’t get into Cert III or a Cert IV.

Unsuccessful students are then referred to ‘stand-alone’ LLN provision, where they can improve their skills to Certificate II level before being allowed entry to a vocational course, or they can attempt the admissions test again. In a regional centre in another state, a generic online initial assessment tool is currently being developed to be undertaken by all new students following their enrolment in a course. These formal and generic testing processes can be contrasted with an informal process at another TAFE college in a different state, where LLN teachers play an almost surreptitious role during course enrolments. In this college, in every teaching section, while students are queuing up to enrol in their courses, LLN teachers interact informally with the students, asking them to write some basic details about themselves in order to obtain individual student ‘profiles’. The manager of the college calls this:

… a conversation… about what have you done before and why are you interested in this? And it’s about picking up language and literacy… We don’t say you’re going to have your literacy assessment … They (LLN teachers) are just another person on the vocational section’s team.

The individual student ‘profiles’ containing background details and a brief example of the students’ writing are then used in negotiations between the LLN section and the vocational sections of the college in deciding which students are most likely to need support, and in which classes.

Most commonly, and for many years (see Kelly 1989), LLN teachers have devised their own ‘screens’ which they tailor to the particular curriculum needs of the different vocational sections. A carpentry course, for example, will feature trade calculations typically required in the carpentry course. In one state there are discipline-specific ‘skills checks’ which LLN teachers can use for assessing students. Usually in the first week of classes, or the first teaching session, LLN teachers administer the screens to all new students and, as with the abovementioned ‘profiles’, use the results as both evidence of the need for LLN support, and to decide where it is best provided. Respondents were asked if they used measures based on the Australian Core Skills Framework (ACSF), the nationally developed assessment and reporting tool, and very few did. The issue was largely one of funding. If the LLN support was provided under the federal government’s WELL program or the jobseeker program (Language, Literacy and Numeracy Program – the LLNP), there was a contractual obligation for providers to use the ACSF to assess students. When there was no such obligation, few providers used the ACSF.

In the CAVSS no LLN assessment of students is undertaken. This is because CAVSS is designed to deliver support to the whole student group, not just those considered to need assistance. Delivery of CAVSS is sought from vocational sections based on the perceived value of providing support to the whole group.

Establishing a ‘working together’ relationship

The relationship between LLN teachers and vocational teachers depends a lot on how the LLN is planned to be undertaken, and how ‘integrated’ it will be. If the intention is to withdraw students from class or arrange special times before or after the vocational class to provide the LLN support, then the
relationship between the respective teachers is less significant. In this situation, by and large, the students provide the LLN teacher with their class notes and can explain their needs. If the intention is to provide team teaching or a closer working relationship, as in the shared delivery model, then much more time and planning is involved. One LLN teacher in the shared delivery program explained that for the program to be successful, both teachers and their respective departments needed to be committed firstly to working together, and secondly, ‘to make changes to how things are done’. Without this commitment on the part of both vocational and LLN teachers, team teaching was unlikely to work. According to this teacher, the lead-in process to shared delivery might take three or four months to allow for the selection of staff and for everyone to become clear about goals, outcomes and parameters.

Sometimes the process of establishing a team teaching arrangement takes a lot longer. One LLN teacher said it took years before she managed to work in the accounting section in her college. It began with her providing out of class support to accounting students and the occasional one-to-one tuition and then, as she explained, ‘I gained a little bit of a reputation. By word of mouth I found people coming to me. Over time I managed to get myself invited to work in class with one of the accounting teachers’. In other cases, working relationships began strategically through informal ways. One LLN head teacher asked the rhetorical question and provided the answer, ‘how do you get all the hairdressing teachers to a meeting to talk about learner support? Offer champagne’. The issue prompting this particular case was that hairdressing students started their college day at 8.00am and finished at 5pm, and there was little opportunity for LLN teachers to work with them unless it was during class time. One effective way to talk about these issues with hairdressing teachers in a friendly and informal way was over a glass of bubbly (a ‘champagne soiree’) which helped break down barriers and hopefully opened up the receptiveness to team teaching in some form.

What type of ‘integrated’ role?

As we indicated earlier, few teachers actually refer to the term ‘integrated’ to describe their practices, but teachers are nevertheless aware of the need to develop LLN skills that are embedded within the context of vocational learning, and that the primary aim is vocational learning. Usually these practices are expressed in various forms of team teaching, but interpretations of what team teaching means in action vary considerably. The most common understanding is that the LLN teacher will be in the classroom with the vocational teacher, but primarily to assist those students in the class who are ‘in need’ of assistance with the LLN demands of the course. We refer to this as a ‘hovering’ model, as one teacher explained that in the vocational classroom she mainly works with ‘her’ group of students who need additional help, ‘so I just hover and take good notes and then I just ask questions that I think they may not understand’. Another teacher explained how she targets mainly students in need:

I move around sometimes, just maybe if I pick up a term that I think a particular student might not be aware of; I might just quietly go to that person and explain particular terminology.

These examples indicate a secondary, supporting role, in which LLN teachers are largely passive, listening for much of the instructional part of lesson while the vocational teacher delivers the content, and then working with individuals or groups of students having difficulties. This way of working seems to be accepted by many vocational and LLN teachers as the norm. Some teachers did explain however, that while they may start in this way, it often leads over time, depending on their persistence and motivation, to them playing a more active team teaching role. One experienced LLN teacher explained that for one week she ‘hovered around the edge’, and then she started with a ‘language box’, a section on the whiteboard where she wrote up some of the terminology used in the classroom. After a while, the vocational teacher she was working with could see the value of this exercise, and incorporated it in the
session, as the LLN teacher explained: ‘every now and then she turns around and she says, ‘Would you mind putting up something about …?’ Oh yes, okay, and I'll put that up’. Also, when the teachers understand each other better, the LLN teacher might (tactfully) suggest for example, ‘they're looking a bit tired, can I have 10 minutes with them and I'll wake them up for you’. Or the teacher might suggest, ‘Can I have 10 minutes at the end of the class and do some revision work?’ Strategies like this can lead by stealth to the LLN teacher becoming a more active agent in the team teaching process. Behind the face-to-face delivery, the LLN teacher may also have a strong role to play in developing the resources of the vocational course, for example, incorporating explanatory notes in course handouts. One LLN teacher later discovered that her ‘boardwork’ in a commercial cookery class had been photographed by the vocational teacher and was used in later classes as a classroom resource.

In the CAVSS model, LLN teachers are expected to work closely with vocational teachers in the planning and delivery of the course to the whole class and not primarily to those experiencing problems. Often this involves ‘tag’ teaching, a strategy requiring mutual trust and respect in which the two teachers take it in turns to address the whole student group, with the vocational teacher focusing on vocational content, and the LLN teacher making explicit the LLN practices. Beyond the CAVSS, however, few LLN teachers claimed to teach together in this way, though one head teacher in a trades section claimed this model was more common in previous years.

A final comment needs to be made regarding the shared delivery model in which the vocational course and an LLN course are run in parallel. On the face of it, this is not team teaching, but in fact it involves the vocational teachers and LLN teachers working very closely together, planning their courses. In some cases, the LLN teacher is physically located in office space in the vocational area (an automotive section), and in another case, an aged care teacher has her office space in the ESL section. While this model does not necessarily mean joint delivery in the classrooms as team teaching (though sometimes this does happen), the close working relationship between the teachers certainly qualifies as a ‘team’ approach. In some other support programs, LLN teachers were also found to be ‘embedded’ in the vocational section, and thus their preparation, administrative work and informal social interactions were with other vocational teachers and not their fellow LLN teachers.

LLN teachers as a perceived threat

Quite a few of the LLN teachers interviewed made the point that they needed to be careful in how they worked with vocational teachers due to the perceived threat they may present to those teachers. One LLN teacher explained that her relationship with the vocational students was the cause of much of this threat:

… it’s not so much they feel threatened by the knowledge you have but adult literacy teachers have a certain patience with students. We’re aware that people learn in different ways and take longer to learn things. I have found vocational teachers don’t always have that awareness. They seem a little bit threatened by the fact that some students prefer to approach the learner support teacher than their class teacher.

As we mentioned earlier, some teachers are especially concerned not to be seen to be judging the pedagogy of the vocational teacher, and it requires particularly good skills on the part of the LLN teacher to provide support to students in a way that doesn’t threaten the vocational teacher. A head teacher of a vocational section stated that she had trouble convincing some of her teachers that team teaching was a good thing, but a couple of teachers were threatened by it, ‘they felt they were being watched’.
One LLN teacher in an office administration class spoke of the ‘mindless stuff’, the exercises the students were required to do in the class, and that she had to navigate her way through trying to represent the students’ interests but in a way that did not undermine the teacher. Her spoken discourse in the classroom featured terminology such as, ‘we’re not with you here mate, we’re not with you’, and ‘I tell you what, what about if … ? Would that be ok if I had a go at … etc etc.’ In other words, in a diplomatic way that would not upset the vocational teacher, the LLN teacher was trying to adapt the pedagogy to better meet the student needs. As this LLN teacher said of team teaching, ‘it’s all interpersonal’.

Another teacher followed a similar line by explaining that LLN teachers need to fit in with a softly, softly approach:

... you've got to be the sort of person who can subdue their ego and make other people not feel threatened, so you absolutely can't go barging in there with an agenda. It's got to be, I'm here to help, whatever you like, whatever you think, especially initially. Perhaps after a while (when) they can trust you, you can negotiate a little further, but it's really got to be softly, softly.

A role in the theory AND the practice of vocational learning?

By far the majority of teachers interviewed regarded LLN teachers as having a role in the theory but not the practical components of vocational courses (though we acknowledge not all courses have a practical component). Even LLN teachers with up to 20 years experience in this kind of work were adamant, ‘no, never go to the practicals’ and ‘keep me away from the hammers’ (i.e. a panelbeating course). Part of their rationale was the efficient use of their time, with one LLN teacher stating, ‘we probably could if we had 10 times our budget. I’m sure we would be very useful’. Interestingly, one LLN teacher who was heavily involved in supporting the practical side of the hairdressing course a decade previously, now had no such role. She explained this was largely due to curriculum changes: ‘… they’re so driven to get through things. We still do a bit of it, but there doesn’t seem the luxury anymore’. This same teacher was asked if this meant her primary aim was for students to succeed in the academic requirements of the course rather than to be successful in their workplaces as hairdressers. The teacher responded: ‘I’d hope that they’re the one and the same thing, but they’re not. No, you’re right, there’s very much the focus on getting them through the assessments and keep them in the course’. Quite apart from these issues though, it was pointed out that there were occupational health and safety issues for LLN teachers working in the practicals, with one teacher stating, ‘you’ve got to be very careful about what teachers are telling people to do in areas that have got equipment, chemicals, things like that’.

The flip side to the above responses though was the minority of LLN teachers who did see a role for themselves in the practical sessions. There were not many, but those involved in the CAVSS were philosophically of the view that they should be involved in both the theory and the practice of vocational learning. As we’ve indicated earlier (benefits section – better workers), one CAVSS teacher spends half his teaching program in the practical workshops in the trades course he provides support on. This varies with other CAVSS teachers, depending on how the teachers wish to structure their teaching, but the point was made that vocational learning is most effective when learnt on the job or during the practical application where it has most relevance. Interestingly, the shared delivery model was not designed to involve LLN teachers in the practical side of vocational learning, but several LLN teachers had become heavily involved through their total engagement with the program. One teacher providing support on a business administration course actually organised the practical placements for the students ‘because I had a number of contacts’, and he then visited the students ‘on behalf of the business administration and for this department (ESL)’. Likewise with a shared delivery teacher on an
aged care course, who had worked on this program for the past five years, and from the start he involved himself in the clinical student placements in aged care centres. He said this was to ensure he knows exactly what the industry requires, enabling him to speak with some authority on aged care work, and also:

   to show my support to them (students) while they’re there, even if it’s just to go along for an hour to see what they’re doing and what issues they’ve got and how they’re putting together some of the writing tasks while they’re on the job … the common goal is to get them into work.

The role for these few LLN teachers thus extends far beyond getting people passed their theory assignments and exams.

**Professional development for working together**

This issue, the professional development of teachers wishing to be, or currently engaged in LLN support on vocational courses is an important issue, but one that can be dealt with quite expeditiously because there was very little evidence of such professional development. Only in the CAVSS did we find formal professional development was available, in fact mandatory for LLN teachers wishing to deliver the course (Western Australian Department of Education and Training 2008). Interestingly, CAVSS professional development does not apply to the vocational teachers who will be working with the CAVSS teachers. This would appear to be because the aim is for the LLN teachers to ‘fit in’ to the vocational domain and not vice versa. The great majority of teachers we interviewed for this project, LLN and vocational teachers, simply learnt how to work together ‘on-the-job’ with at most, a supportive head teacher or a colleague to help them along and provide advice. In some TAFE Institutes there was evidence of some ‘in-house’ professional development provided locally by LLN coordinators.

In the TAFE Institute where the shared delivery model was operating, all newly appointed vocational teachers undertaking the mandatory qualification, the Certificate IV in Teaching and Assessment (TAA), were required to complete the LLN elective of the course so they would have some understanding of LLN issues.

With a little irony, we have entitled our study ‘working together’, drawing the title from an extensive professional development package developed in TAFE NSW in 1990. It is ironic because, more than two decades on, no current TAFE NSW teachers interviewed for this project could provide details of any recent specific professional development activities on LLN support in VET.

**How much content knowledge is needed?**

A longstanding vexed issue in the provision of LLN support in VET is the extent of specific vocational knowledge required by the LLN teacher. Teachers spoke of their early difficulties getting to know the content in vocational areas where they initially knew next to nothing. For example, a LLN teacher providing support on a rigging/scaffolding course stated:

   I really struggled for the first year, and I was constantly in that staffroom saying ‘I don’t know what this question’s about?’ … It’s a whole new language, concepts I’ve never heard of: lifting loads and angle factors.

What usually happens however, is that after a period of time the LLN teachers become quite knowledgeable in the vocational content. Some of the teachers had been providing LLN support for many years and it was inevitable they would learn much about aspects of vocational areas. One teacher
said she started as a support teacher in panel beating in 1992, ‘My very first day, very first class was panel beating. I’ve been in there with them since then’.

In a couple of cases the LLN teachers actually acquired the vocational qualification they were providing the support on. One involved a teacher on an office administration course, and another involved an accountancy course. In both cases, the teachers acquired the credibility as vocational experts while also providing LLN support. Occasionally also, the teachers gained sufficient vocational knowledge to temporarily replace an absent vocational teacher. One college manager said:

Now they’re not accountants, or they’re not electrical trades, or they’re not hairdressers, but they can continue the work because they know enough about the language, the terminology, what the teacher’s been doing. Sometimes that can be quite seamless to the students.

However, not all LLN support teachers saw themselves as vocational experts despite spending considerable time in the vocational sections. A LLN support teacher in an automotive section said that despite hearing the information many times, ‘I can’t give the practical illustrations, I can’t answer the questions’. Other teachers, including a CAVSS teacher in the building trades, were quite adamant that their role should not replace the vocational teacher’s in any way, even though at times to an outsider it would have been difficult to distinguish the two teachers working together in the classroom. In one sense there could be an advantage in the LLN teacher not having strong vocational knowledge. As with the students, the support teacher would be an ‘outsider’ to the discipline, and thus in a position to better understand the needs of students and indicate to the vocational teacher areas of misunderstandings.

No time for joint planning

The point was made by quite a number of the LLN teachers that while they would like to work more closely with vocational teachers and establish more team teaching, there were a couple of key factors limiting this, namely: curriculum changes and staffing conditions. We have already mentioned that one head teacher considered that providing support in the practical component of vocational courses was now a ‘luxury’ they couldn’t afford due to curriculum pressures. Some indication of these curriculum pressures was provided by a vocational teacher who stated: ‘TAFE has cut the hours of instruction right back. They get minimal hours to learn. Some of the subjects have been cut in half over the years’.

Similarly, a head teacher of an accounting section said that for next year, ‘Our Certificate IV will no longer be two semesters, it will be one semester. Our diploma will no longer be three semesters, it will be two semesters’. Other vocational teachers spoke of the new focus on short courses of six months duration, and the role of full fee-paying students who could fast-track their way to a trade qualification in just one year instead of three. These curriculum pressures, combined with the ever increasing compliance and audit measures meant some teachers considered they no longer had the time to spend negotiating and planning properly for team teaching.

The second factor concerned the casualised status of so many teachers. This varied across organisations and states, but in one TAFE NSW college, for example, all the LLN support on vocational courses was provided by part time/casual teachers (known as contract or sessional teachers in some state jurisdictions). Furthermore, many of the vocational teachers had the same casualised employment status. In these circumstances, teachers had little opportunity, and neither were they paid to discuss and plan team teaching as they shifted between their different part time work in different teaching sections, colleges and even sectors. In some other states the situation appeared different. In a several Queensland TAFE Institutes, and in some Western Australian CAVSS programs for example, there were full time literacy and numeracy teachers who only worked as support teachers on vocational programs.
Literacy and numeracy support at what level course?

Much of the LLN support was provided on lower level courses (Certificate I-III) which are not the main priority for federal government funding, but there was a role recognised for LLN support on courses at all levels. A college manager indicated that with new funding arrangements for courses based increasingly on course completions, it was important that LLN support was available in all courses to maximise completion rates. Examples were provided of LLN support on the Certificate IV and Diploma courses in Training and Assessment (TAA). Fee-for-service courses and workplace programs (WELL) also often included higher level work requiring writing for policies, procedures and compliance. Some teaching sections, in recognition of the changing VET environment, are eschewing the term ‘basic’ (as in adult basic education) and adopting other terms such as foundation studies, because they consider much of their work is no longer ‘basic’. The recent report by National VET Equity Advisory Council (NVEAC 2010) recommends that foundation skills be embedded in courses at all levels in VET (our italics), as does the recent report by the Industry Skills Councils (2011:7).

Dependency and issues of special treatment

Some final issues which we will discuss briefly in this section include a couple of potentially negative outcomes from providing LLN support due to dependency on the part of some students, and resentfulness about special treatment from some teachers and students. Some students, for example, may get so used to receiving LLN support that they feel they can’t do without it, and sometimes do not develop as independent learners. This may be particularly the case when students receive support in a separate class or as one-to-one tuition. A mature-aged hairdressing student, for example, appeared totally dependent on one particular LLN teacher who provided weekly one-to-one sessions with him in the library, and who acted as the reader/writer in any written assignments and exams required in the course. The student argued that without this support there was ‘no way in the world’ he could have managed the course, which may well have been the case. But it also meant that after receiving LLN support for several years prior to the course, and on the course, he couldn’t manage his life without it. He said he expected to continue receiving the LLN support even when working full time as a hairdresser. For him, LLN assistance was becoming a lifetime dependency.

A vocational teacher also made the point that sometimes the students receiving the extra LLN support make less effort in their studies because they depend on their LLN teacher to provide them with all the support they need. The teacher stated:

There are the other students who think they’ve got adult literacy and numeracy support, and then they don’t put the work in. They expect the support teacher to do all the work for them. It’s true, like today, have you studied? Have you looked at your notes? Why bother, they’ve got support?

One vocational teacher also said that sometimes the mainstream students not receiving the LLN support resented that others in the class were receiving special treatment: ‘... the other students say, “why have they got special preference? ... that’s not fair” ‘. One LLN teacher said he had come across the occasional vocational teacher who thought that providing LLN support was in some way cheating, and another said some teachers ‘are a bit concerned that we might help them over the line’ when they think the students should be doing the work on their own. On the other hand, some vocational teachers appeared to be overly dependent on the LLN support teacher to get the vocational students to pass their courses.
Most of the above issues arise when LLN support is not integrated well with vocational learning, and thus they contribute to the case for integrated provision.

**Student responses and changes**

Research question three asks: *How do vocational students respond to, and change as a result of, the provision of integrated literacy and numeracy support?*

The data for this research question were limited to interviews and observations undertaken in two VET institutions as part of the case studies, and therefore they need to be seen more as snapshots of student responses in specific locations rather than generalised accounts.

One small group of six Certificate III Beauty course students, all female and young (to early 20s), and all but one speaking English as an additional language, received LLN support mainly in the form of individual or small-group tuition outside of class time through appointments with the LLN teacher. On two occasions, the LLN teacher had come into the vocational classroom to write notes which she then printed off for the whole class, but as one interviewee observed, ‘if you don’t go to see her, she won’t help you’.

These students had language needs associated with English not being their first language, but the work they were training for was largely practical, and one student expressed the view that reading and writing had a limited role:

> ... in the industry we have to know about skin and everything, but we don’t have to sit down and do tests about it. So, it’s more in beauty – it’s more practical, so there’s not really much reading and writing you have to do.

The problem for these students was passing the many written assignments and exams in the course, which some students expressed frustration with. One student stated, ‘I think too many theory exam. They should have more practical exam’. Another student commented, ‘we just keep doing it. Within two weeks another theory (exam) and, you know, so on until the end of the course’. Quite a few students do fail the course, and they simply re-do the exams until they pass. If required, the LLN teacher will sit with a student as a reader for the exams: ‘they just explain the question. Like try to use another word’. One student said, ‘Practicals is fun, but, you know, the theory is, you have to put everything in writing’.

The LLN support provided on this program was fairly traditional. Students requiring support made specific appointments with the LLN teacher to obtain support, and this support was primarily aimed at getting the students to pass the many theory exams. It is difficult to identify, for these students, any meaningful changes resulting from this provision beyond passing their theory exams.

In a second student group, this time in an electrical trades course in the same VET institution, but involving young males, classes were observed each week over several weeks, and two students were later interviewed together. These classes featured an electrical trades teacher and a LLN teacher working together as team teachers in the classroom with approximately 15 students. Language and literacy issues did not receive much focus, but a large part of each session comprised exercises on academic maths – mainly the transposition of formulas, which some students continually had problems with. In the sessions there was considerable repetition as worksheet exercises on transposition were jointly delivered by the two teachers. The two students interviewed had few problems with their course, claiming they enjoyed the course ‘on and off’, though they did find some of the work repetitive. One complaint was the relative lack of practical work on the course, and while this was only the first year of the course, it was felt at this stage the course would be of limited use to them in the workplace. One said:
There’s a lot of formulas and stuff like that, whereas the practical side of things, I don’t think there’s enough – like, if you did the whole TAFE course and then went out for a job ... you’d know nothing sort of thing. It might get better or different.

Both students could see the value of two teachers in the classroom with one specialising in maths, especially for other students who hadn’t been to school for a while or who had left school early. What they liked in particular were the genuine exchanges between the teachers to clarify points: ‘they even converse in the middle – so each of them know what they’re talking about, which is good because it explains it to everyone’.

The main repetitive element for both students was the prolonged work on academic maths, ‘like, we spent six weeks solid just doing transposition. We’re now in second semester and some guys still can’t do it properly’. They also spoke of the disruptive element of some students who experienced problems with the academic maths and who appeared not to be very committed to the course.

The third student group we feature here is very different again to the previous two. The students were all males from CALD backgrounds – quite a few from the Sudan, and others from Afghanistan, Turkey and Vietnam. This was a shared delivery course, and therefore the students were enrolled in two courses – a LLN course and a Certificate II in automotive servicing. Both courses were linked closely, and the two teachers, while they taught their own respective courses, essentially worked as a team, meeting together early in the morning once a week to jointly plan their teaching programs, and sharing resources and ideas.

The interviews with the students revealed unanimous enthusiasm for the way the course was structured, the quality of the teaching, and the outcomes of the course. All students claimed strong gains in their spoken and written English skills, their automotive knowledge, and their positive attitudes to further study and/or work. Many of these students had previously been mechanics. Typically, one Sudanese student said, ‘I have lot of experience, mechanics ... just the English here is difficult ... I know everything about the car, just after it is difficult, you need the certificate, you need to follow the rules’. These students were very anxious to obtain work, preferably as a mechanic, but were limited by their English skills and their lack of Australian qualifications. Typically, another students said they started ‘from beginning’ with their spoken English, and were now ‘going better’. One said as the result of the course, ‘... all the parts name, how to fill job card, how to report information for the car ... do a lot of practice in workshop, transmission, cooler, everything we now become better’.

The shared delivery model enabled these students to undertake a course which they would not have been able to undertake in the mainstream way – they would not have had the entry requirements. One student said, ‘so they will put you at the back of the line ... very hard to get into’. The automotive vehicle servicing course was chosen because it led directly to job prospects. But because the course had been so successful, the two teachers and the students were at the time of the interviews lobbying for the students to be allowed to enrol in the Certificate III automotive next year, which, if they passed would result in them becoming trade qualified mechanics. A small group of students were also planning to start up their own automotive servicing business.

There were a number of factors that enabled such high student satisfaction and successful course outcomes for a group of students for whom successful outcomes are often problematic in the VET system. The LLN teacher focused exclusively on the spoken and written English these students would require in the automotive workforce, and her program was jointly planned with the automotive teacher. For the automotive teacher, his program delivery shifted markedly from the traditional automotive
teaching model in order to accommodate these students. His pedagogy changed, with his main focus being on practical work with the written work as secondary, as he explained:

To me, their learning is based more about doing, so we spend large amounts of time actually doing the job, and then talking about how we do the job, and then writing about the job, where the (traditional) apprentice program is, we write about the job, and then we do the job. So I’ve reversed the whole process.

The three student groups featured in this section were not meant to be compared to each other, but in terms of their responses and how they had changed as the result of the LLN support program they participated in, some comparative observations may be useful. These brief observations indicate how various pedagogical strategies may have different outcomes for students.

In the beauty course, students attended special one-to-one or small group LLN support primarily to get them through the written exams, and this support was successful in terms of passing their theory exams. However, the students saw little link between the written theory work and the practice of being a beautician, and this was reflected in their relative lack of enthusiasm for their course.

The electrical trades students were also largely lacking in enthusiasm because the primary focus of much of the course so far had been on endless exercises on academic maths, and in particular, transposition of formula. These students also could not see the direct links between this form of study and their later work as an electrician. The team teaching may have been beneficial in teaching the academic maths, but without direct practical application, motivation for the course was limited.

The shared delivery program of enrolment in an automotive and LLN course, however, featured highly motivated students who thoroughly enjoyed their courses, spoke very highly of their teachers, and who were working hard to obtain employment in the automotive industry. In both of their enrolled courses the students saw the direct relevance of their studies to their future work aspirations. Further, while they all had spoken and written English needs (which identified them as a shared delivery group of students), the courses were interactive and drew on and respected their pre-existing knowledge as former mechanics in their home countries.

Varying contexts

Research question four asks: How do varying contexts, for example, different vocational areas, geographic areas and student demographics, influence the provision and outcomes of integrated literacy and numeracy support?

There is of course an almost endless range of contexts which may influence provision and outcomes, and some aspects relating to different vocational areas and different student demographics have been touched on in previous sections. Geographical area is the context we will focus on in this section, and in particular, LLN support provision in more remote areas. Our interviews included VET providers in remote areas of the Northern Territory, Western Australia, North Queensland and South Australia.

In the Northern Territory case study the focus was on providing LLN support to Indigenous mine workers, and unlike most programs in this study, the ones in this case study were funded under the WELL program. Key issues for the students/workers included the background of the trainer in the RTO, and the role of mentors and culturally senior people. The trainer in one particular site worked well with the mine workers at least partly because, as the researcher explained, ‘he had a skin name and was known in the region’. The involvement of a ‘culturally senior person’ was also significant. He had worked in the mine for a long time and was known and trusted by the workers. He provided a liaison and translation support role for the trainer because the students spoke an Aboriginal language as their first language. This senior person was instrumental in ‘Aboriginalising the curriculum’, enabling the
workers to learn new concepts in their first language, and follow this up with work in English. In another mine site Aboriginal mentors played a significant role providing tutoring and support outside the classroom.

The most obvious difference between metropolitan VET provision and provision in more remote regions, is the number of students enrolled in courses and in consequence the economies of scale that affect the extent and type of LLN support. One teacher in a remote Western Australian VET college estimated that while a class may comprise 20 students in the city, it might be 10 in her VET college, and of those students, there may be several doing different level courses – certificate levels II, III and IV all in the same class. This made it problematic providing team teaching for example, and much LLN support tended to be individualised in open learning centres. Student demographics varied too, with an increase in the number of Indigenous students, many of whom spoke English as their second or third language. Due to the LLN needs of many of these students, the focus was mainly on lower level courses, with relatively few students moving beyond certificate II.

One Indigenous vocational teacher described the provision of LLN support on a remote VET course – an agriculture (beef cattle) Certificate II course, undertaken by 10 young Indigenous students who were resident at the cattle station during the week. While the literacy demands for this type of work are fairly minimal, students do need maths skills to calculate the truck loads of cattle for the road trains, the construction and repair of fencing, and to determine water tank needs for the cattle. While most of this was learnt on the job, a CAVSS teacher provided additional support for the maths work, and due to the remote location and the fact that CAVSS stipulates no more than 20 percent of the total course hours, the teacher travelled to the location once a week for a two hour class. The course needed to be adaptable to the needs of this program, and while the two teachers met beforehand to plan the sessions, and they were present in the same training room, there was a strong demarcation of roles as the vocational teacher explained: ‘I do the practical with them, she does the theory’. He was present in the classroom not as a co-presenter, but largely ‘for the boys when they misbehave’. According to the vocational teacher, the program was successful in providing employment opportunities in an area where there are few employment opportunities. He also drew attention to some complex cultural factors at play in which some students, regardless of their LLN levels, were reluctant to progress further in courses and take on head stockman-type positions due to their kinship status in Indigenous communities. As he indicated, ‘your nephew can’t talk too much to your uncle and so forth …’

In other remote locations examples were provided of the need to adapt the LLN support provision to meet the needs of students, indicating that the business rules applying to courses cannot always be strictly adhered to. Sometimes, for example, a teacher took a small group of students aside and gave them additional LLN support – which strictly speaking falls outside the CAVSS rules.

In far North Queensland there are also challenges for mainstream VET providers in providing LLN support in VET programs. Many programs have a high representation of Indigenous students who may travel for block study to centrally located colleges or RTOs but who cannot access LLN support from within their home communities once they return home. There are many vocational programs delivered by a range of private RTOs and public VET organisations, and there are instances of these providers working in partnership to provide the vocational training with LLN support. One private RTO in particular, specialises in both assessing the LLN needs of Indigenous students with their customised assessment tool, and providing LLN support on these programs which are usually delivered in the local communities rather than in central VET institutional locations. The type of support provided needs to fit into the programs being delivered, and again, there needs to be greater flexibility in the delivery of LLN support compared to city locations. Very rarely would there be the opportunities for any form of team teaching. Sometimes the work in the local communities involved the use of Indigenous community
mentors, and examples were provided of mentors undertaking some training (the literacy and numeracy competencies of the Certificate IV Teaching and Assessment) and assisting in programs with some one-to-one tutoring. In many cases, Indigenous students on apprenticeship programs undertake their on-the-job training in their local communities, and then attend week-long block training with a VET provider in a regional centre several times a year. In one case, apart from the LLN support provided during the block training, a teacher flies to a remote local community every second week to provide one-to-one tuition to assist a student with the maths on a carpentry course, and to assist some other students in a childcare course. Clearly there are cost factors to this form of provision, and also providers indicated there are difficulties in finding suitably qualified and experienced teachers. A large part of the funding for LLN support in these remote areas was provided under the WELL program.

In all of the above remote sites, examples were provided of teachers and trainers needing to be flexible in their pedagogical approach to accommodate the needs of local students, and this flexibility extended to how students were assessed in VET courses. A VET manager in North Queensland for example, stated:

Some of the vocational trainers use quite a lot of oral assessment because unless there’s literacy and numeracy required in the job or in the competency, there’s no reason for them to have to write an essay ...

Similar comments were made in the Northern Territory mining case study.

In some of the regional towns and the more remote areas of South Australia, as with the examples above, there are challenges relating to smaller student numbers and low completion rates. In the South Australian public VET system quite a wide range of LLN support programs are available, with a LLN coordinator claiming, ‘we’ve had to be a lot more radical with our delivery just for a mere survival rate because of the thin market’. The delivery modes include ‘applied learning’, which involves LLN teachers working in the vocational classroom with vocational teachers, and some ‘core skills’ work which is often one-to-one support. Also included is an online tutoring program purchased under licence in which VET students obtain individual assistance from mainly university graduates. Another initiative being trialled is an online generic diagnostic tool for assessing the basic literacy and numeracy skills of students enrolled in courses.

In summary, the four geographical sites for VET delivery outlined above indicate that in more remote areas, providing LLN support on VET courses requires flexibility and adaptability. Strategies such as team teaching between vocational and LLN for example, may be problematic with small and diverse student groups and with many students having extensive LLN needs. Often the support provided is more individualised, with a lot of one-to-one provision, sometimes using local community mentors. There are additional travel costs, lower economies of scale, and the difficulty of employing appropriately qualified and experienced LLN teachers in these areas. LLN teachers in these contexts not only need to have the specialist LLN skills, the ability to work with the vocational teachers, but also be culturally acceptable to enter and work in the communities of the learners. Online support is one area that is being trialled as a means of overcoming the tyranny of distance.
Implications and conclusions

An overall deficit approach
In the research literature outlined at the start of this report, we briefly explained what we meant by a deficit approach, and linked it to the idea that people, rather than structural inequalities in society, are held responsible for their own failures. We also indicated that deficit approaches are reflected in various remedial programs targeting those assessed to be ‘in need’. When applied to the findings of our research, the conclusion we make is that, overall, LLN support in Australian VET fits within a deficit approach. Almost invariably, LLN support is viewed as a pedagogical strategy for enabling students with ‘problems’, often termed ‘disadvantaged’ students (see NVEAC 2010), to succeed in their vocational courses. Often these students are seen to fit within various ‘equity’ target groups who traditionally have experienced lower success rates in VET. These groups include Indigenous and culturally and linguistically diverse students, various students groups categorised as ‘at risk’, older students returning to study, and some categories of disability groups. Furthermore, as we indicated in the literature review, the deficit approach is typically based on a view of LLN as ‘functional’ skills that can be learnt and assessed in relative isolation of the context of their use (as in study centres or special stand-alone LLN classes).

The key indicator of a deficit approach in this research is the requirement to assess students, usually prior to or immediately after course enrolment, to determine those who are ‘in need’ of LLN support. Almost all VET providers in all states and territories have assessment regimes in place, and we have briefly mentioned some of them ranging from pre-course generic online testing, to 20 minute customised ‘screens’, to informal chats with LLN staff during course enrolments. These assessment regimes are based on ‘standards’ established in VET which identify ‘deficits’ that may or may not have a direct bearing on students’ abilities to succeed in their chosen vocational field. They do not identify and draw on the everyday literacy and numeracy practices of students that overseas research has shown can be very valuable in VET learning (e.g. Ivanic et al 2009). In some cases these assessments have been designed to keep students out of courses, requiring them to build up their basic LLN skills to a specified level before they are allowed to enrol in a vocational course. Nevertheless, whether the LLN assessments are overt and harsh or informal and surreptitious, the aim is the same, to identify those students who are ‘in need’ and then to provide a program to address those needs.

Is ‘integration’ the answer?
In the literature review it was suggested, with reference to both VET literature and some higher education literature on academic literacies, that integrated LLN approaches, especially those involving team teaching between LLN specialists and discipline experts, enabled provision to move beyond a deficit approach. In the VET context, this suggestion was made on the basis that the whole class rather than selected students assessed as having problems benefits from more explicit LLN teaching in the process of learning the new skills and competencies required of their vocational course. If this form of LLN support was extended also to the practical or field work required in the course, then conceptually, LLN would be truly ‘situated’ as part of the social practices required of students to become members of the community of practice of their vocational field.

The research data indicate, however, that rarely is LLN support so situated. While it is common for LLN teachers to be present with vocational teachers in vocational classrooms across all state and territory VET systems, many such teachers see their role to be primarily about helping students to pass their theory exams and assignments. They do not necessarily see that they can have a role to play in the students’ practical work. Further, the students they support are seen to be mainly those who are
experiencing problems with the course, and commonly LLN teachers are seen to ‘hover’ over those needing support while the vocational teacher delivers to the whole class. One vocational teacher described her role in the following way: ‘We just deliver normally, and they (LLN teachers) sit and observe or go to these students and see if they are coping ok, working with them and so forth’. From the comments expressed by quite a few of the LLN and vocational teachers, this secondary and often relatively passive role for the LLN teachers in the vocational classroom is considered the norm, and it clearly fits a deficit approach. A VET college featured in one of the case studies provides an extensive LLN support program, in fact, a ‘whole of campus’ approach, but nevertheless the pedagogy featured largely fits the above deficit approach.

In the next two sections we describe how LLN support programs can be seen to move beyond a deficit approach, and we do this by drawing on data selected from two particular types of LLN support programs documented in this study: the CAVSS, and the shared delivery model.

Moving beyond a deficit approach

The CAVSS team teaching model is one example where integrated LLN support is specifically designed not to be a deficit approach. The CAVSS was first trialled in 2000 in Western Australia as a response to traditional deficit models of LLN support that were considered not to work. A manager responsible for introducing CAVSS explained, ‘we had teachers who would set up support classes during lunchtime and then complain that it didn’t work because the students wouldn’t go to them’. The CAVSS aims to improve vocational learning by adopting a perspective which sees LLN as social practices (Bates 2004:4). It is based on two underpinning principles: the normalising principle, in which LLN support is viewed as an ‘ordinary part of the VET training, and something that every student is engaged in as a matter of course’, and the relevance principle, which ensures LLN practices relate primarily to the vocational learning (Bates 2004:4). Apart from Western Australia, the course is now commonly delivered in TAFE systems in other states, including Victoria, South Australia and Tasmania, and in a number of private RTOs.

There are a number of key features of the CAVSS model which differentiate it from other LLN support models, including the following:

Team teaching is mandatory, and requires a close working relationship between the LLN and vocational teachers. These teachers are required to jointly plan lessons, and as we have already mentioned in this report, they often present to the class as ‘tag teachers’. In practice, it is sometimes difficult to differentiate the respective roles of the teachers as they work together towards the same vocational outcomes for students.

Teaching focuses on the whole group and withdrawing students for extra assistance is not allowed, even within the same classroom. An experienced CAVSS teacher stated that he could see no justification for focusing on individual students with problems because there was the likelihood that others in the class were experiencing similar problems. Helping one or several students soon escalated to helping the whole class, and ‘what happens is the students at that particular point in time will realise that you’re not there for the dummies; you’re actually there for everyone’.

The LLN teacher participates in both the theory and the practical work. One CAVSS teacher said his workload was approximately 50:50 in relation to classroom and workshop work, and most other CAVSS teachers see an additional role for them to play in the practical workshops.

There is no assessment of the literacy and numeracy skills or levels of students. This aspect makes CAVSS different to almost all other LLN support models – there is no attempt to identify individual students with LLN ‘problems’. One CAVSS teacher said that assessing students ‘would just ruin everything’ including the
momentum, the ethos of the CAVSS, and the teacher’s relationship with students. This teacher said the advantage of being a CAVSS lecturer was that:

… no student ever sees you as judging them or being the person who holds the key for them to open the door … you’re just a person that is … genuinely interested in helping them get through what they’re doing so they can go onto the next part and finish this course and become the tradesperson that they want to become.

This same teacher found it hard to justify how, for example, first year trade apprentices could be assessed appropriately for their LLN skills anyway, because they had no trade knowledge, so an ‘industry-based’ assessment was not appropriate, and a ‘school-based’ test was simply a return to experiences that for many students were not positive. For this teacher, ‘success’ was the key factor, regardless of students’ LLN ‘levels’. For many students, CAVSS was the first success they had experienced in an educational environment, which they could achieve with some ‘genuine support … rather than a person who wants to point out what they can’t do’.

The CAVSS provides an example of a model that is based on a coherent set of principles that shifts away from deficit approaches to LLN support in the delivery of VET courses towards what we might term a social practice approach, which we briefly referred to in the literature in relation to the academic literacies research in higher education, and which now requires further elaboration.

To ‘fit in’ with vocational pedagogy
Lea and Street (2006) make a theoretical distinction between what they term the ‘academic socialisation’ and the ‘academic literacies’ approaches to pedagogy, and it is the former approach which appears to largely encapsulate the CAVSS model of LLN support. The academic socialisation approach was described by Lea and Street (2006:369) as ‘acculturation into disciplinary and subject-base discourses and genres’. That is, related to the VET sector, the CAVSS teacher is expected to ‘fit in’ with the vocational discipline – the aim is to for the LLN teacher to be integrated (embedded) in existing vocational practices, and not necessarily to challenge those practices. Based on Lea and Street’s work, we might reasonably call this a ‘vocational socialisation’ model. The embeddedness featured in this model can be well demonstrated by some CAVSS teachers actually occupying office space in the vocational sections where they provide the support, rather than in their own LLN sections. But it goes much further than this. CAVSS teachers interviewed in this study have demonstrated their great reluctance to be seen to be actively influencing the pedagogy of their vocational team teachers because the ideological basis of the CAVSS is to fit in to vocational disciplines, which requires mainly respect, and not critique. The CAVSS teacher’s handbook (Western Australian Department of Education and Training 2008) states that the CAVSS teachers ‘always teach in direct relation to the teaching methods and strategies used by the VET lecturers they work with …’ (p.5). The handbook quotes CAVSS lecturers who state the need to ‘fit in with the VET environment …’ (p.39), and the need to ‘acquire an insider’s knowledge of the industry’ (p.51).

‘Shared delivery’- the potential for changing pedagogies
In the course of this study we researched a pedagogical model known as ‘shared delivery’ that appears to go beyond the primary notion of LLN teachers accommodating themselves to vocational disciplines, to actively encouraging change in both the vocational disciplines and their own LLN discipline. We will briefly explain how the shared delivery model works, and then draw links to the theoretical approaches proposed by Lea and Street (2006). Briefly, the shared delivery model that we researched involved CALD students co-enrolling in an LLN course (actually ESL, but for consistency in this report we refer to it as LLN) and vocational course, and the timetable was structured so that over the course of each week students received approximately the same number of delivery hours in each course. Students for
example, may typically attend a practical workshop session in the morning delivered by the vocational teacher, followed by a classroom-based LLN class delivered by the LLN teacher in the afternoon. This pedagogical model was not designed to provide team teaching involving LLN and vocational teachers in the same classroom, but it was designed as a ‘team’ (or rather, ‘shared’) delivery, in so far as the LLN and vocational teachers worked very closely together with shared responsibility for the same group of students, and with employment being seen as the same primary outcome for the students.

In some cases in shared delivery we found the LLN teacher ‘embedded’ in the vocational section, having their office space located there, similar to some CAVSS and other teachers in this study. However, we also found one vocational teacher (in aged care) ‘embedded’ in the LLN section – with office space in close proximity to the LLN teacher she worked with. In some cases, the LLN and vocational teachers did manage to team teach together, though this was not the aim, and funding was generally not available for it.

The way shared delivery was structured, and the dynamics of how it worked in practice, indicated the potential for influencing and changing pedagogy on the part of both the LLN teacher and the vocational teacher. To a large degree the success of this program depended on teachers from both areas sharing a disposition – a commitment to the program and to change, as one LLN demonstrated:

Everybody needs to be committed to the program. The program won't work if you haven't got the teacher and the department commitments. They have to be prepared to change, to make changes to how things are done, things that have always been done. So again, if neither department's prepared for that, 'ouch'.

This same teacher scheduled times each week when he met with the vocational teacher, and they actively discussed how the program could be improved: ‘We start questioning everything. Is this really necessary? Could this question be a new phrase? Should this be done this way or another way…?’ Part of the justification for these frank discussions was that the English language needs of these students presented pedagogical challenges which not all teachers may have felt completely confident in dealing with. As one LLN teacher indicated, ‘things that would work for native speakers don't necessarily work for our students …’. The two specialists in their own fields thus ‘share’ the delivery, even though they may not actually teach in the same classroom together, and they have an equal voice in how the students are taught. In this process of sharing the delivery, established pedagogical practices can be challenged as both teachers explore how best to meet the needs of the students.

As we have indicated previously in this report, some LLN teachers in shared delivery involved themselves heavily in the vocational areas, in some cases taking a role in the placement and monitoring of students on their work placements. For most LLN teachers, this active role in the vocational practices of another discipline was a big departure from their regular LLN pedagogy. For vocational teachers, a good example of how they could be influenced into changing their pedagogy was provided earlier in which an automotive teacher effectively reversed his traditional pedagogy for apprentices, going from a ‘telling, leading sort of style, to more interactive’. He did this to better meet the needs of this particular student group, and he negotiated his new role through regular dialogue with the LLN teacher with whom he shared the delivery.

The theoretical discussion in the literature review that saw LLN teachers as ‘outsiders’ to the disciplinary discourse to be mastered by the students, may play a role in these discussions. The LLN teacher may well view aspects of vocational pedagogy from a different perspective than the vocational teacher (i.e. as an ‘outsider’), and this may result in pedagogical changes. Previously in this report, for example, it was noted that vocational teachers may change their spoken discourse in the classroom (e.g. less idiom), and
explain content more slowly to students after working with the LLN teacher. In another example, an LLN teacher providing shared delivery on a business course said he ‘couldn’t believe that you could have a subject called handling mail without handling the mail’, and he subsequently brought parcels, letters and scales into the classroom to enable practical sessions with the students. He also found part of this vocational subject dealt with aerograms, which of course are totally irrelevant these days (‘so cross that out, we don’t need that’). In many ways such as these, the LLN teacher may provide an outside perspective which challenges the pedagogical status quo. As this teacher stated, ‘If that mindset is changing then it can only be for the better because they – the manuals, are useful in some instances, but not the be-all and end-all’. In this example, his reference to ‘manuals’ can be seen to symbolically represent the established curriculum and pedagogy of the vocational discipline.

**Should it be called ‘support’?**

Throughout this report we have referred to LLN ‘support’ in VET, and this is how we understood the role of LLN from the beginning of this study, which should hardly be surprising given the historical role in TAFE systems of ‘tutorial support’ and ‘learner support’. This understanding has been continually reinforced because for the most part it was shared by the teachers and managers we interviewed. We are reluctant to be drawn into semantics, but it may be time to question the term ‘support’ in this context. In one sense of course, all teachers provide support to their students, but by referring to the role of LLN teachers as the ‘support’ teachers, it suggests LLN teachers do not have an equal role to play with vocational teachers. This appears to be accepted by most LLN teachers as the norm in VET, and it explains the ‘hovering’ model we have explained earlier in which LLN teachers assist (‘support’) individual students in the classroom, while vocational teachers ‘just deliver normally’. To a large degree the CAVSS team teaching moves beyond this model, but the CAVSS also makes clear that the teacher with the main responsibility for the students, that is, the teacher who ultimately decides what is to be taught, and how, and who sets and marks the student assignments, is the vocational teacher.

While the role of LLN teachers continues to be described as ‘support’, it is unlikely they can provide more than a secondary role in the vocational classroom. In the shared delivery model, however, there is no support teacher. Both teachers have a primary responsibility for their own courses, but they share responsibility for the same cohort of students in the overall program. They work together as equals, and in the process of sharing the delivery, both teachers have the opportunity to contribute to changes in each other’s pedagogy to better meet the needs of the students. ‘Support’ teachers on the other hand, are likely to have much less influence and opportunity for pedagogical change, and they may in consequence be seen to contribute to the pedagogical status quo.

**Towards a social practice approach**

The above discussions can be linked to the theoretical frameworks outlined earlier in this report, and in particular, the work of Lea and Street (2006). These researchers explain that the ‘academic literacies’ approach challenges deficit accounts by drawing on the existing skills and practice of people – students and teachers, to question the pedagogical status quo. They state the approach: ‘… is concerned with meaning making, identity, power, and authority, and foregrounds the institutional nature of what counts as knowledge in any particular academic context …’ (Lea & Street 2006:369). It may be appropriate in our study, drawing on Lea and Street, to refer to this approach as ‘vocational literacies and numeracies’. Such an approach is known more generally as a social practice approach. In the literature review we briefly cited the recent work of Ivanic et al (2009) on ‘literacies across the curriculum’ in further education in the UK. Their research drew on the everyday LLN practices of VET students as a way of influencing and changing VET pedagogical approaches to better meet the needs of students. The
researchers also questioned established VET pedagogical practices in terms of their relationship to the vocational practices that they were educating their students for.

To maintain their relevancy, and to meet globally competitive challenges, VET systems in Australia need to be dynamic and open to change. To an extent, the overall findings discussed in this report seem not to reflect a dynamic, changing VET system. Rather, by describing LLN support largely as a deficit approach, the implication is of relatively static VET systems with normative standards against which students are assessed. Students found to be ‘in need’ of support in reaching these standards (i.e. having ‘problems’) are then provided with a range of support programs designed to bring the students up to the standards required (i.e. for successful course completion). In this study we have provided examples of pedagogical practices that represent a shift away from this deficit approach. In the CAVSS for example, the pedagogical debate shifts from teaching individuals with LLN problems, to a more inclusive pedagogy in which complete student cohorts benefit from LLN practices being made more explicit in their courses. Further, the shared delivery model provides examples of how VET pedagogy, that is, the pedagogy of both LLN and vocational disciplines, can be influenced and changed as a result of LLN teachers and vocational teachers working together in an equal role. This process of working together for change is illustrated by the one of the LLN teachers mentioned earlier in the shared delivery, who stated ‘We start questioning everything. Is this really necessary? … Should this be done this way or another way…? This type of dialogue for change is most likely to occur if the two teachers are of equal status and share an equal role.

**Integrating LLN in all aspects of VET**

Our primary concern in this study has been with integrating LLN in the ‘delivery’ of vocational courses. For the most part we have considered, in some depth, the issues involved with LLN teachers working together with vocational teachers in various ways. What we have not made clear is that the ‘delivery’ aspects are strongly related to a number of other aspects of the integration of LLN in VET. There is the need to have LLN integrated and documented in *VET strategic plans*, and we found this in the TAFE Institute where we researched the shared delivery. If integrated LLN is recognised in VET documentation and is built into Institute annual/triennial plans, there is likely to be a whole-of-organisation approach in which all VET staff are clear about the benefits and importance of an integrated approach, which seemed to be apparent in the interviews with shared delivery teachers. Linked to strategic planning, integrated LLN needs to feature in *funding and resourcing* which, based on our research, is rare in VET organisations, and most often integrated LLN provision competes with ‘stand-alone’ LLN provision for funding. The *initial training of VET teachers and professional development* are other vital aspects, where integrated LLN has not featured sufficiently to date. These aspects of integrated LLN are in turn linked to the training packages which determine what is taught in VET, and LLN has long been built into training packages (e.g. Wignall 1998). Currently there are recommendations for incorporating LLN as ‘foundation skills’ in all aspects of VET ‘products’ (National Quality Council 2010).

**A new model of integrated LLN in VET**

We have drawn attention in this study to some alternative ways of integrating LLN in the delivery of VET courses. In particular, we have highlighted the value of pursuing elements of a social practice approach, drawing on theoretical concepts and providing examples of VET pedagogical practices which can be seen to fall within this approach. We have also drawn attention to a number of other aspects of integrated LLN which strongly influence delivery in VET courses. In the following section of this report we outline several key elements of what we would view as an effective approach to providing integrated LLN in VET courses, and which largely draws on social practice principles. We then outline
our recommendations for effective integrated LLN in accredited VET courses. The key elements include the following:

A fully integrated model of VET

As we have indicated in the previous section, there is the need to integrate LLN not only in the delivery of VET courses, but in a whole range of other aspects of VET, including strategic plans (i.e. policy), funding/resourcing, and initial teacher training and professional development. These aspects in turn relate to integrating LLN in course content, involving training packages and other VET ‘products’.

A focus on pedagogical change

A dynamic, changing world of work requires a dynamic, changing VET system. The existing practices in the delivery of LLN support in VET courses generally do not reflect change, rather, they reflect accommodation to the status quo. As we have argued, LLN teachers are usually required to ‘fit in’ to existing VET pedagogical practices. This is important in terms of ensuring that the LLN teachers work with relevance and understanding within the vocational context, but there is the potential, through more effective policy and working relationships between LLN and vocational teachers, to change and improve VET pedagogy. VET pedagogy in this context includes not only teaching methods, but course content (the curriculum), and all forms of assessment. It also includes the pedagogy of both LLN and vocational disciplines.

LLN teachers and vocational teachers as equal partners

In order to promote change more effectively in VET pedagogy, LLN teachers and vocational teachers need to work as equal partners. Currently, in the great majority of cases we examined, the LLN teacher as the ‘support’ teacher, occupies a secondary role. The shared delivery model provides examples of an equal role in action, where both teachers, through their shared work and responsibilities for student outcomes, have the opportunity of learning from each other, and improving each other’s pedagogy. Usually an equal partner role will require team teaching, but as the shared delivery model shows, it may not mean two teachers in the same classroom. More important is the shared role in terms of planning and evaluation to meet student needs, and the mutual trust and respect of the specialist skills and knowledge that are afforded by each teacher.

A focus on LLN practices, not student skill deficiencies

The CAVSS provides excellent examples of how the LLN teacher works with the vocational teacher and makes explicit the LLN practices required of students in becoming members of the community of practices of their chosen vocational discipline. The focus is on enabling students to manage the LLN practices which are embedded in vocational practices, which is a separate process from identifying students with LLN ‘problems’ based on criteria that may not be directly linked to the LLN practices required in the course or workplace. Students learn best when they see the relevance of the practices required of them. As one CAVSS teacher noted, motivation, seeing the relevance of tasks, and ‘success’ can overcome many of the barriers to learning. Assessing students to indicate their deficiencies based on criteria which may not be directly relevant to successful vocational learning, has the potential to present additional barriers to learning for some students.

A focus on student outcomes that go beyond course completions

The UK definition of embedded LLN cited earlier states that the skills acquired from this provision ‘provide learners with the confidence, competence and motivation necessary for them to succeed in qualifications, in life, and at work’ (Roberts et al 2005:5). For the most part, the data on Australian
LLN support in VET indicate a focus primarily on course completions – qualifications, as the success criteria. In the literature and in practice in Australian VET, course completions are viewed as the major rationale for providing LLN support programs in the new competitive funding regimes. As one LLN teacher noted, ‘your funding finishes once they’ve dropped out’. However, as the CAVSS teachers with their work in the practical workshops demonstrated, and as shared delivery teachers indicated, ‘in the end, what we’re really on about is making these people successful in getting a job’. A shift in perspectives and policy is necessary to enable LLN and vocational teachers to be focusing on student outcomes more in terms of work (and to a large degree ‘life’) skills, rather than the current quite narrow focus on academic LLN skills for formal assignments and exams (i.e. course completions). The implication of such a shift is greater involvement by LLN teachers in the practical elements of workplace learning.

**Drawing on the students’ own resources**

Our research was not designed to explore this element – drawing on the resources the students brought to the VET classroom. However, we mention it here because one program we researched, the shared delivery course involving CALD students enrolled in an automotive course, did highlight this element. These were male students from Sudan, Afghanistan and several other Asian, African and Middle Eastern countries, and most of them had previously been mechanics. The vocational discipline was not new to them, even though the language of the automotive course, in English, was new. In the class we observed, the vocational teacher drew on their automotive knowledge. Questions were open ended inviting responses. As we have stated before, this teacher’s style had changed ‘from a telling, leading sort of style to more interactive’, in which he sought student engagement. The students responded with confidence, actively voicing their knowledge in an environment where they were not singled out as ‘lacking’. Differences between what were acceptable work practices in the students’ own countries and in Australia were explicitly discussed and used to explain the reasons for particular Australian industry requirements. The motivation for VET learning of these students was in marked contrast to previous students we spoke to in other courses who were eager to learn their chosen vocations, but appeared to be unmotivated through the constant focus on formal LLN skills (the transposition of formula in one case, formal written tests in another). In these latter groups there was little or no attempt in the VET classrooms to draw on the existing knowledge resources of the students, rather, the focus was on what they didn’t know, and this was possibly reflected in their relative lack of enthusiasm for their course. Within the broader social practice model, these issues are crucial. As Ivanic et al (2009) has indicated in the further education context of their study in the UK, there is considerable scope to draw on the existing resources of students – including their everyday LLN practices, to make learning more enjoyable and relevant, and to improve VET pedagogy.

**The realities of Australian VET**

The above section on the elements of a proposed model of integrated LLN in the delivery of VET may represent, in total, an idealised model, even though we have provided examples of the application of each element from our research data. We make no apologies for presenting an ideal to work towards, though we recognise there are structural constraints in Australian VET systems which may prevent the realisation of all or part of such a model. We have already mentioned some of these constraints in this study. For example, the latest VET funding models, based primarily on course completions, will necessarily encourage a focus on course completions at the expense of other valued outcomes. The competitive nature of VET and the contestability funding models that are currently favoured, can lead to pressures to complete courses quickly and at the minimum costs, which works against VET providers building in additional costs for integrated LLN. Examples have already been provided of VET providers reducing the length of courses, thus making courses more intense (‘they’re so driven to get
through things’ said one LLN teacher), and teachers not having the time (the ‘luxury’ said one teacher) to negotiate team teaching arrangements. A largely casualised VET teaching workforce also works against teachers investing their time and energy in partnerships between LLN and vocational teachers because these partnerships may not be sustainable. The current inadequate initial training of teachers based on one short Certificate IV course, and inadequate professional development of existing VET teachers are additional factors which hinder the adoption of elements of the proposed model.

Regarding the initial training of VET teachers, one head teacher of a vocational section lamented the displacement of the university Bachelor of Education program for initial teachers by ‘a certificate 4 which is delivered over six Fridays’. This head teacher had recently lost many full time staff through retirement, and now he was finding it necessary to augment the inadequate training of his new teachers with his own notes from when he trained as a teacher many years ago. He described how some of the new teachers seemed to adopt strategies such as giving students ‘bucket loads of maths ... you want to learn how to do a maths task, do it a hundred times’. Such strategies were found to cause problems with some groups of young students in terms of their progress and motivation, and classroom management. He considered a more in-depth, and critically reflective initial training of teachers would enable VET teachers to adopt alternative teaching strategies that would better engage students and improve learning. VET teacher training is an issue in this current study because the model we promote involves LLN and vocational teachers working and sharing together as equals, and critiquing their respective knowledge systems and pedagogies. A baseline VET teaching qualification ‘delivered over 6 Fridays’ is unlikely to encourage the effective delivery of such a model.

Shifting from an overall deficit approach in the provision of LLN support in VET is also problematic given that assessment regimes, and programs based on them, are so ingrained in VET cultures. Any meaningful change will require quite extensive professional development for all VET teachers. At present, assessing students for their LLN skills (or lack of skills) is the primary basis for arguing the case for providing LLN support on VET courses. Further, a shift from a deficit approach is difficult in the sense that most LLN teachers and managers do not regard themselves as ‘deficit approach’ teachers, because the term has negative connotations. Moreover, in most VET systems the existing practices involving assessing students for their deficits and targeting those ‘in need’ of support, are considered ‘good practice’ approaches to helping students to get their vocational qualifications.

It should be pointed out however, in terms of the realities of VET, that particular approaches to the integration of LLN in VET should not be viewed as being mutually exclusive. In the higher education literature by Lea and Street (2006) for example, there is acknowledgement of the overlap between deficit and social practice models. In the CAVSS model also, there is acknowledgement that the course will not meet all the LLN needs of VET students, and that there is a place for other forms of LLN support. In the case of the shared delivery model, it worked well, but it targeted a particular student population, and the model may well not be applicable to all student groups. As we have demonstrated by highlighting the different forms of provision existing in major urban and remote areas of Australia, the VET sector is so varied, involving so many different student populations and educational and training disciplines. Inevitably, as other researchers have recently indicated, a ‘one size fits all’ approach will not work (Leach et al 2010).

**Recommendations**

In this final section we respond to research question five: *What are the recommendations for VET policy, pedagogy and professional development for effective integrated LLN support on accredited VET courses?*

For VET policy we recommend:
That integrating LLN in VET courses be acknowledged as a significant dimension of the VET system, and be addressed as a focus of national VET policy renewal in terms of:

- teacher training
- ongoing professional development
- tender specifications for the delivery of VET courses
- improving equity and social inclusion outcomes
- improving retention and completion rates
- improving employment outcomes for VET graduates
- teaching and curriculum development approaches
- VET evaluation and research

That the delivery of integrated LLN in VET courses be recognised as a specialist pedagogical role related to, though distinct from, the delivery of ‘stand-alone’ LLN provision.

That the delivery of integrated LLN in VET courses incorporate the whole range of course levels, and not only those at the lower end of the AQF.

For VET pedagogy we recommend:

That while a range of pedagogical practices provide LLN support to individuals and groups, greater focus should be placed on practices which require the LLN and vocational teachers to:

- work together in an equal role in the program planning, delivery, assessment and evaluation of courses
- avoid a deficit approach by delivering to whole student groups drawing on the learning resources students bring with them to the VET classroom/workshop
- address and make explicit the different academic and workplace LLN demands of VET courses in vocational areas
- continuously work together in a spirit of critical enquiry to improve pedagogical practices to meet the changing needs of students, workplaces and vocational disciplines

For VET professional development we recommend:

That orientation or induction programs be designed for LLN teachers and vocational teachers working together to delivering integrated LLN in VET courses.

That professional development forums be established in VET organisations to encourage the sharing of knowledge and information about integrated LLN in VET courses. These ‘communities of practice’ could examine the many issues and challenges of working together and changing pedagogical practices to better meet the needs of students, workplaces and vocational disciplines.
That LLN teachers be provided with the opportunity for placements in industry or workplace visits to observe their students in their work placements in order to develop their understanding of the LLN practices needed in workplaces.

That practitioner research be encouraged to enable LLN and vocational teachers to develop further their pedagogical practices and to explore good practice models of integrating LLN in VET courses.
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Appendix - Focus interview questions

Focus questions for semi-structured interviews with vocational teachers/trainers

Name of teacher:

Vocational area:

Institution, location and position:

Phone/email contact

Teacher qualifications and experience

Focus questions:

Effectiveness of integrated L&N support

1. What do you understand by the term ‘integrated literacy and numeracy’?

2. What difference does L&N support make to student outcomes in your courses? (e.g. pass rates, any evidence, feedback from students, observations)

3. What would happen if no L&N support was provided? (any evidence? Attrition rates, pass/fail rates)

Details of provision

4. What type of L&N support is provided? (e.g. team teaching, withdrawing students, referring them to the ILC, special classes)

5. Which types of students need L&N support? (e.g. younger students, NESB, Indigenous, apprentices, older etc)

Student needs

6. What types of problems do they have? (e.g. understanding trade calculations, essay questions, understanding theory)

7. Does the L&N teacher work with the students who have L&N difficulties or with the class as a whole?

8. Are you concerned primarily with the L&N needs of students in order for them to pass the course, or their L&N needs to be a good worker in their chosen profession/trade?

9. How are students assessed for their L&N needs and who undertakes this assessment? (e.g. informal observations, when they fail assignments, screening at beginning of the course by ABE teacher, formal test etc)

10. How do you determine what ‘level’ of L&N is acceptable in your course, and do you provide details to the L&N teacher?
11. Do students change over time? Do you have any specific examples (stories) of students who have passed their courses after having received L&N support?

12. Do different student groups require different teaching approaches? (e.g. young apprentice students, NESB, Indigenous, older students)

**Vocational teachers and L&N teachers working together – the issues**

13. Describe how you work with the L&N teacher? (general comments - regular meetings etc. How do you work together in the class)

14. Are there any issues or problems that need to be solved in working together with an L&N teacher? (e.g. different pedagogy, methods, different backgrounds, approaches, relations with students etc)

15. Do you meet regularly with the L&N teacher, and what sorts of things do you discuss? (e.g. weekly meeting after the class, staff meetings, content planning, sequencing of the lessons)

16. Were there any initial difficulties in working with the L&N teacher? How were they resolved? (e.g. inter-personal difficulties, embarrassment, anxieties, different philosophies)

17. To what extent does the L&N teacher get involved with the content of your course? (e.g. how do you determine who does what? Do they focus exclusively on L&N or share the content information with you?)

18. Does the L&N teacher need to know much about the content of the course or can they simply focus on L&N issues?

19. Are there areas of role conflict? For example, where the L&N teacher may be teaching aspects that you usually teach?

20. Does the L&N teacher just focus on the theory or do they have a role in the practicals also?

21. What have you learnt about the teaching of L&N through working with the L&N teacher?

22. What difference does the L&N teacher make? Could you provide the L&N support to the students having worked with the L&N teacher?

23. What’s so special/different about what the L&N teacher provides?

24. Does it get easier over time, working with the L&N teacher? And if so, why?

25. Are there any policies encouraging L&N support, or directing L&N support as a priority?

**The Future**

26. Can you suggest ways in which L&N support for vocational learners can be improved?

27. What do you think will be needed to enable these changes to occur?
Focus questions for semi-structured interviews with L&N teachers

Name of teacher:

Vocational area:

Institution, location and position:

Phone/email contact

Teacher qualifications and experience

Effectiveness of L&N support

1. What do you understand by the term ‘integrated literacy and numeracy’?

2. What difference does L&N support make to student outcomes in your courses? (e.g. pass rates, any evidence, feedback from students, observations)

3. What would happen if no L&N support was provided? (effects on student attrition, pass rates etc)

Details of provision

4. What type of L&N support do you provide? (e.g. team teaching, withdrawing students, referring them to the I.L.C, special classes)

5. Which types of students need L&N support? (e.g. younger students, NESB, Indigenous, apprentices, older etc)

Student needs

6. What types of L&N problems do students have? (e.g. understanding trade calculations, essay questions, understanding theory)

7. Do different types of students have different needs and therefore a different pedagogical approach? (e.g. young apprentice students, NESB, Indigenous, older students)

8. How do students change over time? Do you have any specific examples of students who have passed their courses after having received L&N support?

9. How do you assess students for L&N needs? (formal test, informal screening, use of NRS or ACSF)

Vocational teachers and L&N teachers working together – the issues

10. Describe how do you work with the vocational teacher?

11. Are there any issues or problems that need to be solved in working together with a vocational teacher?

12. Do you meet regularly with the vocational teacher, and what sorts of things do you discuss? (e.g. planning lessons, reflecting on lessons)

13. Were there any initial difficulties in working with the vocational teacher? How were they resolved?

14. To what extent do you get involved with the content of the course?
15. Do you need to know much about the content of the course or can you simply focus on L&N issues?

16. Are there areas of role conflict? For example, where you may be teaching content aspects that the vocational teacher would normally cover?

17. Do you just focus on the theory and exam aspects or do you have a role in the practicals also?

18. Do you have a role in marking/assessing students in the course, or in designing the assessments?

19. What have you learnt about the subject through working with the vocational teacher? What have you learned from them about teaching vocational students?

20. What difference do you think you make? Have you influenced the way the vocational teacher teaches? Do you think the vocational teacher could manage with the L&N support after having worked with you? Explain.

21. Do you think you could cover the content of the course as well as the vocational teacher after having worked with them?

22. What’s so special/different about what you provide to students?

23. Does it get easier over time, working with the vocational teacher? And if so, why?

**The role of literacy and numeracy in courses**

24. Do you work mainly with those students with L&N difficulties, or all students in the class?

25. Is there a role for L&N assistance in the higher levels courses (Cert IV and Diploma) or mainly the lower level courses? Can you explain? Do students have problems in going from one level to another due to L&N problems?

26. Do students receive separate results for their Literacy/Numeracy course?

27. What L&N course do you enrol students in, and why (ASH/budget implications?)

**Budgets, guidelines and policies**

28. Is there sufficient budget to provide L&N support? Which areas are neglected? Where’s the unmet demand? Have the number of hours available for L&N support changed in recent years?

29. Are there any policies guiding L&N, directing L&N support as a priority (over, for example, community groups)

30. Is there overall systematic/organisational support for L&N support? (e.g. information provided to all new students about L&N support)

31. What guidelines are there to assist you in providing L&N support?

32. What is the funding source for L&N support courses?
33. How do you cost L&N support? Are teachers paid for preparation and meeting time with vocational teachers? If so, at what rate? (DOTT or teaching)? Does the costing change with FT compared with PT teachers?

34. Is there an additional student charge or fee for the L&N support?

35. What administrative procedures are required to teach L&N support? (e.g. CLAMS, assessment validation)

**The Future**

36. Can you suggest ways in which L&N support for vocational learners can be improved?

37. What do you think will be needed to enable these changes to occur?