



National Research and Development Centre
for adult literacy and numeracy

Research report

Embedded teaching and learning of adult literacy, numeracy and ESOL Seven case studies

Celia Roberts, Mike Baynham, Paul Shrubshall, Jessica Brittan,
Bridget Cooper, Nancy Gidley, Violet Windsor, Jan Eldred, Sue Grief,
Celine Castellino and Margaret Walsh

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Introduction

Why undertake research into embedded teaching and learning of literacy, language and literacy?

The national Skills Strategy (<http://www.dfes.gov.uk/skillsstrategy/>) aims to increase substantially the number of individuals who have a level 2 vocational qualification.¹ One obstacle to this is that many people who might want to study for such qualifications have limited literacy, language and numeracy (LLN) skills. The **Skills for Life** Strategy recognises that many people with LLN needs do not want to attend LLN classes. But it is also widely accepted that their willingness to work on their LLN skills is enhanced when they can improve them as part of a vocational or leisure programme, which represents their primary motivation.

The Skills for Life Strategy Unit (SfLSU, DfES) is funding a major curriculum and materials development project to develop learning materials for embedded learning.²

There are two broad approaches to providing LLN within the framework of a wider vocational programme:

- i. **Discrete or non-embedded literacy, language and/or numeracy support** – this may be provided through an additional support programme, which provides individual or group tuition based on a general diagnostic assessment of LLN needs. In this provision the LLN teaching takes the form of generic support rather than being based on the vocational subject. Discrete provision also commonly takes place outside vocational programmes, in general LLN provision.
- ii. **Embedded or integrated literacy, language and/or numeracy** – this is LLN support teaching organised in such ways that it is an integral part of the vocational programme itself. The SfLSU defines embedded teaching and learning as that which *'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.'* There are many examples of how embedded LLN can be provided, with several illustrated within these case studies. To some extent, these are dictated by the variety of vocational courses which exist, characterised by different sorts of skills and knowledge and different ways of organising learning.

The distinctions between **discrete LLN learning support** and **embedded or integrated LLN learning support** are not absolute. As this research shows, there can be areas of overlap – but the organisation of the teaching and the learning experience are significantly different. A defining characteristic of embedded provision is that the very processes of LLN learning and organisation have been redesigned so as to fit the vocational objectives of the learners on a

This section uses the term 'teachers' to include all staff responsible for teaching and learning, who may also be known as tutors, trainers, or lecturers. Similarly, it uses the term 'learners' to refer to those who may also be known as students or trainees.

¹ There is no absolute distinction between vocational and leisure. For example, these case studies include 'leisure' courses in complementary therapies and first aid.

² <http://www.dfes.gov.uk/readwriteplus/embeddedlearning/>

particular programme. There has to be a degree of flexibility provided throughout the course to enable this to happen. The approach is strongly learner-centred.

The purpose of this research project was to gather evidence about the characteristics of embedded LLN teaching and learning. In particular, the project aimed to establish what is meant by "embedded teaching and learning", how the vocational subjects and the LLN skills relate on such programmes, how subject teachers and LLN teachers work together or how sometimes a single teacher can handle both, and what implications can be drawn for policy and practice. To study all this, it was essential to select a contrasting range of embedded programmes for the case studies. In selecting the case studies, close reference was made to the work of the DfES Standards Unit, and to the findings of the Developing Embedded Basic Skills project (DEBS).

The organisation and scope of the research

The project aimed to examine a wide variety of embedded LLN provision to reflect the diversity of vocational courses. The sites for the case studies were selected from the following curriculum areas: Land-based; Entry to employment (E2E) – engineering; construction; , complementary therapy; childcare; and nursing. The courses studied were either standard vocational programmes for young people or specially designed preparatory vocational programmes for adults. The seven case study courses were:

Course level and form of embedded LLN	Progression routes	Students	Providers
1 Modern Apprenticeship in construction (Level 2) - numeracy and literacy	Advanced Modern Apprenticeship in construction (Level 3)	15 young people male	College of building
2 Entry to Employment: engineering (Level 1)- numeracy	Modern Apprenticeship in engineering (Level 2)	7-10 young people male	Engineering group training provider
3 Childcare and English for speakers of other language (Entry Levels 2/3) - ESOL – part-time	Foundation childcare (Level 1)	16 adults female	General further education college
4 Complementary therapy and first aid – taster courses - part time 30 hours (Entry Level 2 – Level 1)	Literacy and numeracy courses or complementary therapy (Level 1)	3 x 12 adults mixed	Adult Community Learning Centre
5 Horticulture (Entry Level 2/Level 1) – oracy, literacy and numeracy	Further study Possible employment	10 adults SLDD mixed	Land-based college
6 Preparatory course for supervised nursing practice: nursing and ESOL (above Level 2 except in oracy)	Supervised nursing practice	11 adults Overseas qualified nurses female	Adult Community learning centre
7 'Sporting essential skills'	Sports coaching (NVQ Level 2)	7 young people male + female	Rural college

The methodology used for the research was ethnographic (see below). Details about the methods and organisation of the research are given in each case study. Full versions of first six embedded case studies are available from the NRDC website, www.nrdc.org.uk. The field work for the research was undertaken over a period ranging in length from two to six months. Researchers familiarised themselves with the wider setting of the college or centre and with the aims and design of the programme. They also interviewed the manager responsible for the programme.

The fieldwork was predominantly classroom-focused and learner-centred concentrating on the behaviour and response of individual learners and teachers. The researchers emphasise that they endeavoured to take a holistic view of the learner – i.e. all aspects of his or her experience in the classroom, including the affective aspects (i.e. feelings) as well as the cognitive. There were repeated classroom observations of the same group (up to fourteen times), with audio recording and transcription of up to half of this observation. Notes were made at all sessions observed. During the same period, the researchers interviewed learners and teachers. The teachers who were observed and interviewed were both vocational teachers and LLN teachers. The interviews with learners and teachers also mainly focused on the classroom and their experiences of the course. The analysis of classroom observation focused on "what was going on" – the talking, the classroom organisation, the behaviour and interaction and the relationship between the vocational activity and the uses of and development of literacy, language and numeracy.

It is important to emphasise that this research is not about the formal curriculum documentation and administration of these courses or their organisation in a broader sense. But the analysis of the research does provide useful evidence and ideas relevant to these matters.

The case study sites were selected on the basis of being those where embedded approaches to teaching and learning were being used. They were not necessarily selected as examples of good practice.

Key findings

The case studies describe examples of embedded approaches at work, and illuminate how embedded LLN can work successfully as an integral part of vocational courses. They also illuminate some of the characteristics critical to this success. Many of the teachers – both vocational and LLN – appear to be both expert and strongly committed to this approach and we can learn more from their practice as a result. But we must still be cautious about the generalisations which follow from this small and diverse range of courses.

Motivation and vocational courses

The case studies describe how well resourced and well taught vocational courses offer learners both the acquisition of practical skills and a new "professional" identity, or, as some of the case studies describe, offer learners membership of a new "community of practice" (Chaiklin and Lave 1996). This means learning to be like a professional; learning what is worth knowing, how far they can draw on their existing expertise and what are the risks and challenges in taking on this new identity. This new professional identity is what motivates such learners and for young people this identity is often in contrast to their former experience as "school pupils". Teachers are both teachers and mentors. Learners are both "doing things" and understanding the culture of their chosen jobs – the behaviour, values and ways of

communicating – for example, as joiners, as childcare workers, or as Indian head massage practitioners. This is an apprenticeship model (Lave and Wenger 1991) in which learners are socialised into both vocational skills and the LLN required to be a competent member of the group. This new identity, in turn, changes learners' attitudes towards working on "theory" and on literacy, language and numeracy because learners can come to see them as an integral part of the learning for the job they are aspiring to. Once learners "value" LLN in this way, they will accept focusing on improving their LLN skills. Embedding LLN in subject teaching is also an economic way of learning. As studies of practical thinking in real life situations show (Scribner 1997), people draw on *the specific knowledge they need to accomplish the task*. The case studies illustrate that young people feel most reluctant over LLN skills. Adults who need to improve their skills in literacy and ESOL appear keen to do so when the language is part of the key to what they want to do.

The organisation of LLN learning

The case studies describe how LLN learning often takes place when the speaking, listening, reading, writing or calculating are directly linked to a practical task. This is very obvious in the case studies where there is observation of numeracy learning. Quite simply, there are many practical tasks in the construction and engineering courses observed which cannot be undertaken without calculation, measurement and estimation as integral parts of the process. It is reasonable to surmise that extra help with these processes feels a lot more useful to a mathematical learner when he or she is engaged on a task than when in a separate classroom and at a different time. In any case, the gap between carrying out the particular task and the learner's existing maths knowledge may only become apparent to the learner and the teacher as the learner carries out the practical task. Similarly in ESOL classes many practical activities require learners to extend their language.

These practical workshop activities require learners to work on their own or together in small groups. To be most effective, the LLN teacher needs the opportunity to support learners at the time of the practical task. Where the vocational and LLN teacher is one and same person, the teacher has to have the opportunity to bring out the LLN implications of the task. As well as providing learning through doing, this approach allows young people, in particular, to escape from the peer pressure of appearing weak in LLN. At the same time, the case studies bring out clearly that relationships between learners and teachers have to be based on empathy and respect to be successful, particularly for LLN learning. There was observed to be less of an effective role for the LLN teacher if the majority of the vocational teachers' time was spent in whole class "up-front" teaching.

The relationship between the vocational subject and the literacy, language and numeracy curricula.

The case studies describe how "embedding" is not just about interlinking different curricula; it is deeper and more complex. Mapping literacy, language and numeracy skills onto the vocational curriculum can only give a general idea of what has to be learned and provide a starting point. The LLN teacher has to learn, by participating in the vocational classroom, how literacy, language and numeracy are used both for the particular job and in this type of vocational classroom, and cannot do this simply by studying the curriculum on paper. The case studies describe how learners need and learn the "situated" learning of LLN skills of their chosen job (Lave and Wenger 1991). The case studies also show how learners need, in addition to situated LLN, the more general or "transportable" LLN skills of classroom learning and reflection: for example, a range of adjectives to write aromatherapy instructions or to describe and compare plants in horticulture. However, the curriculum and evaluation

processes have not developed a language for describing situated literacy, particularly when literacy is learnt alongside practical activities in a multi-modal way.

The teaching team

Qualities possessed by teachers and relationships between them were more important than general curricular models of embedded provision. On all the courses described, the teachers planned and worked closely together. Indeed, in five out of the seven case studies, there were teachers who possessed both vocational and LLN expertise, and on two courses there was a single teacher who taught both. They shared, in their respective roles, the same vocational objective for their learners and they were strongly learner-centred.

Vocational teachers have a natural legitimacy on their programmes in the eyes of the learners. They represent the role to which the learner aspires. The LLN teachers lack this immediate legitimacy because their role is one of support and enabling. Learners have to come to recognise the value of the LLN teachers to their aspirations. As mentioned above, the case studies suggest this is more immediately recognised by adult learners who need help developing their English language or rediscovering buried skills learnt long ago at school, than by younger learners with literacy or numeracy needs. This distinctive role for the LLN teacher in embedded teaching may not be one that all LLN teachers can take up successfully: they have less control of the curriculum and of how it is taught than they experience as a subject teacher in their own right. LLN has to be subsumed into the overall vocational objective for the learner. Equally, some vocational teachers will not find it easy to adapt to such a collaborative way of working and one which has to recognise the real importance of LLN to the learners' objectives. The case studies are informative about teacher attitudes to embedded LLN and show, in some cases, the often gendered nature of the relationship between male vocational teachers and female LLN teachers.

The characteristic of the successful teacher teams in the case studies was that they were strongly motivated to provide embedded provision; they had the time to work and plan together; and both sorts of teachers were willing to learn from each other. The vocational teachers were willing to try to understand the importance of LLN for their learners and were modifying their classroom organisation and practice to reflect this. The LLN teachers were willing to learn a lot about the vocational area and how to provide effective LLN support for these learners in terms of both teaching approaches and content. The case studies show that the relationship between the vocational and LLN areas is a dynamic one, changing over the period of the course. This means that the relationship between vocational and LLN teachers has to be a flexible one, with recognition of respective priorities at any one time on the course.

These issues have implications for staff development. Teachers are adult learners too and like the learners in these case studies are likely to benefit from situated/apprenticeship learning. Whilst short formal courses may be useful for either group, extended opportunities for informal learning (and learning from each other) chime well with models of adult learning. Staff need time to work together developmentally in teams.

The teaching team has to share the embedded learning including, at times, sharing the same classroom, but the case studies show that the actual literacy, language and numeracy can be provided and learners supported in a variety of ways. Initial LLN assessment is necessary, but much will be added to this when learners are observed and supported in their vocational settings. There is also a place for focused and separate LLN classroom work on such

programmes, providing it is integral to the delivery of the vocational curriculum and done by teachers who have close links with the vocational classroom.

Participation and success

Although all the learners accepted the fact that LLN were elements of the course, the great majority of them would not be prepared to attend stand-alone literacy, language or numeracy classes. However, there are a range of vocational programmes for young people that include key skills and additional learning support. So for these young people one test of the embedded approach is whether they are more likely to succeed with an embedded approach to LLN than with discrete key skills and learning support arrangements. Does embedded LLN raise achievement for young people?

The position is different for the four adult part-time programmes described in the case studies. These courses were specially designed to provide literacy and language integrally combined with preparation in the chosen vocational area. Such programmes, if successful, can be a powerful strategy to widen participation and start learners on a route which can lead to a Level 2 vocational qualification or to accredited LLN programmes. But the case studies show there can be a tension between the vocational preparation and the stand-alone literacy or English language qualification they are being prepared for; for example, on the childcare and nursing courses, where separate ESOL qualifications are being taken by learners.

Conclusions and recommendations

For teachers and teacher trainers

1. These case studies offer graphic insights into teaching and learning processes where learners with vocational aspirations are being made aware of the value of literacy, language and numeracy (which they may feel negative about studying) in relation to their aspirations. There is a wealth of analytic detail about interaction between learners and teachers. The case studies also provide analysis and understanding of how aspects of literacy, language and numeracy form an integral part of both the professional working practices of different occupations and of the teaching and learning of the skills for these occupations.
2. More broadly, the case studies show how learning theory is grounded in the ordinary details of classroom life. They provide practical illustrations of the value and relevance of a view of learning which draws its analysis from activity theory and social constructivism (Vygotsky 1978, Rogers 2003). They illustrate the analytic value of the theory of language and literacy learning as socialisation in both work and learning. In particular, the case studies demonstrate the notion of situated literacies.

For curriculum managers and course teams

1. Embedded LLN, as an aspect of vocational courses, offers a way of both widening participation and raising achievement in the right circumstances. It is different from discrete additional learning support and requires its own model of organisation and resourcing.
2. Embedded LLN requires the commitment of the whole course team for it to work. New courses should be developed by committed teachers with one group of courses at a time. The key is for vocational and LLN teachers to plan and work genuinely together and share responsibility for the course. This is a cross-subject way of working which does *not* suit some teachers. The embedded LLN may be helped by some broad mapping of the **Skills for Life** curricula on to the vocational curriculum, but this is only a starting point and should not involve too great an investment.

For policy makers

1. Recognise that, in the right circumstances, embedded LLN in vocational programmes can widen participation (by providing access to such programmes) and can raise success rates. This may require some changes to the current regulations so that joint planning and joint classroom work with vocational teachers can be recognised in a funding formulae for embedded LLN support. Without clear and uncomplicated funding arrangements, embedded provision may not be widely provided.
2. Fund preparatory vocational and leisure programmes with embedded LLN within the local skills strategy. Define the outcomes for such courses in terms of progression to accredited vocational programmes or to literacy and numeracy programmes.
3. Commission research into comparative success rates on similar courses with similar learners between vocational programmes with and without embedded LLN. Include analysis of the backgrounds and aspirations of the learners in the research.

Methodology

This research uses ethnographic case study methodology, which should not be confused with other kinds of case studies, such as those used as exemplars of good practice. Ethnographic case study methodology involves looking at one set of activities in a very detailed and concrete way so that new insights and ways of looking at the problem are revealed. The aim is to stimulate creative thinking and disturb general assumptions. Case studies also reveal the complexities of the practices observed and so help to explain why so often general maxims about what is effective do not work out in real life. Just as the microscope reveals teeming life in a speck of material, so the case study method provides a new lens for looking at a single case.

Each case study represents a 'telling case' (Mitchell 1984) out of which theory, concepts and hypotheses can be drawn, leading to further research. As Mitchell says: 'The search for a "typical" case study for analytical exposition is likely to be less fruitful than the search for a "telling" case study in which the particular circumstances surrounding a case, serve to make previously obscure theoretical relationships suddenly apparent.' So, these more general observations and concepts are shown to exist precisely when specific contexts and conditions are taken account of.

Insights from each study can be transferred to other sites where similar conditions exist. For example, in case study three on building trades, the importance of empathetic relationships between staff and learners on what is perceived as a very 'male' course, and the various ways in which these relationships are acted out, can be transferred to other learning sites where a similar environment exists.

Case studies are more than descriptions or apt illustrations. They are selected and described in all their specificity in order to understand the *theoretical relationship* between the events and not just the events themselves. For example, in the case study 'Being a nurse and following new rules', the theoretical relationship between institutional and professional discourse was drawn out of the detailed analysis of classroom interactions. Overseas nurses had to learn to manage these discourses if they were to pass the selection interview and cope with life on an NHS hospital ward.

Mitchell's argument is based on analytic induction whereby all the data is looked at until patterns begin to emerge. The search for phenomena which do not fit the pattern i.e. disconfirming evidence helps to make the pattern richer and more complex. Once all the data has been accounted for in the pattern, then it is possible to say: 'If all these circumstances pertain then we can generalise from this pattern.' A more practitioner-oriented way of describing this process is the concept of 'fit'. If the case study gives enough context i.e. describes all the conditions under which this pattern emerges, then readers can decide whether this case study fits the situations which they are familiar with.

Ethnographic and micro-ethnographic methods were used, similar to those in the NRDC *Adult Learners' Lives* project, including participant observation, ethnographic interviewing, audio and video recording of classrooms and photographs. Ethnography uses observation, sometimes participant observation, and in-depth interviewing, over a sustained period of time, to understand other people's worlds from their perspective. Micro-ethnography combines this understanding with detailed discourse analysis. This multi-method collaborative approach meant that good relationships were developed with teachers and learners. Such relationships are crucial to the quality and truthfulness of the research.

Since some of the learners were from linguistically and culturally diverse backgrounds, it was important to use research modes which were sensitive to diversity. Ethnographic interviewing is designed to elicit participants' own way of speaking rather than imposing researchers' categories and language on them. Although English was used for interviewing learners, it was done with care in order to allow as much learner voice and meaning as possible. In this way, the interview data is of the informants' world constructed in their language.

Ethnographic approaches are particularly suited to practitioner-orientated research (Bloor 1997) since practitioners bring in a wealth of knowledge and experience, and so are able to make considered analysis of actual instances of phenomena and the rich descriptions of classrooms and learners' lives. Since some of the research instruments, analysis and writing of case studies were worked on collaboratively with participants, it could be argued that all the teachers and many of the learners in the case studies were co-researchers. This collaborative approach meant that a range of perspectives enriched the studies. These perspectives, as well as the good relationships of trust developed in a collaborative approach, were crucial to the quality and the validity of the research.

In order to ensure that the case studies were not developed in isolation, the team met on several occasions to discuss methods and agreed a number of common themes:

- Focus on the detail of classroom life.
- Focus on the relationship between classroom/workshop practices and learner perceptions.
- Acknowledgement of the linguistic and cultural complexity of classrooms.
- Acknowledgement of the resources learners bring to the learning.
- Interest in culturally and linguistically appropriate and sensitive methods of data collection.
- Practical relevance: particularly in terms of resources for teacher development.

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Case study one

A matter of respect: embedding meaningful language, literacy and numeracy in a horticultural programme for students with learning difficulties and disabilities (SLDD)

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Introduction

This study explores the ways in which literacy, numeracy and oracy are embedded in a practical vocational horticulture programme which has been devised for a specific setting and a particular cohort of students. It has two main foci:

- An examination of the development of embedded oral communication skills as a distinctive feature of the programme.
- A consideration of what might count as progression for the students on the programme.

According to the prospectus, Supported Learning at Bishop Burton College is about 'overcoming difficulties, gaining confidence, learning new skills, social development, being accepted, moving on in life – all within a caring and supportive environment'.

The Horticultural Enterprise and Skills Training (EaST) course was created within Supported Learning to fill a gap in the progression route for part-time (SLDD) students. Its aim is to develop skills through a programme of training, which includes horticulture, numeracy, literacy, business and work-related skills.

This particular group of learners have limited skills in reading, writing and numeracy. They have been assessed predominantly as Entry Level 3 in literacy and Entry Level 2 in numeracy. However, there is no separate assessment for oracy; this is subsumed within the overall 'literacy' heading. All the learners live in sheltered situations, at home or in residential care, and their current levels of skills enable them to get by in the limited environment of their daily lives: they can skim/read a tabloid newspaper or a magazine on a subject which interests them; they can read and write a personal letter or a simple formal letter of acknowledgement or request; they can handle money in everyday exchanges. For them, the attainment of these skills virtually marks the limit of their capabilities. It is, therefore, important for them to reinforce these skills continually to maintain existing levels, but the fact is that they are unlikely to improve greatly. So, for them, the foremost communication skill

which they use, the way that they present themselves to others, is oracy. Speaking and listening are how they relate to others socially, and speaking and listening are the most common ways that they give and receive information. Oracy is also one of the prime skills for learning.

Methodology

The methodology can be described as a naturalistic case study, relying on participant observation and interviews and collection of course documentation as its main data sources. I visited the college twice a week between November and February and observed 14 half-day sessions of learning during that time. The horticulture and basic skills sessions proved most relevant to this project, and I attended nine basic skills and seven horticulture classes. Because the learners stay together for the entire day, I also spent break and lunch times with them, and so was able to converse and observe them informally outside class time over the few months I spent at the college.

As part of the research I interviewed most of the staff attached to the course: basic skills co-ordinator, course manager, ICT tutor and supported learning assistant (SLA), since I was keen to contextualise the case study as much as possible in the decision-making processes of the college. The basic skills co-ordinator was my main contact with the college; she suggested other relevant management and teaching staff and arranged introductions with them. In addition to our initial interview and informal conversations, she spent three more two-hour sessions answering my questions and discussing the college, the course and the learners. I was also able to question the course manager and supported learning assistant informally en route to the various teaching locations on-site and during outside visits. I interviewed the Principal and a number of senior staff and teachers.

Context

The college

Bishop Burton College is a rural land-based college set in several acres of farmland near Beverley in East Yorkshire. The extensive grounds of the present-day college, which celebrated its 50th anniversary in 2004, include separate buildings, outbuildings and a working farm set in extensive parkland. Students help to service the farm and residential facilities are available, partly to enable them to work the farm out of college hours.

The college deems the main learning aim for *all* students to be a vocational one. All students are screened for basic skills needs on entry and their literacy and numeracy levels are assessed. This gives a starting point linked to the core curricula, which identifies those students who may have a mismatch between these levels and the level of the course on which they have registered, and who will need additional learning support to help them achieve their primary learning goal, which is vocationally linked to their course. All additional learning support is provided in the study skills centre, rather than through core LLN provision, where elements of basic skills learning would need to be identified as an additional learning aim. The learning support co-ordinator sees this as one of the strengths of the centre, which encourages a wide spectrum of learners to access the service without stigma. The difference for the EaST learners is that they are not working to any external pre-set vocational agenda,

so they have the freedom to have individual goals.

The learners

There are ten learners in the group, but this study focuses on five individuals, who are well motivated and potentially capable of progression from this course to more vocationally specific opportunities outside college.

The course

The Enterprise and Skills Training course was created to fill a gap within the progression route for part-time adult SLDD students. While some learners have accessed other college provision, e.g. the ASET curriculum or the internally-accredited STAGES (Skills Training and General Education Studies) course, assessment suggested that these were not suitable routes for others. It is a key aspect of this case study to reflect on what might count as progression for these students.

PROGRESSION

It is important to consider how we can understand progression in a group of learners who may never make the hoped for vertical progression towards a Level Two basic skills qualification; what should we understand as progression for them? In her discussion paper about progression, Veronica McGivney argues the case for wider definitions. She asserts that 'too great an emphasis on linear progression can ... suggest that lesser value is attached to those learners whose aims do not, initially at least, include upward progression - ... people with learning difficulties for whom horizontal progression is very important.' (McGivney, 2002, p.14) She highlights the continuing policy preoccupation with vertical progression 'despite its acknowledged inappropriateness for some groups of learners', and suggests that progression 'cannot be interpreted as a single direction or set of outcomes. It can mean different things for different people, depending on their characteristics, circumstances and starting points. What may be a small step for one may be a huge distance to travel for another.' (p.17)

The notions of horizontal and vertical progression have interesting resonances with Bernstein's notion of horizontal and vertical discourses (Bernstein, 1996). The trajectory of a vertical discourse takes the learner through the various levels of the national curriculum framework, towards the goal of a Level Two qualification. On the other hand, the trajectory of a horizontal discourse implies the addition to the repertoire of a range of situated, local literacies, in various work and community settings and environments. Its focus is on diversifying the range of skills and capacities of students. Moss (2004), albeit in the context of literacy in schools and in the leisure time literacies of school aged children, writes of the transience of horizontal discourses, surviving as long as there are contexts to support them. Here we can see the curriculum as creating horizontal trajectories for the students through community and work settings, diversifying and opening up opportunities in this way.

The programme of training includes horticulture, numeracy, literacy, oral communication, business and work-related skills. The main centre for the course is the college nursery, where the students learn to produce saleable items. Any profit made is ploughed back into the course.

During the first term the students undertake an initial assessment, the results of which inform their learning plans, and allow the course tutors to make any adjustments to the curriculum. This initial assessment is backed up with ongoing diagnostic assessment of actual skills, as well as an assessment of each learner's preferred learning styles, and ILPs are negotiated with each learner. Thereafter, lesson plans are required to address 'the integration of key and basic skills, opportunities to assess learning and differentiation for individual needs and learning styles'.

The development of oral skills, in conjunction with the development of literacy and numeracy skills, is central to the teaching and learning activities in which the students engage. This development is central in ways that would not be typical, or at least not explicitly so, in more mainstream literacy and numeracy provision. It is our argument that oral skills should be taken more seriously in basic skills provision more generally.

Students are in college for two full days each week, arriving at 9 am, when they gather and meet up with the SLA in The Meadows, the college refectory. They are collected here by their relevant sessional tutors. They remain together as a group throughout the day until 4 pm. Their afternoon tutor takes them to the bus stop, where she waits with them until they are collected. The tutors and the SLA stay with them for the entire day, including breaks and lunchtime.

The course manager, who is a horticulture specialist, teaches the Tuesday morning Horticulture module, with the participation of the SLA to provide physical assistance, and students work predominantly in the greenhouse and potting shed. The basic skills co-ordinator teaches the Thursday pm basic skills module, with the support of the SLA. During these sessions, students focus on general reading, writing, oral and numeracy skills. They have the opportunity here to reinforce existing skills and develop their skills further. They use the practical work from their horticulture sessions as their context. The notes they have made there provide the raw material for writing and numeracy activities in the basic skills sessions. In the first term Tuesday pm and Thursday am was ICT and art & craft; in the second term it was Floristry and Personal Hygiene. Each module is taught by a different specialist tutor, with the constant participation of the SLA.

An initial broad outline for the overall scheme of work suggests practical horticulture and business areas e.g. business planning, organising work areas, research, ordering materials, planting and related activities and selling. The course is structured to provide an integrated framework within which these topics will be delivered over three terms. The schemes of work are then planned for each module, accommodating learners at all levels between Entry Level 1 and working towards Level 1, identifying the opportunities to address specific elements of the two curricula. All work completed in the practical subjects is mapped against the Basic Skills Core Curricula and is identified as such in the teaching plans. Although the curricula are not referred to in so many words, students are aware that they are learning new elements and reinforcing their competence in other specific sub-skills, and their achievements are recorded as such in their portfolios.

In her original application to develop the course, the basic skills coordinator stated that: "one of the aims of the course is for the learners to be able to work as a team in order to operate a very simple business". The sub-skills covered in the taught sessions encourage the learners towards generic skills such as independence, and encourage communication with other group members and the wider population of the college while, at the same time, they are

developing, consolidating and reinforcing the more clearly identified basic skills of oracy, reading, writing and numeracy.

The scheme of work for 'Basic Skills and Portfolio Building' is set out in terms of elements of the Curricula, with accompanying general information about the horticultural/ business contexts within which the syllabus is framed. So a session on sentence structure, including spelling key words and using appropriate grammar, will incorporate key verbs in gardening; another session on reading and understanding instructional text will use the language and tabular format of seed packets; a third on using language suitable for different audiences and purposes will enable students to write invitations to the sales of their produce.

So what of the embedding of oral skills in the course? 'Respect rights of turn-taking' is the first reference listed in the term's scheme of work for Basic Skills; it is also included on all the learners' Individual Learning Plans (ILPs). Thereafter, most of the syllabus areas refer to specific reading and writing elements of the Literacy Curriculum. However, at the start of the scheme of work, an important note is highlighted:

The following speaking and listening elements underpin each lesson but may not necessarily be referred to within the scheme of work.

- SLd/E3.1 – Follow and understand the main points of discussions on different topics.
- SLd/E3.2 – Make contributions to discussions that are relevant to the subject.
- SLd/E3.3 – Respect the turn-taking rights of others during discussions.

Speaking and listening skills do, in fact, underpin all lessons and all subjects. In both sessions, there is a good deal of overlap between informal discussion and formal teaching. Because the group is together all the time, both inside and outside the classroom, there are opportunities for a number of different kinds of relationships to form between students and staff. This situation exemplifies one of the strategies for discussion stated in Access for All: 'Some of the best discussions can take place in less formal surroundings such as the cafeteria or even a corridor.' (p. 52) So a friendly chat that may begin at 9 am in the refectory while waiting for all students to gather may continue during the walk and on into the classroom or greenhouse. Informal chat blends into formal question and answer and leads to specific topics of learning quite seamlessly, without the students being aware that 'learning' is taking place. In this sense, the learning is highly situated and a distinctive feature is that the learning moves through the different settings in the college: classrooms, greenhouses, corridors and refectory. It is situated in the daily lives and routines of the students. In a very real sense the whole college is a learning environment for these students.

ORAL LANGUAGE IN THE GARDEN PLOT

One morning in early January, the Horticulture lesson is going to take place in the garden plot, where students are readying the soil for planting, and they have been asked to bring overalls and boots with them this morning. The SLA has arrived wearing particularly scruffy clothes and some good-natured joking ensues about her looks. She, in turn, compliments one of the students on his clean overalls and is told that he received them for Christmas. Others chip in with information about gifts they have received for Christmas; a couple have brought in their Walkmans and show off their new CDs. The SLA asks about their favourite songs. One student complains that she doesn't like to get dirty, while others recall specific incidents from the previous time they worked in the plot. Discussion develops about what they need to do to the plot to get it ready and about the importance of using proper equipment and dressing appropriately. In this way, the group are gradually being prepared for the morning's activities; they are reminded that they will need to change their clothes first and they begin to plan what they are going to do. By the time they get to the nursery, they are focused and ready to get down to work.

The full case study explores in detail how oral language is both constitutive of learning and at the same time, for this student group, can be understood as a legitimate outcome of learning. The question that this centrality of the oral evokes is whether oral skills development should be treated as a generic personal skill, as it is at present, or as a core component of basic skills. If it is the latter, it follows that the place of oral language should be enhanced in the literacy and numeracy curricula more generally

Conclusions

This study raises important questions which challenge the predominant *Skills for Life* perspective. Have we developed an appropriate, inclusive way of considering the acquisition of basic skills for all learners? What about those who have reached the limit of their reading and writing skills at Entry Level 3 or Level 1? What does progression mean when there is little realistic chance of vertical progression? For such learners, the acquisition of oral skills is their vertical progression. Oracy is also the medium through which they achieve horizontal progression: first, in the acquisition and consolidation of their reading and writing skills and, second, in their progressions beyond the classroom. It is through their oral skills as much as anything that they present themselves to others in a variety of formal and informal situations. It is how they communicate their knowledge and understanding. Moreover, if this group of learners was to progress to volunteering and or employment, these are likely to be the dominant LLN skills through which they communicate and perform work activities and employers are keen to employ people who have effective speaking and listening skills.

How does *Skills for Life* recognise their strengths and support them to attain the highest level they are capable of achieving? To answer these questions, if only in part, we must revisit the issue of respect for the individual implicit in both the actual practices and the comments of the teachers of SLDD observed and recorded for this study. The Further Education Funding Council report on inclusive learning advocated a high level of respect as a matter of student entitlement. It recommended 'redesigning the very process of learning, assessment and organisation so as to fit the objectives and learning styles of the students.' (Inclusive Learning,

1996, p.4) For SLDD, such as those experiencing the EaST programme at Bishop Burton, a greater cognisance of the role of oracy in learning does fit their life objectives. Oral skills need to be more widely recognised by policy-makers, providers and practitioners as valuable aspects of LLN. The initial and on-going assessment of learners should include oracy so that goals in speaking and listening can be agreed and imaginative ways of recording progress and achievement in oracy should be adopted so that it can be celebrated.

Tutors should plan to use and value informal conversation approaches as well as more formal structured question and answer and discussion methods in their teaching of the 'host' subject. They should plan to use paired and group discussion and dialogue as learning approaches.

Finally, embedding the development of oral skills in vocational programmes seems to provide the motivational opportunities to develop these particularly important skills for life.

ORAL LANGUAGE IN THE CLASSROOM

Once settled into their classroom or other learning setting, each session begins with several minutes of conversation, catching up on what everyone has done inside and outside college since the previous week. So, in the basic skills session, the tutor, Cheryl, will ask:

Question: Where did you go with Jane last week?

Answer: To the garden centre.

Q: Which one?

A: Don't know.

Q: Did you go to Homebase?

A: No we went to [name of centre].

Q: Do you remember what you saw at the garden centre?

A: Plants.

Q: Did you see some of the plants you talked about with Jane?

Q: Did you buy anything?

A: No, it was all too expensive.

Q: What else did you see there?

The questions become more probing, picking up on the general points individuals have remembered. What has started as general conversation, e.g. 'what did you do last week?' becomes directed questioning – which plants, what kind of containers, relative costs – to identify specific topics and activities that will link with and provide the raw data for the literacy and numeracy activities that they are going to undertake. What the teacher seems to be doing is meticulously reconstructing shared knowledge in the group, via intertextual links with previous activities and conversations, to be used as a basis for the next activity. This classroom intertextuality is probably a characteristic of all teaching and learning situations, where connections are established back to previous activities and conversations as well as forward towards prospective activity. What is distinctive here is the painstaking detail of what must be reconstructed and reactivated for the students.

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I have also consulted various internal unpublished materials relating to the Horticultural Enterprise and Training course, prepared by Cheryl Dillon, Basic Skills Coordinator, Bishop Burton College.

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 Angie Mason, ICT/Basic Skills Tutor
 Mark Musselle, Section Head, Supported Learning
 Liz Philip, Funding Manager
 Jane Puckett, EaST Course Manager
 Janet Richardson, Study Skills and Learning Support Co-ordinator
 Suzie Sherpa-Baer, FE Manager
 Judith Slingsby, Course Manager, Full-time Supported Learning provision
 Amanda Wilcox, Section Head, Animal Management

Case study two

Doing as learning: “It’s not like doing maths at school – here you know it’s to do with what you’re doing”.

Jessica Brittan and Sue Grief – Learning and Skills Development Agency (LSDA)

Introduction

This study explores some of the ways in which numeracy skills are taught, negotiated and learned in a vocational (engineering) setting. It addresses the following question:

“Can teaching that is firmly embedded within vocational teaching enable learners to develop the mathematical understanding needed to function effectively within their chosen vocational area (that is where that mathematical understanding straddles particular contexts and learning instances *within* an overarching vocational context)?”

It touches on some of the questions current in debates about the nature of adult numeracy and related pedagogical approaches.

- How does the context, that is the engineering context, assist – or otherwise – learners in developing understandings about numeracy?
- Is it possible to assess whether learners develop “portable” skills – can they translate from one context to another within the programme – if so what are the interventions that trainers most effectively use?
- To what extent are numerical skills perceived to be “visible” and “accessible” within the engineering curriculum by learners and trainers – and do these perceptions differ – if so does it matter?
- Is there any difference between the trainers’ and the learners’ perceptions and experiences of “theoretical” and “practical” sessions? Is there any impact on learning?
- How important is the social context for learning?

There is a sense in which the term “embedded numeracy” is to some extent tautologous: there is a distinction between numeracy and mathematics that reflects the “situatedness” or contextual nature of numeracy. This has been articulated and defined in a number of ways. The Adult Literacy and Lifeskills Survey Numeracy Framework 2000 (ALL, 2002), for example, defines numeracy as “the knowledge and skills required to effectively manage the mathematical demands of diverse situations”. A number of studies, for example Lave (1988),

Harris (1997) and Nunes, Carraher and Schliemann (1993) suggest that there is something either about the context, or the situation in which numerical activities take place, that enhances a learner's ability to perform those activities. This has clear implications for pedagogical practice: if learners learn "better" in real contexts, especially those that are meaningful to them, then perhaps we need to re-examine current understandings and practices in relation to what we understand by "numeracy in context". Numeracy learning here is embedded as an activity within an activity, rather than linked to a context that may or may not be a potent one for the learner.

Methodology

The Bedford Training Group (BTG) was visited 12 times between the end of November, 2003 and mid-March 2004. In each case I acted as a "participant observer", working alongside the trainers and trainees in both formal and informal settings. The following data was collated:

- 11 workshop/classroom observations, three of which were recorded (others were fully annotated).
- Three full interviews with learners.
- Two interviews with trainers.

Context

Training provider and course structure

BTG offers training in engineering for Foundation and Advanced Modern Apprentices (FMAs and AMAs) in addition to young people on Entry to Employment (E2E). It expresses its aim as:

'To advance the theoretical and practical education and training of persons engaged in the engineering industry.'

The training day (for the E2E trainees) commences at 8.30am and ends at 4pm, with two 20-minute refreshment breaks, together with a 30-minute lunch break. E2E trainees are expected to attend on Mondays and Tuesdays. They are working towards a National Vocational Qualification (NVQ) in engineering at Level 1, with attendance patterns on a "roll-on, roll-off" basis. Trainees are referred and supported by a Connexions adviser, who visits the workshop on a regular basis. The trainers work flexibly with small groups of trainees, with some movement between groups as training and assessment activities change. Training may be "practical", that is delivered while trainees are using the equipment, or "theoretical", that is delivered in the classroom, or one of the adjoining areas.

Trainers

There are several trainers working at BTG. Of these two, Kevin and Tony, spend most of their time on Mondays and Tuesdays with E2E learners. Others may have a more peripheral involvement. Tony is the specialist in electrical engineering, while Kevin specialises in welding and acts as overall manager of the E2E programme, taking responsibility, for example, for the work placements.

The trainers have attempted to enrol on **Skills for Life** teacher education Level 4 courses in their area, but have not been able to do so as the programmes are not yet available in the

Bedford area. Trainees undertake the Basic Skills Agency Initial Assessment in numeracy and literacy. Some trainees' ILPs contain reference to literacy or numeracy targets, although this is not the norm.

Trainees

There are usually between seven and ten trainees enrolled on the E2E programme at any one time, although attendance can be erratic. For the purpose of this study it was decided to focus mainly on the progress of two of the trainees, the most regular of the attendees. Other trainees are not excluded from the study, but their participation has of necessity been marginal to that of the core group. All the trainees observed are young men between the ages of 16 and 19. In the early stages of this study it became apparent that trainees and trainers share a more explicit understanding of the role of numeracy within the engineering curriculum than they do of literacy. For this reason it was decided to concentrate on numeracy for the purposes of this study.

The course

In the classroom: learning through thinking and talking about doing

Those trainees with whom interviews were conducted expressed a range of views about numeracy, based on their experiences within the programme and at school.

Mark: Well, I didn't really go to school a lot really, but yeah, maths and that....it wasn't very interesting, and I wasn't very good at it, really...

Steve: It's not like doing maths at school – here you know it's to do with what you're doing, like the measuring and that. It's much better when you're doing maths and things, when you're doing something in the workshop – you can take so much of the theory stuff in the classroom. Anyway, we tell them when it gets too much.

The trainees articulate the view that there is something different about "doing maths at school" from the kind of mathematics they are engaging in whilst studying to be engineers. Steve goes a step further and suggests that there is a connection between (his) levels of motivation and whether or not he is tackling mathematical problems in the classroom or in the workshop. To him, the mathematics is clearly visible – or in other words, the extent to which the mathematics are embedded within the engineering curriculum is evident. This appears not to be an issue where the mathematics is embedded within the vocational task.

At various points the trainers refer to other contexts to illustrate some of the calculation processes. Even within the embedded context, the trainers have chosen to draw in other contexts likely to be familiar to the trainees, who actively seek to construct their own meanings to help make sense of their own learning. In the following extract from an interview with Tony, he expresses his approach to this "double embeddedness":

Jessica: Do you find with explaining things in an everyday way, it makes them more comfortable with doing it?

Tony: Yeah, it doesn't scare them so much. When we're working out loadings for cables, for example, and we need to use sizes, I use the example of um, there's an old lady across the road and she's bought a fire from Argos, I go into a bit of detail, and she knows you're doing an electrical course at college and she asks you if you can put it up for her. So you screw it up on the wall, then you go to plug it in, and you think oh, I'd better work out what fuse size is needed, so you have a look and it's 60 kilowatts, but kilowatts isn't amps so you have to work it out.

T: There's another one I use. Um you've moved into a house and the person who was there previously didn't have a shower there, but the wiring's there and the plumbing's there, so you get a plumber come round, and he says, Yes, everything's there, you just need a 40 amp shower, but when you go to the DIY shops it says nothing about 40 amps, it's in kilowatts, so they have to work that out, and things like that, so I try to do everyday things.

J: Those things involve using formulae, don't they? How do you manage to get those ideas over?

T: It isn't too bad, it is fractions, yeah. Er but I try and do it the simplest possible way I can. I give them the basic formulae, then all the different ways of using the formula, so it's all there, and then I go through it with them as a group, and I ask them which one do you think we should use? They get there eventually. Then they write it all down – I say: You don't have to remember all these things – all you need to remember is where's the formula in my paperwork? You don't have to remember everything all the time ...

Tony succeeds not only in expressing numerical concepts in real-life, everyday terms, but also in situating them in a meaningful and vocational narrative. He expresses the view that the skills the trainees have learned may indeed be transferable in a vocational context. There is a sense in which the trainees are acquiring skills and a degree of underpinning knowledge that are "good enough" in order to allow them to do a job of work. They will not have to remember the formulae, just identify the correct one from amongst their paperwork. Obviously if they are not going to put their customers' lives and property at risk, they need an appreciation of both what it is they are actually calculating, and the reasons for getting it right. Sometimes the power of a context resides not just in the fact that it is just that, a context for learning, but in the nature of the context itself. The knowledge that the trainees acquire, that is what it is necessary to learn, is therefore defined by the job itself, not by external demands or criteria.

Issues and implications

It is important to understand what a "meaningful" context is in relation to teaching numeracy. It is more than presenting a learner with a set of algorithms parcelled in a context that has some kind of putative interest. Learners are motivated to learn, and crucially may learn better, within a situation that has relevance and where their activity is directed towards achieving a personal goal within a specific practical task.

The trainees are clearly less reluctant to engage in mathematical learning if it is perceived to be an integral part of the engineering curriculum (see Steve's explanation of his feelings in this respect). Again, those who may be "reluctant" learners may be enticed to engage in learning if they clearly understand its relevance to their lives (and livelihoods). This is to say more than purely the context has significance because it is real: this reality is motivational in itself. This also suggests a need for an extended but graded approach to moving learning to different contexts – that in themselves should be meaningful.

This study shows that embedded courses are not narrowly functional in their processes though very functional in their outcomes. It is possible to draw on experiences and contexts not directly related to the task in hand, but directly related to the learners' own experiences, to assist learners in developing their understanding of mathematical processes. In effect there are various levels of "embeddedness". Even within the embedded context, trainers chose to draw in other contexts likely to be familiar to the trainees, who themselves actively seek to construct their own meanings to help make sense of their learning.

DOUBLE EMBEDDING LEARNING

Much of what takes place in adult numeracy classes (in the United Kingdom) relies on a model of practice where an algorithm is deduced from a context (that may or not be meaningful to the learner), processed by the teacher or materials writer then re-inserted in the original context for the learner. The extent to which abstract skills such as the conceptual knowledge of formulae and algorithms are generalisable, that is a learner can carry out that particular operation or set of operations in other situations, is open to debate. Nunes, Schliemann and Carraher (1993) suggest that people working in a vocational context may replicate their ability to perform calculations and other numerical operations in other contexts – but only in other contexts that are as meaningful to them as the original. One of the trainees in this case study, for example, may very well be able to use decimal multiplication to work out the total length of metal needed for a strut in a gate, or to calculate the cost of a number of fuses. It is not certain, however, whether he could perform a similar operation in a context-free situation, for example for a test. Evans suggests a role here for teachers, in that it may be possible to "translate" from one set of specific circumstances or discourses to another (Evans:2002). In this case study, the instructors achieve this by encouraging the learners to practise skills not only in different vocational contexts, but also by "double embedding" their learning within meaningful personal contexts.

It is not sufficient merely to understand why a learner may be reluctant to learn: this study demonstrates the extent to which teachers need to possess or develop empathy with their learners, sensitivity to their needs and respect for them as individuals. Such attributes in turn engender respect for the teachers amongst learners. It may prove to be rewarding to conduct further analysis of the skills necessary to work with "reluctant" learners in improving their numeracy.

The trainers in this study have a clear awareness of the importance of allowing learners to make mistakes: learning takes place when learners "do it wrong". Learning is revealed in different ways and doing it wrong can make learning (or failure to learn) more explicit. This demonstrates the importance of allowing learners to experiment and make mistakes. In a vocational context such as this it is also possible for learners to appreciate the consequence

of making errors. Most adult numeracy teachers are aware of the concept of "mathematics anxiety". It may be advisable to look a little further at what this actually means for learners, especially where the learners in question are socially and emotionally vulnerable, and may be hard to engage (and retain).

Planning of learning and recording of achievement within vocational contexts (and possibly others) could be expressed in terms of "doing". Learners more readily accept targets and measures of progress that are articulated in these terms. This goes one step further than suggesting that numeracy targets should sit alongside vocational ones within a learning plan. However measuring progress and recording progress when couched in this way demands that the teacher clearly understands the relationship between the vocational and mathematical context. Initial and diagnostic assessment may more accurately capture a learner's starting point if delivered within the vocational context.

There is a need to develop understanding of the kind of interventions teachers should make in order to support learners in developing skills that can be transferred (or translated) from within one situation to another.

Related to this, this case study shows teaching and learning that has less to do with explicit targets and more to do with the kind of responsive, contingent teaching evidenced in the data. It is challenging, though not necessarily impossible, to capture this kind of learning journey through ILPs and assessment records. This is not to say that these should not be used, but rather to suggest that the use of targets and methods of measuring achievement should be sensitive to contexts and styles of learning and teaching.

Finally, this study suggests that even the simplest calculation is best done in a meaningful vocational context. Although many learners are not interested in literacy and numeracy as explicit in the curriculum, literacy and numeracy *are* the curriculum in a course such as this. In other words, rather than embedding literacy and numeracy within the engineering curriculum, engineering skills are embedded within the literacy and numeracy curricula.

NUMERACY AS PART OF THE VOCATIONAL DIALOGUE

Numeracy is being taught and learned as an integral part of the vocational dialogue. The numeracy task leads to the vocational doing. Kevin conceptualises the support and tasks he has given to Mark:

Kevin: What he's been doing is working on metric and imperial and so forth, so I've been getting him to work out the common denominator and so forth, basically not only their multiplication from metric and so forth but also in imperial. So he's got the two systems, basic systems, which helps his engineering, but also his maths. It might have been a bit of a cheat with the calculator – the whole point was to give the confidence to understand the formula – once you've got the formula the actual putting the numbers together – following the formula makes it easier to have the confidence to use the formula in the first place.

Jessica: Do you do a lot of conversion work with them, between...

- K: Whenever we have the opportunity,... because we find that fractions and imperial aren't taught so much in the school as the metric system as that's the common system now. Also data charts and data tables and understanding how to read through a data table and using the conversion tables ... is going over how you transfer a decimal into a fraction
- J. *Do you think this helps them to be able to do things again?*
- K: As you can see what we've done there... I've demonstrated the first one, helped with the second one and then basically just let him get on with the third one and again with the conversion back and so forth.... I'd also been back over with it previously, that formula, I had to remind him of it as he couldn't remember the formula exactly. Um but then once he was aware of it... I asked him how, you know, he goes about it. He says multiply .. I then question him about that – and then he realises you have to divide it, so um, first of all you have to put, give the information so.. put the idea in their head, putting in the seed, then seeing if you can expand on that seed, so you're just letting them actually get confidence to believe in themselves to use it.

Conclusions

This study has touched on several issues raised by the teaching of mathematics within a vocational context, in this instance engineering. It suggests that the context itself offers powerful incentives to learn, given that many of the learners are perceived to be "vulnerable", and hard to engage. Some learners indicate that they consider there to be a difference between learning mathematics in school, and within the (engineering) vocational context. Moreover, there is a perception that there is a difference between learning in the classroom – that is "theoretical" learning, and learning through "doing" in the workshop. This perception is reinforced when trainees are observed performing calculations and measuring in order to complete specific manufacturing tasks: should they not complete the calculations and measurements to a requisite standard, the items cannot be made. They also gain an understanding of the degree of "tolerance" imbued within a specific task. Knowing when a calculation or measurement is "good enough" to do the job is a skill in itself. Trainees clearly understand that they are learning mathematical skills: this appears not to inhibit learning or motivation where the learning is firmly embedded within the vocational task.

The social context within which the learners and instructors act has a considerable impact on their learning. The trainers describe a view of pedagogy within which the trainees learn from interaction with both instructors and peers, whilst being actively engaged in constructing their own learning. The trainers are sensitive to the needs of what they perceive to be a particularly vulnerable group of learners and reflect this in the way in which they encourage and support the trainees. This support is itself embedded within the approach to learning mathematics, as trainees use calculators to "avoid looking stupid". It is also evident in the ways in which the trainers use a variety of methods to assuage learners' experience of "mathematics anxiety".

It is not possible within the limited confines of this case study to infer detailed conclusions on

whether or not the learners develop transferable skills. As far as the evidence goes, it seems to suggest that as the trainees make the transition to thinking and talking about producing items and completing specific tasks they are able to replicate the numerical skills they have learned, insofar as the skills they have learned are reproduced within similar contexts. Learners develop their skills and their motivation to learn, within contexts that are meaningful.

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Case study three

Rites of passage: embedding meaningful language, literacy and numeracy skills in skilled trades courses through significant and transforming relationships

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Introduction

How does embedded language, literacy and numeracy enable learners to make progress in achieving vocational and other life goals?

Our study aimed to take a holistic approach. We sought to understand and illuminate the complex and dynamic nature of the process of embedding through the perspectives of students, teachers and managers, as active participants in the process. It was equally important to understand the whole environment in which this process took place. More specific research questions included:

- How does embedded language, literacy and numeracy work in this environment?
- How do tutors make LLN and vocational content significant to learners?
- What makes a meaningful learning environment?
- How do students/tutors feel about the course and its various aspects?
- What do students and tutors learn/feel about each other and the learning environment and how does this come about?
- What role does ICT play in basic skills provision?

Methodology

An ethnographic approach was taken to this study. Initial meetings were arranged and access agreed by key stakeholders, followed by conversations with the various participants explaining the nature of the study. Informal discussions with staff and students provided broader understanding of the issues. Observations of classes rapidly focused on lessons where embedding was taking place successfully. Subsequently, we recorded greater detail of classroom processes, focusing on specific tutors, groups and individuals and both non-verbal and verbal interactions.

Closely observed students and tutors, as well as staff at different levels in the embedding process, participated in semi-structured interviews. These provided a rich understanding from several different viewpoints, including the perspective of the basic skills tutor, ICT tutor, vocational tutor, classroom assistant, basic skills programme leader, skills for life coordinator and divisional manager. During informal conversations we also elicited the views of key skills tutors, other basic skills and vocational tutors. Though we focused on classrooms and tutors where embedded basic skills appeared to be working well, other conversations and interviews gave wider insights.

We undertook seven formal interviews with staff and three formal interviews with students, all of which were recorded and mostly transcribed. There are over 12 hours of classroom observations written up as narrative accounts and 16 hours of informal interactions around the college documented as field notes.

Theoretical framework

Our theoretical framework reflects our holistic approach to this study. The emphasis on constructivism in current learning theory has been enhanced by more conscious integration of affective and cognitive issues prompted by developments in neuroscience (Damasio, 1994;1999;2003; Goleman, 1995) and the recognition of social capital, created through interaction, for staff and students (Hargreaves, 2001; Hoban, 2002). Together these reinforce older psychological theory on the importance of affect in learning. Vygotsky (1986) argues that the separation of the affective and the cognitive is a major fault in traditional psychology and that the higher cognitive processes are enabled through human relationships. Intense interaction and attention to the emotions increase focus and the speed of processing according to Damasio (1999) who argues that all interaction is registered in the brain and throughout the body as a feeling. Students therefore need empathic tutors who understand their emotional responses to learning very precisely (Cooper, 2002), adapting to situations and teaching contingently as the moment requires (Wood, 1988; 2001). Tutors who develop profound empathy (Cooper, 2002), and have a very rich, individual, mental model of students (as opposed to the more superficial group mental model of functional empathy found in large, teacher-led classes), can dissipate anxiety and support communication, change and development. More opportunities to put the learner in control of their learning and even support others, enables learners to adopt Heathcote's '*mantle of the expert*' (Hesten,1995).

Affective issues have often been forgotten in the intensive push towards standardised and crammed curricula and mechanised teaching and learning during the 90s. Understanding in education has been too often reduced to the measurable, the observable and the categorisable (Broadfoot, 2000), and this has adverse implications for the understanding of human issues. Fragmented curricula and relationships, in a time-poor, highly assessment oriented system, can alienate students and teachers in the learning process (Cooper,op.cit). Noddings (1986) talks of the importance of 'normal conversations' in the caring teacher relationship. Best (2003) defines love as mutually respectful interaction. Aspy (1972) speaks of the importance of personal interaction in the development of literacy, while Purkey (1970) stresses the significance of self-esteem in learning. Watson and Ashton (1995) talk of the small personal interactions which make students feel valued and Clark (1996), of the significance of personal interaction in the creation of learning communities.

Context

The physical and cultural context

The college is situated in a purpose-built building, five minutes from Leeds city centre. The college has a friendly, relaxed feel and a decidedly gendered culture. It is predominantly male, with bunches of "lads", in working clothes, nudging and ribbing each other along the corridors. There are a number of ethnic minority students in the college and a few female students. However, the student population is predominantly white, working class and male.

Staff and students chat in a friendly way throughout the building. The vocational tutors and managers are predominantly male, some in work gear, others, more office bound, in suits. There are male security guards, technicians and porters. The reception, library and office staff and the basic skills tutors are predominantly, but not exclusively, female. This gendered culture probably both reflects and reinforces the fairly traditional world view of many of the people in the college. A "family" feel is reflected in the perspectives of staff and students voiced in this study and in the classroom practices we observed. There is a resonance here with attitudes towards learning, in that the vocational (male) aspects of the course take precedence over the LLN (female) aspects. Harry (a senior manager, ex teacher and professional): 'It (the course) should be driven by the vocational tutor'. However, significantly, the caring, more traditionally feminine nature of the work, rather than the curriculum, dominates attitudes of all staff and managers towards learning regardless of gender. Harry: 'The curriculum is a side issue....the caring is very important – very important'.

BUILDING A SENSE OF SELF BY UNDERSTANDING HOW THE PAST INFLUENCES THE PRESENT

Tutors envisage future working lives and also take action based on these boys' past experiences, taking opportunities to boost needed self esteem.

Pete: 'The quality might not be as good as somebody else in the group but for them personally it's brilliant and I try and bull it up a bit - because some of them have never had praise and they think you're taking the Michael out of them and you say ' "Eh you've done a bloody good job of this" - and they don't know how to take it - they don't know how to react to praise.'

The envelope in which all learning and interaction occurs then is developed within a personal and social narrative, one of relevance to personal and past experience and possible future experience. The emphasis is on the relevance of the course to these students as real people, currently valued and full of potential. Their tutors empathise with them having had similar experiences:

Pete: 'I hated school with a vengeance - they were the worst days of my life - I hated it - and then I came to college and I was top student - yes - it was all relevant and I knew I wanted my own business and I knew I wanted to be the best.'

The boys' accounts echoed his feelings. Steve when asked which lessons he likes best: 'I like

practical – then computers, because to be honest I'm pretty good at computers -- and then it's theory. Everyone .. everybody hates theory.

Int: Can you tell me why that is?

Steve: 'It's .. you know, you're sat at your desk and you have to be writing and we don't want to do that -nobody really wants to do that (passionate) - it's like being back at school.'

For this reason literacy is played down in the early stages of the course as both basic skills tutors and vocational tutors try to emphasise the practical aspects, boosting the boys' confidence through more positive attitudes. The palpable negative emotions around writing and spelling create barriers to relationships and learning.

Pete: 'So if they don't want to hand work in because they think their spelling's poor or their literacy's poor but they know their stuff and that puts that barrier up - I'd rather take that barrier down [] It's no longer an issue and if they can't spell – "Here's my spell checker – type in what you think and it'll give you it" - and they respond to that as a good strategy... '

Then they gradually make the importance of basic skills more explicit over time. During this study the boys increasingly realise that they need literacy and numeracy to pass the course, to become a modern apprentice and to work in the real world effectively. They are continually reassured that help is there for them to progress:

Janet speaks to the class in a very informal, friendly but clear way – she emphasises the need to get their basic skills up to a level to be able to do a modern apprenticeship.

'So take advantage of me while I'm here' she says in a good natured way, flinging out her arms (offering herself to them).

The timing however is crucial. Janet: 'You can get away with it now – once they've accepted it - basic skills. It would be cruel to put them through it at the start.'

Ideally, she would like two tutors in every lesson with time in each for some basic skills.

The learning context

This study focuses on one group of full-time students in a particular area of the construction trade. The key aspiration of most students at this stage is to become a modern apprentice, both working and studying at the same time. For this they need certain qualifications and acceptance by an employer, which requires a range of practical, academic and personal skills. The students are attracted to the course because of its practical nature. There appears to be a symbiotic relationship at work between the two curriculum areas which changes over time. Initially, the vocational course offers the motivation for students.

Harry: 'And the ice is broken and they come into a different environment and there's a lot of practical involved and it helps tremendously - you know there's a 60/40 ratio of practical technology - it takes them out of this "sat on a seat - looking out of the window" (as in school').

Students do initial basic skills assessment at the start of the course. The results of these are kept and used meticulously for addressing learning needs from then on by LLN tutors. However, many needs which inhibit learning surface later, as students build trusting relationships with tutors. They are often emotional, relating to home or school experience.

The course

Teaching and learning

Embedding is not just about interlinking different curricula; it is deeper and more complex. Richly informed and caring, student-centred attitudes were the predominant feature, with staff working closely together in positive, caring relationships to best serve student needs, both academic and personal. Affective and cognitive development were closely interrelated to enable both short- and longer-term development and improve life chances. Whether talking about or working with students, a very personal approach was evident and voiced and enacted by all the staff we encountered, at whatever level in the organisation. It was at the heart of staff motivation and was valued by students. This caring approach was facilitated by good student-teacher ratios, good staff relationships and considerable teaching skills and life experience. Staff were driven by a desire to see students make progress both as people and as learners, both of which they saw as vital to their future careers and personal life.

Significantly, staff in our study would argue that they are still in the process of embedding basic skills in the vocational course. Both basic skills and vocational tutors gradually learn about each other's area of the curriculum, how they interrelate and their significance to students. They also learn how best to work together as a team and which teaching and learning strategies are most effective.

Tutors integrate up to five possible areas of teaching and learning in one course; vocational, literacy, language, numeracy, ICT, as well as personal and social issues. The last category is considered particularly significant by staff but is not officially part of the curriculum. To facilitate integration, managers consciously attach LLN tutors to particular courses, rather than deploying them across courses. This enables rapid familiarisation with one cohort of students and their vocational curriculum. They can build strong relationships with vocational tutors, who can also start to understand and value the basic skills curriculum and teaching approaches, so that the skills and understanding of both teachers overlap and complement each other in order to support students most effectively. However, the course merges different cultures, attitudes, genders, histories and teaching approaches, in addition to the subject matter. This is a major learning process for all concerned. Staff timetables are full and their students numerous and needy, often arriving with a history of negative learning experiences. Embedding LLN skills is a challenge and staff have conflicting views about the course it should take, both within themselves at times and between colleagues. However, their commitment to their students' progress is passionate and unquestionable.

EMBEDDING REQUIRES SHARED WORKING

The embedding process needs both formal and informal time for it to work effectively. Tutors' own fears of the unknown other need to be dissipated through team working. Embedding seems to require shared working over intensive periods and this became precisely the aim of management.

Harry: *'Key skills and basic skills- I want to integrate it totally -it means you (the senior management) staffing it in hours. I want to put that as a double class so that we get the vocational tutor, the key skills tutor and on some occasions the additional support tutor in at the same time -so that we get this continual personal development of staff - all three would learn each other's roles - and as you know all vocational staff are going to have to get a basic skills qualification - but how strange when it was fragmented... '*

Janet describes this gradual process which she believes needs more shared time for planning: *'We do need time to sit and talk -but we will get there. We're starting to build bridges with the vocational staff - they would prefer basic skills to be separate at the start of the year before they get them which I think would be a big mistake.'*

LLN skills tutors have recently been invited to vocational tutor meetings, which is helping to build bridges. Janet: *'You know I'm doing the (students') course myself and I have made a basic skills pack to go with it - I did a crossword (with all the terms). I gave it to them (in the meeting)' Any use? 'Really great!' -but not everybody's so keen. Each time on my course I create basic skills stuff. I'm doing the course partly for my job but also for myself - I would have to cover the subject anyway. You have to know your subject area'*

Int: Do vocational staff need to know your subject area?

'If we're going to embed it - vocational tutors need to know basic skills. Students have to sit and do exams in basic skills and tutors need to know.'

Vocational tutors were already responding. Asked about joint planning Pete explains how his perspective and practice is shifting:

'We are starting to do now, we're trying to integrate more from their point of view into ours and I'm more conscious of it but we still don't have a session where we plan this is what we're doing in week sixteen and how can we bring this in. But I'm now much more aware of their needs than I was last year -- and that's a developing thing - so I'm doing more maths rather than doing a calculations package -(right that's done with pushed to one side).- I'm starting with each assignment (to) bring a little bit of maths into -each time -so I'm building each time ... '

Conclusions

The importance of moral, personal and emotional issues stressed by both male and female staff and students is not an official part of the curriculum, though it is recognised implicitly in the speaking and listening aspects of the core curriculum. Its importance seems to need greater recognition and articulation but this will always be challenged because the traditionally intangible and feminine underpinnings of such areas, have ensured they are undervalued, even ridiculed (Damasio, 1999), compared with the more rational and masculine emphasis on the cognitive and the curriculum. The importance of emotional intelligence is now having an extensive influence over leadership courses and is moving rapidly into thinking in schools. Perhaps a greater emphasis is also needed in further education, especially given the particularly emotional nature of LLN learners. Clearly both male and female tutors here were sensitive to emotional issues and strongly committed to the caring aspects of their roles. In addition the availability of positive male and female role models seemed beneficial.

Many features of lessons and comments made by staff and students mirror precisely the analysis of profound empathy illuminated in Cooper's thesis (2002). The collegiality felt between staff, the sense of care and concern and mutual respect felt for students, the 'family' feel to relationships, the physical contact, the need to build esteem were all important. So too was positive interaction and informal conversation which supports relationships, the importance of humour, the insight into past and current experience and the sharing of a vision of future lives and careers. One-to-one time was significant for relationships, as was emotional awareness which led tutors to respond differently for each student. Students and tutors valued the relaxed and informal nature of learning, the valuing of student knowledge and shared interaction, the importance of praise and the measuring of students' progress against their own achievements.

It is within this envelope of personal narrative and interrelationships that embedded basic skills can work in this context and probably in other similar contexts. The good staff/student ratios, engender the positive relationships in these classrooms and as the connection is made between real life and work and both applied and more abstract skills, students gain trust and begin to perceive relevance. They gain confidence (Purkey, 1970) and begin to feel able to ask for support and seek answers to their own questions, as the control of the learning shifts further towards the learner and their fears of failure in LLN can be overcome. With tutor support they gradually assume Heathcote's 'mantle of the expert' (Hesten, 1995). This was most successful in practical lessons, tutorial lessons and ICT lessons where high teacher/student ratios gave time and opportunity for personal interaction in which mutual respect can be modelled by staff working together with students. There was potential for even greater integration of ICT throughout the vocational course and for developing basic skills in an engaging, multi-media fashion. Currently this is limited by lack of student access to computers in class. Research in schools increasingly advocates an integrated approach to ICT (BECTA, 2003), particularly through non-intrusive wireless tablets or laptops.

The constraints in this study also mirror the findings in Cooper's thesis (2002). Overfilling and condensing courses reduces the space needed for positive interaction and students feel "done to", alienated, and merely repeat the experience of school. Fragmenting the curriculum, in this case, separating LLN from vocational skills had in the past fragmented the relationships, and depersonalised the learning. In school these issues are made worse by the larger class sizes and increased anonymity, causing even more fragmented relationships and

depersonalisation of the curriculum. In the college, increased contact time with more personal tutors, working on a shared curriculum, allows much greater understanding of students as whole people and makes learning relevant.

In order to break down barriers of old negative emotions from school, the manner of the introduction of LLN is very important. Students need small groups, good ratios, activities they enjoy and can gain confidence and success in. They need to start with the practical elements of the course, with concrete applications of numeracy, which they see as relevant to their working and home lives. The relationship between concrete and abstract can then be made more explicit over time as old fears are dissipated and are replaced by more positive emotions associated with learning. Literacy and its associated negative emotions need to be introduced very sensitively. ICT can help in this regard. As students become more confident and value their learning, increasingly identifying with tutors and sharing their perspectives, they can see the relevance and need for LLN skills which are associated with higher expectations and prosperous careers.

Embedding is not just a matter of mapping a basic skills curriculum to a vocational curriculum and then finding time to teach and ways to teach them but is a living, dynamic developmental process which involves the students, the tutors and the courses in the contexts in which they work and also their wider lives beyond the classroom and workshop. It seems that we need to pay great attention to the quality of relationships between all the participants in the social and historical context in which they interact and to maximise the positive emotion and shared understanding between them.

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Case study four

Embodying literacy: complementary therapy and personal care classes

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Introduction

There are two ways of thinking about embedding literacy. First, literacy is bound up with particular practices which shape its nature; there are different kinds of literacy, e.g. of the school, the home and the workplace. We call these situated literacies. Secondly, elements of practices are embedded within written texts and transported to other contexts and practices. We call these transportable literacies. If, practically and theoretically, we need both of these kinds of embedded literacies, what is their relationship? How can they both be useful for learning?

We look at community-based complementary therapy and personal care classroom practices to see how the above distinction gets explored by learners and teacher. The observed classes are part of a six-month Learning and Skills Council (LSC)-funded project. All classes were taught by the same teacher. As both subject and literacy teacher, she embodies both areas of learning. This is the most embedded type of subject/LLN, when they are embodied in one person. Literacy is embodied in other ways: the instructional texts become part of the bodily movements of massage, first aid and other classes. Used in this way, they are an example of situated literacy. However, literacy is also a theme in the second sense: of transportable literacy. There are text-orientated tasks, e.g. writing instructions for massage and also formal accounts or evaluations of the literacy that has been learned.

In order to explore the relationship between situated and transportable literacy, from the participants' points of view, we focus on two different uses of instructional texts and their situated and transportable literacy practices. We analyse the use of instructional texts in Indian head massage and find that learners use the multiple modes of reading aloud, talk, gesture, touch, and pointing to coordinate themselves to each other and the text. The formal account of literacy learning does not capture the situated literacies of using instructional texts in actual learning encounters.

A brief exploration of situated literacy practices can help us identify interesting phenomena and questions that can supplement formal and transportable accounts of embedded literacy learning in these classes. However, formal accounts play a part in learners' self-perceptions: they are important to learners because they provide a description of the sorts of things they

know and can do already. Differences between transportable and situated literacies can be positive and enabling as long as the teacher exemplifies both literacy and subject expertise and literacy frames the classes.

Methodology

We draw on methods of ethnography and micro-ethnography, combining a concern for learners' and teachers' perspectives, the ways meanings emerge within the details of talk in interaction, and an interest in understanding these meanings within wider classroom practices.

Data was collected from November - December 2003 through 22 classroom observations (three aromatherapy; three manicure; three pedicure; eight Indian head massage – over two separate courses; and five first aid.² 14 audio recordings and two video recordings of classroom sessions were also made and eight interviews were conducted with learners and one with a teacher; these were transcribed and partly analysed.

Context

The course

The observed classes are part of a six-month LSC-funded project in which 50 new learners each attend 30 hours of classes. To meet the funding requirements, based on the criteria of widening participation, 40 per cent of teaching has to be devoted to basic skills and a proportion of learners have to move on to literacy or numeracy courses³ These are either three- or six-week courses of two hours per week. Learners are told at the initial interview and in the first lesson that they will be learning both the subject and literacy. There are three main kinds of classes: complementary therapy and personal care, arts and crafts, and IT. Most learners go on to do (or have done) other community-based adult education classes in literacy, numeracy, and IT. There are also longer courses with certificates in various complementary therapy classes and first aid. These courses are part of a broader community-based adult education provision. Classes take place at different sites: in a council flat, in a shop, and at a house within a residential area. There are areas and rooms for computers, kitchens, offices, etc.

The classes form part of wider educational and social practices that are enormously complex. Negotiation between learners, teachers, and office staff over future classes happens before and after classes, during classes, and on the telephone. Talk typically is about similarities and differences between more and less familiar subjects. Learners, as we will see below, have quite different backgrounds and reasons for being in the classes. Each learner has a unique academic and social trajectory through the different short courses, assembling her own "portfolio" which is recorded in a "learning log". Rather than learners progressing from one

² First aid is different from other courses in that it has a more text-based orientation, learners having a first aid booklet which they work through and are tested on at the end of the course.

³ 45 learners have to enrol onto a second "progressor course" (i.e. enrol on subsequent project courses after doing an initial one), 34 learners have to enrol onto a course with a "move on aim" (i.e. taking a Level 1 or 2 City and Guilds literacy or maths certificate) and 12 new learners have to gain a basic skills qualification within the lifetime of the project, hopefully some of these learners achieving within a move-on scheme.

course to another they are jumping from one "ladder" to the next. Different courses lead in different directions and indeed the project is aptly named 'learning ladders'.

FIRST AID AND SITUATED LITERACY

Unlike pedicure, manicure, and Indian head massage, in which learners may decide to skip over some movements or stages, in first aid there is a fixed and unchallengeable sequence. During the course of a simulation of resuscitation, learners start to discuss the rationale for a part of the sequence. Stephanie resolves this by reminding learners of the mnemonic "Dr. ABC":

Geoff: I don't know whether to do that before or after when you check their breathing.

Sandy: You're supposed to check it before, then if there's something in there, then if you move it you might not need to do the rest.

Geoff: Yes, but then you don't know whether they're actually breathing or not, so I suppose you've got to check that they're actually not breathing, and then you've got to find out why they're not breathing, if they've got something stuck in their throat, I'm only assuming that.

Sandy: When do we look in their mouth?

Steph: When do you think?

Sandy: I don't know.

Steph: Before we've checked it or after it?

Geoff: I think it's after.

Steph: OK what is the sequence?

Geoff: Airway.

Sandy: We've checked the airway.

Steph: Airway is the mouth so check the mouth, tilt the airway.

Geoff: Yes.

Steph: Go on to breathing.

Geoff: Yes.

Steph: Are they breathing? No, get helper to send 999, or you go for 999 and come back to give her two breaths and check circulation. That's the "C".

Geoff: mm ok

Steph: "A" "B" "C"

Performing the first aid simulation requires a strict adherence to the complete instructional sequence regardless of the medical complexities. There may be improvisation in real life - and there is talk about some of the tough medical decisions the learners may face in other parts of the lesson - but the learning of resuscitation in the classroom is about the learning of this routine.

Literacy is embedded within the actions of doing a massage, the mixing of oils, the application of a varnish, etc. At the time this situated literacy is in some respects "invisible". Later, evaluations of learning refer to these situated literacies.

Issues and implications

The ways that texts are used in Indian head massage are distinctive of this subject: instructional texts are used differently in manicure and pedicure sessions and first aid. Within the manicure and pedicure sessions, instructional texts are on hand to remind learners what comes next, but the moment-by-moment actions are determined more by the use of tools and varnishes. In first aid mnemonics are used to structure simulations and provide limits to medical discussion. Instructional discourses are highly complex and work in different ways in different subjects. The relationships between the instructional discourses of different subjects are relationships of difference rather than development or extension. Therefore, to talk about the language of instruction as if instructions were always realised in the same way is misleading.

Learning how to point, gesture, touch, relate pictures to text, are part of learning how to follow instructional text (Kress, Jewitt, Ogborn & Tsatsarelis, 2001). This notion of multi-modal literacy depends on a view of language as essentially bound up with context and use, i.e. with other meaning making activities. Multi-modal literacy is always situated literacy. Language, particularly its representational function, ceases to be privileged and language becomes one, albeit essential, mode of meaning making.

This different approach to literacy has implications for how to design evaluations of situated literacy learning. The above kind of analysis may provide material for asking questions about evaluations which are metapragmatic as well as metalinguistic. In other words as well as evaluating, for example, whether learners can use adjectives appropriately (metalinguistic), there need to be questions which ask how literacy is being used in particular (often multi-modal) contexts, including how people work together with literacy, how they decide what needs to be explicitly talked about and what can be done by other ways of making meaning (other semiotic means). For example, just how, exactly, are gesture, touch, talk and pointing used to tell participants how to use text? Evaluation could tell us more about what language is doing, how it works in a multi-modal environment to perform the massage. The focus would shift to the different ways for massage giver and receiver to work together with language and other semiotic systems. For example, what are the differences between the receiver and the giver reading the text aloud? How important is it to annotate the text with one's own text and pictures? What are the different ways to use learners' notes?⁴

These metapragmatic questions would then bring the situated literacy and the transportable literacy closer together. Evaluations would be of the situated (and in this case multi-modal) literacy of the Indian head massage. Learners and teachers would be able to reflect on the practices of literacy and not just on its more discrete elements.

Returning to the class of activities which have a textual outcome, we can recognise that these already have a strong multi-modal aspect; identifying persuasive advertisements can and does take account of visual design; taking photographs of Indian head massage movements and then labelling and arranging these for an exhibition is essentially multimodal. However, when the time comes to evaluate these activities, there is lacking a readily available descriptive language to capture these multi-modal meanings.

Let us return to the question we asked at the beginning of this section: can local classroom-situated literacies supplement metalinguistic accounts of literacy learning? This kind of embedded literacy – in particular the multi-modality of instruction following – is unaccounted for in the official evaluative language of the classroom, but is already regarded as important by learners and teachers. We have made a start on highlighting some of the questions that need answering to assemble a different and supplementary language of evaluation.

Making movement literate

The gap between situated literacies (e.g. using instructional texts in Indian head massage) and transportable literacy (e.g. the items used in evaluations) can be seen in the context of the programme as a whole and the way this relates to learners' expectations and teaching goals; the programme is officially regarded as a stepping stone to generic literacy and numeracy courses, so it is generic literacy that is indexed at the metalinguistic level. The differences between the different subject knowledges and literacies and the generic literacy evaluations reflects a difference between the funding rationale – to attract new learners into basic skills programmes – and the priorities of the learners grappling with the practical tasks that make up the different subject introductions.

The learners have views about learning and literacy which suggest that this gap has a positive function. For example, one learner values doing reading without realising it because this is something that she has neglected in her home life while another values being reminded about what she has already unsystematically learned at school. Being told what you already need to know (or remember) in order to have done something else, is a valued feature of learning in these classes; learning literacy can be a reclaiming of knowledge (remembering), and teaching literacy is partly but crucially about reminding learners of what they already know. Learners value being told about the sorts of things that they already know and can do (e.g. spell specialist words, listen to and understand instructions) rather than having a comprehensive account of what they have just done. Learners are thereby treated with respect because they share an understanding with the teacher that they are autonomously remembering, practising and re-learning literacy given the right prompts about the directions they need to follow (or return to). The prompts relate to generic problems such as spelling and grammar.

4 During an observed first aid class learners were asked to work with differently formatted instructions and then to reflect on which ones were the most effective. An awareness of multi-modality could inform this kind of activity.

INSTRUCTIONS AND LITERACY IN COMPLEMENTARY THERAPY

The complementary therapy classes have a central practical element; learners work towards performing a complete Indian head massage, a manicure, a pedicure, preparing and using oils to perform a hand and arm massage. As learners perform practical tasks - practise massage, mix oils, practise first aid simulations, work on nails - they are having to work out in the midst of their actions what to do and how to do it, often using instructional texts which have sometimes been supplemented with their own notes and annotations. These practices are sometimes recognised later on as doing literacy, and sometimes not.

Instructions differ from one subject to the next. For example, the Indian head massage instruction following requires attention to the movements and actions themselves. So if the giver/receiver of the massage want to collaborate to get the movements right, they have to locate the movement together in the instructional text.

In interviews learners do not seem to regard these details as important, and this could be because literacy, although situated, is seen as ancillary to the main task at hand. Although Denise and Francesca compare manicure/pedicure and Indian head massage instructional practices in terms of the numbers of "steps", they do not make further links between the subject and instructional practices. They compare the complexity of the subject and the extent of their knowledge of Indian head massage and manicure/pedicure, as well as the more "personal" aspect of Indian head massage:

- Paul: Can you imagine doing it (Indian head massage) without these instructions?*
- Denise: No, I couldn't.
- Francesca: No, I wouldn't remember how to do it.
- Denise: No.
- Francesca: No, I wouldn't remember. There's too many steps.
- Denise: Mmm. I mean, if you count up there's probably, it's got to be about 30, isn't there?
- Francesca: Yeah.
- Denise: Yeah, it's got to be about 30 or so. And then each one of them, sometimes you do it different amount of times or, different places.
- Paul: Is this different, is what you're learning, in respect to what we've just been talking about, is this different to pedicure and manicure, do you think?*
- Francesca: Yeah. Because with the pedicure and manicure, you half know how to paint nails and how to look after your fingers and toes, but this is

completely different. I mean, everyone does each other's shoulders, you know, but with going up the spine, different pressure points, it's completely new because it's not what you're used to, you know?

Denise: Yeah, and it's doing it right. You don't know all the time whether you've got your hands in the right positions and things like that.

Fran: Mmm.

Denise: Pedicure and manicure is a lot more simpler, isn't it?

Fran: Yes. And the thing

Denise: Six or seven places.

Fran: Yeah. This is a lot more personal as well. Because with your fingers and toes, it's sort of away, but you've got to poke someone in the face, sort of thing.

What allows for this gap to be regarded as benign, positive and enabling rather than negative and oppressive? (During observations there was only one occasion when an element of the evaluation was contested.) There are two features of the classes that may provide partial answers. Firstly, the classes are explicitly and officially declared to be literacy classes. This is talked about during interviews between learners and staff before the course has started and at the first session.⁵

Secondly, Stephanie the teacher herself embodies literacy. As a highly fluent exponent of Indian head massage she exemplifies the following, extemporising on, and departing from written instructions. She shows, through whole class demonstrations and individual monitoring, what it is to move from texts into performances by commenting on her own and others' actions and relating talk, text and movement. For example, she demonstrates an element from the neck massage as she explains the limits of the text:

Next part you go on to is the neck, so holding one hand on the forehead you come up back of the neck, doing little rotaries, and you can also do one scoop like that as well, so it's using the thumb and your fingers to sort of roll up the neck. So it is actually only the neck you are working on. The diagram sort of shows as though you're coming down here, but you're not, so you can sort of cross out the bottom bit. But when you're working on the neck, as I say make sure you do hold the forehead, so you're making them feel that you're safe. Then you're working up the neck and you do that three times. I do three rotaries and then I do sort of straight scoop up.

Because Stephanie is both an alternative therapy teacher and a literacy teacher she embodies both subject knowledge and literacy in one person. In so doing she makes movement literate, integrating the actions of the massage with the text.

⁵ Only one learner in the study is arguably negative about the presence of literacy teaching and learning in the course and she admits that she has probably forgotten being told about the nature of the classes.

Conclusions

There are embedded literacies rather than a single literacy, and their tensions as well as their compatibilities need to be better understood. Using only the implicit-explicit distinction to explicate the notion of embedded literacy glosses over the distinction between transportable and situated literacy. The former distinction operates at just one level – the implicit is quite easily made explicit; the latter distinction has the advantage of depicting embedded literacy as operating at two levels. On the one hand the teacher works to gloss practical tasks as transportable literacy practices whilst on the other hand learners make distinctions between transportable literacy and learning. The courses make many other kinds of learning possible apart from transportable literacy learning. For much of the time learning happens around improvised thinking moments in situated literacies, deepening participants' understanding of their subjects and areas of expertise (e.g. first aid is about sticking to routine, pedicure is about using materials). ILPs and individual-focused evaluations of learning do not capture this distributed learning.

There are many ways that literacy is situated. In learning how to follow instructions in Indian head massage, pedicure, and first aid, learners are learning about different kinds of instruction following. There may be differences, e.g. the level of permitted improvisation, as well as commonalities, e.g. the relevance of sequence. These commonalities and differences need to be empirically discovered; learners do not apply a single understanding of instructions to different subjects and areas of expertise, but learn subjects and skills in the course of developing their understanding of what it is to follow instructions in different ways.

This case study suggests that a multi-modal account of literacy can be of use in foregrounding some aspects of situated literacies. There is more to literacy than texts – gesture, image and touch are closely related to the use of texts in these classrooms.

We have seen that although transportable literacy is loosely related to situated literacies, these abstracted and idealised accounts of literacy are not necessarily a problem for these learners. The accounts say more about learner identity than about particular classroom experiences of learning. Indeed, these accounts may fit with many learners' ideas about their learning, as a resumption of their former lives and remembering of buried knowledge; and also the short, modular nature of the courses which allow for the exercising of learner choice. To this extent, the transportable literacies are an important component of the course. However, the evaluation of these literacies needs to be enriched by including ways of talking about and assessing situated literacies. The idealised language of evaluation and its focus on linguistic form (grammar and vocabulary) rather than literacy use does not capture the situated, distributed multi-modal way in which texts are worked on by learners.

The combination and accommodation of situated with transportable literacies is made possible because of the way both literacy and subject expertise reside in the practices of a single teacher who specialises in teaching these distinctive courses. The teacher's expertise is central to the nature of literacy learning in the classroom. The curriculum is, therefore, in the best possible way, teacher-centred as well as learner-centred.

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Case study five

A three-strand approach to delivering ESOL through learning about childcare

Violet Windsor - Basic Skills Agency (BSA)

Introduction

This study describes a course in the process of change. It examines how a group of adult women ESOL learners are extending their experience of learning English while being simultaneously prepared for vocational study in the field of childcare. It looks particularly at the way learners are being socialised into considering themselves as potential learners on a vocational childcare course and how this provides the motivation for improving their language skills

The research illustrates the process of the three tutors working with their separate understandings of the vocational content of childcare at a time of major changes for ESOL. The research data reflects changes and developments in course content over the period the data was collected (October 2003 – February/March 2004) as the learners become increasingly defined as learners of childcare rather than ESOL.

The underpinning knowledge of childcare assumes understanding of the culture of English childcare practices and it is also (on this course) informed by early childhood education practice. The tutors find different ways of developing this dual awareness. Pedagogic practice on this course sometimes involves taking students through the initial learning of creative activities (notably art and storytelling) as a way of experiencing the meaning of activities common to early years' education and development.

For the learners the vocational outcome and the desire to improve language skills, particularly oracy, are an important motivation for attending the course. The three tutors have different ways of teaching language and the embedded practice can be seen as a continuum from childcare knowledge embedded in the language teaching (particularly literacy) to communicative practices woven into childcare knowledge and understanding.

The research began with three principal questions.

- 1 Why is this course happening in this college and how is it happening?
- 2 How is work in the three classrooms defined and accomplished?
- 3 How is the meaning of childcare learned and taught?

Methodology

The college was visited 14 times between November 2003 and March 2004. The researcher was in the role of observer but sometimes became a participant. Detailed notes were taken of 10 of the sessions and four were recorded and selectively transcribed. The three strands were observed for similar amounts of time. Site reports were written for observed sessions and shared with the tutor concerned with some telephone follow-up.

The three tutors were initially interviewed using a semi-structured schedule. These were recorded, substantially transcribed and shared with the tutor. A further interview was held with each tutor; these were less structured. These were recorded and substantially transcribed. The Head of Programme for ESOL at the site was also interviewed.

The purpose of the research was discussed and agreed with the learners. A group interview was conducted by the researcher, with the ESOL tutor taking notes. The learners were asked what they felt they were achieving from the course and whether the link to potential vocational outcomes was important for them. It was recorded and transcribed.

WHY THE COURSE IS IMPORTANT FOR THE STUDENTS

In the following extract from the end of the research, some of the learners explain why the course is important for them. The researcher had begun by asking learners whether they thought it was necessary to formally learn how to care for children.

Int: So why come to college?

Najmin: 'I want to learn English and I have to speak fluently so / *interruption* I can say for myself. When I went to hospital or somewhere before (student has a chronic condition) I needed an interpreter but now I can manage by myself.'

Int: So learning English is important and getting a job working with children is important?

Najmin: 'I think I love children and I'd like to work with children. It would be fun.'

In response to the interviewer's question there is a chorus of students saying they want to work with children and they want qualifications. They also want the course for two main reasons: to help them with their own children (and children close to them) and to get a job.

Nurtop: 'Because yes, content very important. Very important this course for learning, how to look after children. Of course we know how to look after children but sometimes we don't discipline our own children. Contact with other people. Very important for me this course. Learning about English language ... This course about understanding all children.'

In discussion with learners the importance of self-confidence was linked to achievement.

Najmin: 'The main thing is self - confidence in my opinion. When I have self-confidence. For example, when I first came to this college I (was) very shy. I didn't open my folder. I didn't look at anybody.'

Int. What does confidence make you do?

Najmin: 'For example, I'm sharing ideas.'

In this extract both women demonstrate that they can use language to reflect on their learning. Their comments illustrate how they are being socialised as learners: their vocabulary and the concepts they express (in their final comments) suggest they have learnt how to be reflective about their learning from their teachers.

'Jane's⁶ strand and to what extent ESOL is/can be embedded within it will depend very much on how our work together as a team develops. I think the extent to which embeddedness takes place here really crystallises one of the main issues which the Embedding ESOL in Vocational Areas project needs to crack in relation to developing vocational courses with embedded ESOL.' (Karen 10/1/04).

'It's very helpful because the three classes (are) related to each other. That's why we enjoy all the classes. It's not like one class different with another. All of them are related to each other. That's why we learn from all the classes and it helps us a lot'

(Ifraz 13/2/04).

Theoretical framework

The ESOL practitioners in this study consider how identifying a vocational context (childcare) for language learning can enable learners to fulfill other life goals. This means that ESOL learners are defined in the context of learning to become members of another social group in their learning (i.e. potential childcare workers) and the promise this membership offers is an important motivation for improving their language learning. Lave and Wenger (1991) refer to learning in 'communities of practice' which provide a legitimate role for 'the novice'. This concept is explored in this study as learners seek to become potential childcare practitioners.

This study shows how learners are experiencing learning ESOL as "second language socialisation". Childcare provides the motivation for learning but as the learners do not have the language level required to access the vocational course directly, the tutors have to find pedagogic practices which are valid both for the learners' language learning needs and appropriate subject content. The tutors act with integrity towards subject knowledge – and what they present as that knowledge. The content knowledge they teach is the knowledge of the subject rather than another version of that knowledge which only ESOL students learn.

The tutors find ways of managing learners' linguistic development that neither deny the complexity of this task nor lead to false hopes and expectations for the learners. Notions of authenticity are an important concept in ESOL learning but this course moves beyond offering

⁶ Jane is the childcare tutor.

a communicative approach to language learning because the subject content is not under the control of ESOL teaching. All three tutors have to discover how to create with their learners a shared understanding of moving from being an ESOL learner to becoming a childcare worker.

The tutors have the resources of their own experiences, professional and social contacts and each other. The process of the tutors learning as they interact with the learners and each other to define course content recalls Vygotsky's view that learning is social, occurring through the process of interacting with others. Using Ochs' notion of language socialisation the study shows how learners are socialised through experiencing childcare 'into local theories and preferences for acting, feeling and knowing, in socially recognised and organised practices associated with membership in a social group.' (Ochs in Kramsch 2002).

As the creative activities tutor pointed out, tutors were able to approach this pilot in an experimental way because the college recognises that the Entry Level 3/Level 1 interface is a crucial one for progression from ESOL onto a vocational course. The attempted solution, to the problem of improving language skills and achievement through embedding language learning in childcare is to design a course with three strands. This course did not begin with a proscribed design but with *'the strategic aim to pilot a different way of collaborating across programmes to design and develop courses at Entry Level 3 which could then be considered a model for other curriculum and vocational pathways.'* (Karen⁷ 18/4/04). All three strands were studied because one element could not be understood in isolation from the others. Planning and coordination took place but were limited although it was agreed by the tutors that the course would embed language learning within the whole design.

Context

The Course

This embedded ESOL course is in the process of development as one of several prototypes for developing ESOL in vocational areas at an inner city FE college. The learners are a group of women who were all below the level required to study for an initial childcare qualification. The course has three strands (ESOL, childcare and creative activities with ESOL) and three tutors, who teach separately.

The course is delivered as three 12-week units for 12.5 hours per week.

There are no additional resources for double staffing and the course is funded as ESOL provision. On Monday mornings Karen teaches creative activities. Tuesday is a double session on childcare, taught by Jane from the second term. Wednesday and Thursday mornings are ESOL sessions with Monica who uses childcare as a context for encouraging learners to think critically about a related issue (emotional development, hygiene, the purposes of play). As the course progressed the three tutors began to take up some common themes and activities.

⁷ Karen's role within the college is Head of ESOL Developments, managing and developing new initiatives in ESOL provision. On this course she taught the creative art strand. Monica is ESOL tutor for the course.

EXAMPLE PATTERN WORK

In this example pattern work, using 'to promote' and 'to provide', was reinforced with writing exercises. The teacher (Monica) began by eliciting the word 'encouragement' by giving the first syllable and when learners were successful she explained that 'promotion', a word she had previously introduced, also means encouragement.

Monica: 'How do we promote development? You have it in front of you. We're talking about the first verb in your sentence.' *She elicits 'we provide.'* 'We promote development by encouraging'.... *(She pauses and then gives the example).* 'We promote development by encouraging babies to kick.'

Look at your worksheet.' (a gap filling activity)

Student 1: 'Eye contact' *(the sheet gives 'maintain eye-contact')*

Monica: 'Can you extend this?' *(Asked in a way which suggests possible action)*

Student 2: 'We promote development by maintaining eye-contact.'

Monica: 'Another example Katun' (S2) *(said in a gentle, almost conversational way)*

Student 2: 'We promote development by M..' *(Student struggles to find the word and rubs her hand)*

Monica: 'Massaging'

Student 2: 'Massaging the baby's body.'

Monica: Again please. *(Expressed politely rather than as a command)*

Student 2: We provide development by massaging the baby's body.

Monica: Ifrax please, a sentence with 'provide'. *(Said in an encouraging tone)*

Student 3: 'We provide development by picking babies up and talking to them.'

Monica then referred to the story saying: 'It isn't just a silly little story. They were doing a really important thing.' Learners were then asked to complete a written exercise, "promoting development" that gave the pattern, 'Parents promote development by...ing.' A further written activity required learners to write sentences saying how Fatima and Ali promote their baby's development. This reinforced the oral work and practised the written form, which is also a structure learners will need later as childcare students and workers, when they write reports.

In this short activity Monica can be seen to both support the learners and allow them to assume, temporarily, the professional role of observing and commenting on parental behaviour. They are using language to socialise them into being childcare learners. Monica, when she later explained this activity to the researcher said, 'It's important because I want them to learn how to analyse situations from the Childcare perspective and I want them to start applying their knowledge.' She is preparing them for their future role as childcare workers.

The students

The course is only for women. All are Muslim but from different countries of origin with different reasons for coming to London. The majority of women are Bengali and came to England to be with their husbands or brothers. The Somali women came as refugees. First languages are (in order of use) Bengali, Somali, Urdu, Pashto, Turkish. Proficiency in English varies. Most of the women have children but one is widowed and two are single. Attendance is consistently high (slightly lower registration for childcare sessions because of alternative programmes being followed) with all absences accounted for (mainly winter-related). Two of the learners attended another childcare course, in parent education, instead of the one observed. All the learners applied and were interviewed before being accepted onto the course.

Conclusions

This study illustrates a hybrid form of embedded language learning. The focus is on developing learning across a continuum that ranges from contextualised language work to actually experiencing the demands of the vocational area with a sympathetic subject tutor. This participation is planned as learners are placed in different roles: as potential childcare workers, as college students (of both the subject and ESOL) and as children experiencing social cultural activities according to Western pedagogy.

The concept of communities of practice is a different construction of identity for ESOL learners. The benefits of using a language socialisation approach are that it is holistic and views learners as such; it does not construct language as a barrier to achievement.

The active nature of learning also helps learners understand why particular language skills are required for childcare. It offers a wider concept of learning than the traditions of ELT or second language acquisition and may be more supportive and accessible to vocational staff. Language learners can have a specific goal for their learning and it can be an active and creative learning process for tutors. In a parallel process to initial education the embedded classroom may also include affective and creative activities that allow learners to experience knowledge in ways that are less reliant on verbal skills. It similarly develops cognitive skills.

Not all learners from this course will be ready to progress to a vocational course so different progression routes need to be available, particularly for learners who need to improve their language skills. Alternative routes are being created for learners who need more time to reach the standard required to begin a course.

'Embedding is about working together'⁸ but tutors' working lives make this difficult and it is essential that time for regular reviews are built into delivery. The processes of course design, programme planning and evaluation of embedded courses benefit from being transparent, shared and responsive to change and part of the organisation's strategy. The contribution made by the vocational tutor is a vital determinant not only for subject knowledge but how that knowledge is determined by particular practitioner values. Vocational staff may also have effective ways of promoting language learning which need to be recognised, shared and integrated with the work of ESOL specialist staff and their input is also vital to determine what is already known and what requires initial teaching.

⁸ Karen (fieldnotes)

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Case study six

Being a nurse and following new rules

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Introduction

The concepts of "language" and "subject" are complex. There are different kinds of linguistic reality which face and constrain learners; a subject is more than a body of knowledge - it is also an open-ended collection of social practices and encounters. So rather than asking about the relationship between language and subject teaching and learning (a question associated with the notion of embedded language teaching and learning), our main theoretical question is: *How is/can language (be) learned in ways that do justice to different linguistic and social realities?*

We will ask this question of a preparatory course for supervised practice. This course is for overseas nurses and prepares them for a period of retraining and "adaptation" (or supervised practice) in hospitals or nursing homes so that they can become NHS qualified nurses. The "subject" is being a nurse in a different country, culture, profession and institution and the particular ways of, and resistances to, becoming a nurse. In addition, healthcare is itself undergoing transformations. The re-structuring and new managerialism within the NHS is producing flatter structures and so there is more accountability, communication and negotiation both within and across disciplines.

"Language" is not only an individual competence and performance, but is used within social and professional interaction and is an institutional barrier for many of these nurses. For example, only overseas nurses need to fulfil certain language proficiency criteria. We therefore refer to *sociolinguistic* as well as linguistic resistances that learners face. By using this term we focus attention on the ways that language is used and forms part of social practices (Fairclough, 1993).

Nurses on this course, and in their UK working practices, are faced with the task of relating their existing knowledge to new knowledge; in one sense they already know how to be nurses but must learn to be nurses in new professional and institutional contexts. Learners often talk in terms of not knowing "communication skills". Nurses are learning new ways of talking about practices that they are already partly familiar with.

In addition to our theoretical question of how language can be learned in ways that do justice to different linguistic and social realities, our empirical question is:

How is/can language (be) learned in ways that are sensitive to the nurses' task of relating their existing knowledge to new knowledge and to the particular resistances that face them as they go about this task?

Methodology

The following data were collected over a six week period between January and March 2004:

- Classroom observations: eight days communication skills (six days of audio recording); three days nursing (two days of audio recording).
- Interviews with learners: nine on previous nursing career, their experiences of health care in Britain, and how they came to the class; four (with six learners) on interviews and application procedures; six on learning and the course (some using audio recordings of classroom events).
- Interviews with teachers: five (three audio recorded and two in which notes taken).

It was not possible to collect data from the interview and equalities course because of the timetable and time constraints.

We draw on ethnographic methods. We regard learners' and teachers' perspectives as important, and seek to capture these through interviews as well as studies of classroom interaction (although the timescale of this case study only allows for preliminary analyses). We make connections between classroom interaction, wider classroom practices and the trajectories of these learners as health care professionals in a new country, system, and workplace.

Context

Course structure

The course lasts for 12 weeks (three day a week) and takes place in a community centre for refugees. There are three main modules: orientation to nursing in the UK, communication skills, employment and equalities. Preparing for supervised practice interviews is an important part of the course: many learners have had unsuccessful interview or application experiences. There were 11 nurses on the course.

Teachers

The course has teachers with a variety of expertise. Nursing module teachers know about official procedures and ways of talking and writing about nursing (and have medical knowledge). Communication skills teachers know about giving good linguistic performances in nursing contexts.

Learners

All the learners in the observed class are women, aged from late 20s to late 40s, and are from Iran (three), Japan (two), China, Burma, Sri Lanka, Korea, Rwanda, and Brazil. Many of them have substantial experience and seniority, some in specialist areas such as intensive care. They have been in the UK between two and five years. We will focus on four learners. They

have been chosen because they have quite different nursing backgrounds, lengths of work experience, and interview experiences in the UK.

Professional and institutional discourses

The learners are already nurses and so have professional competence. In some respects they know how to do nursing, but they now have to be a nurse in a new environment and they often say that they do not know how to communicate within and about their job. They are not confident language users in this professional context, e.g. empathising with patients in an appropriate way in a British context. Also, they do not know how to talk and write about nursing in new institutional contexts, e.g. making a care plan, admitting a patient, and passing an interview. To appreciate these different difficulties we need to make a distinction not just between nursing and the language of nursing, but between professional and institutional discourses.

Learners' experiences: making connections between existing and new knowledge

Learners in their interviews talk about a range of difficulties in their attempts to enter the nursing profession in this country. Their qualifications have to be approved as they register with the Nursing and Midwifery Council (NMC) for a period of two years. In their NMC "decision letter" they are told what they have to do in order to become qualified nurses: usually pass the International English Language Testing System (IELTS) exam with a score of 6.5 (quite demanding for many of them); and complete a period of supervised practice (a mixture of probationary, supervised work and training) of between four and nine months. In order to gain a place on supervised practice, nurses have to complete an application form, pass an oral interview as well as various language and professional entry tests (composed by individual hospitals). Most nurses on the course are referred to the class by hospitals, almost always as a response to a written application or after an unsuccessful interview. (Of the nine nurses interviewed, only two had not applied to a hospital, but all had registered with the NMC. Only one nurse had passed the IELTS test.) We focus here on four learners.

The course

Communication skills classes

In communication skills classes quite a lot of time is spent on preparing for the English Speaking Board (ESB) exam; their work towards the ESB is regarded by learners and teachers as preparation for their professional lives. There are also ESOL activities which have a nursing subject matter: listening comprehension (e.g. a talk about alternative medicine), reading articles (e.g. on overseas nurses), writing letters (e.g. to an editor of a nursing magazine), discussions and oral presentations (e.g. on nurses' personal qualities), and nursing role plays (e.g. admitting a patient).

Role plays feature especially strongly in the personal communication development module. Typical role plays include explaining procedures to patients, and making requests of and negotiating with other health professionals and families. Role plays provide opportunities for learners and teachers to reflect on what to say in, and how to orient to professional situations. Learners practise in groups and then perform for the whole class, with the teacher making comments following the performances.

There are opportunities in all of the modules for learners to share their current experiences of work and interviews (and this also happens outside the classes). For example, when the teacher learns that one learner has an interview the next day, everyone contributes to a list of interview questions and answers. After the learner has successfully passed her interview she recounts her experience in a later class. Learners often ask questions about their recent experiences and uncertainties in professional and institutional contexts, e.g. a learner volunteering in a hospital is observing professional practice and does not know whether she has to ask permission every time she observes.

Nursing classes

In nursing classes quite a lot of time is spent on explaining documentation, e.g. admission forms, care plans, risk assessments, and drug charts. Patient problems and conditions are often regarded as generic. Teachers return frequently to the themes of professional accountability (nurses must attend to and be aware of relevant matters and demonstrate that they have done so), institutional accountability (demonstrate that they have done so) and reflective practice (practice is evaluated and reviewed to make it better).

One of the key themes is that nurses' professional development depends on their ability to be analytical, to reflect on their practice; nurses need to be able to step back from their taken-for-granted practices and explain why they do what they do.

Generally, in the nursing module, institutional texts seem to be prioritised, whereas in the communication skills classes, professional interactions appear to take priority in the non-ESB oriented parts of the course. This division of labour is seen as coherent by learners.

SIMILARITIES AND DIFFERENCES BETWEEN NURSING AND COMMUNICATION CLASSES

Learners are aware of the similarities and differences between the different modules of the course. In response to a question about connections between modules, Kang Hui refers to differences in expertise between tutors. She says:

'I think they can, they (*classes*) can combine, but in, for example, the communication classes, teachers, they are not nurses and they are not familiar with that in the ward and hospital. But this class (*nursing*), tutor they are qualified nurse, so they are very familiar in hospital system, so they can teach us about hospital system and paper work and patients' assessment. But on the other hand XXXXX or XXXXX (*communication skills teachers*), they are not familiar with the hospital system. That is why they are teaching us about communication skills with patients. Even though they don't know about hospital system, they know how we can communicate with the patients and between people and people, between colleagues in hospital.'

On the other hand learners see similarities between classes - nursing and communication are bound up together. Anna talks about having to learn about communication skills when she went to nursing college. She says:

'It seems like there are three different classes but in fact they connect together. Because through all the courses, whatever you have to learn – the communication skills, and all the nursing courses – we still need the communication in the nursing skill, for the, when you're talking about a communication skill, we still put the situation in the hospital. So, we just connected each other, which is very nice, I mean, good for us. So, in that case, it seems like three different parts, but they just always connect together.'

Issues and implications

Discourses of nursing

Language learning is embedded in the different discourses of nursing. These professional and institutional discourses are taught across the different components of the course through problem solving tasks and role play and through the habit of reflection. Reflective practice is bound up with learning new ways of talking/thinking which can challenge and are challenged by existing ways of talking/thinking.

In order to succeed in supervised practice (and the interview for supervised practice), nurses need to use these discourses to cope with, and articulate, differences between their existing and new knowledge and identities. This awareness and articulation of difference take different forms. Existing knowledge and identities can be resources, drawn on in new settings. These can be challenged by, and challenge, new institutional and professional demands as well as bracketed out in the face of new institutional and professional demands. The learners have to be able to use and move between these different discourses. For example, in the supervised practice interview, the questions and answers are largely in institutional discourse mode but the questions may be in apparently professional mode.

Decisions have to be made by learners at work about what to accept and what to question or challenge (and when and how). This affects how successful they are likely to be and also who they feel they are as professionals. A learner needs to achieve her own balance between existing and new identities; she needs to know and decide when and how to maintain her own practices (overtly or covertly), change them and challenge new practices. These are partly choices about language-use; when do nurses "go along" with certain ways of speaking and doing, and when do/can they challenge them? However, they also require an understanding of the nursing context. Both nursing and communications components are necessary for this.

The classroom provides opportunities for nurses to rehearse some of these choices. In learning how to be nurses in the classroom with teachers and one another they are learning how to be nurses in nursing contexts. Classes can provide interactional spaces for the management of identities and discourses. Some of these learning opportunities in the above sections are further exemplified in the full version of this case study.

ROLE PLAYS

Learners are performing role plays in pairs to the class.

T = Tatiana; K = Kalai; I = Iris; A = Anna; L = Lay, U = Ursula.

- 1 **U:** this cuff, and then, you know, because this is normally so wha- she- so this would
- 2 be a machine, and also the reason why, this is always really important that you
- 3 always explain to people why are you doing what you're doing.
- 4 **A:** I told her.
- 5 **I:** she said because your blood pressure is,
- 6 **U:** =is high, yes, but she didn't unders- she didn't explain to her why they want to
- 7 have it over twenty four hours.
- 8 {2}
- 9 **A:** I just told that, I say your blood pressure is high,
- 10 **U:** yes,
- 11 **A:** and doctor want to make sure everything is ok so will put that { } =arm=
- 12 **U:** =no = it is not
- 13 precise enough, the doctor wants to make sure that everything is ok, that can mean
- 14 everything, so why are you doing a twenty four hour check up,
- 15 {3}
- 16 **U:** why are you doing it,
- 17 {1}
- 18 **U:** how will you explain it,
- 19 **?:** to find out pressure.
- 20 **?:** { }

- 21 **A:** it's just-
- 22 **U:** =exactly to see,
- 23 **?:** { }
- 24 **L:** pressure, how much increase or how much low,
- 25 **U:** over a longer period of time, to see the =phases of = your blood pressure going
- 26 **T:** =observation=
- 27 **U:** up and down,
- 28 **L:** up and down
- 29 **U:** yes, so try to be really precise, not only if the doctor want to see if you're ok.
- 30 **L:** (to see) blood pressure is stable.
- 31 **U:** yes, if the blood pressure is stable, if you have very high peak times, or very low
- 32 peak times, how we can stabilise your blood pressure, so therefore we want to
- 33 monitor { }, yes?
- 44 **A:** mmm

Explaining the need to monitor blood pressure over a period of time depends on an assumption that the patient will make a distinction between normal blood pressure readings and machine readings. There is a judgement about what the patient already knows as well as what she needs and wants to know - the patient will be thinking: 'why this and not this?' And so the patient is viewed as a feeling and rational person who needs to understand the procedure at a particular level of detail in order to emotionally accept and consent to it.

The level of detail that is required by Ursula is not immediately apparent to the learners, particularly to Anna (lines 4 & 9); it is displayed collaboratively over a number of conversational turns. Ursula asks the learners for their ideas on why the nurse is doing a 24-hour check-up (lines 12 - 23) this is a question about what they would say to the patient. Lay's idea and wording (line 24) is continued by Ursula (lines 25 & 27). A little later another idea and wording of Lay's (line 30) is repeated and incorporated into Ursula's subsequent explanations (lines 31 - 33). Learners reciprocate - Tatiana continues Ursula's utterance (lines 25 & 26) and Lay repeats Ursula's 'up and down' (lines 27 & 28).

Ursula is not just evaluating Anna's explanation but providing an opportunity for a second performance of the explanation-giving, this time a collaborative one. During this performance Anna has an opportunity to contest Ursula's demand for more detail. This disagreement over,

and negotiation about, the level of detail is a kind of reflection. In taking account of the feelings and knowledge of the patient in the way they do (e.g. patients should be given a basic understanding of medical procedures), learners and teacher are making claims about the different kinds of relationship nurses can have with patients (e.g. as sharing decision-making), and so learners are also reflecting about their professional identities.

Although there is a tendency for communication skills classes to focus on professional discourse (as well as language), and for nursing classes on texts and institutional discourse, it is hard to keep these apart in nursing classes. Nursing problems are made up of multiple ways of talking.

What makes these learning opportunities possible and effective?

Teachers have different and distinctive kinds of expertise and past experience which are highly relevant to workplace-tuned classroom practices. They have different insights, drawn from their own or others' personal experience, into how outsiders gain, and position themselves in relation to, insiders' knowledge. For example, Ursula, as a cultural insider/outsider, can advise learners on cross-cultural misunderstandings. Joanna and Penny speak from their positions as overseas nurses who have succeeded in coping with differences and gained professional status. These different sorts of outsider/insider identity, and their manifestation in classroom interactions can be useful for learning as they reflect the complexity of workplace demands and provide different sorts of opportunities for learners to manage and experiment with their own identities.

There is an overall framework in which teachers and learners may operate. There are generic themes (discussed at review and planning meetings) which link modules together, such as reflective practice (identifying what patients need to know and how rules relate to nursing practices) and how nurses show their awareness of new professional and institutional demands in interviews. Other general themes, discussed at review meetings, are relationships between patients and nurses, and professional development. These themes are taught and learned in different ways according to the teachers' different knowledge bases and areas of expertise. Indeed, teachers see themselves as working towards a "matrix curriculum" which combines different approaches across modules with similarities of theme. So, curriculum development is not just about mapping pre-existing themes to knowledge about kinds of discourse, but developing new themes.

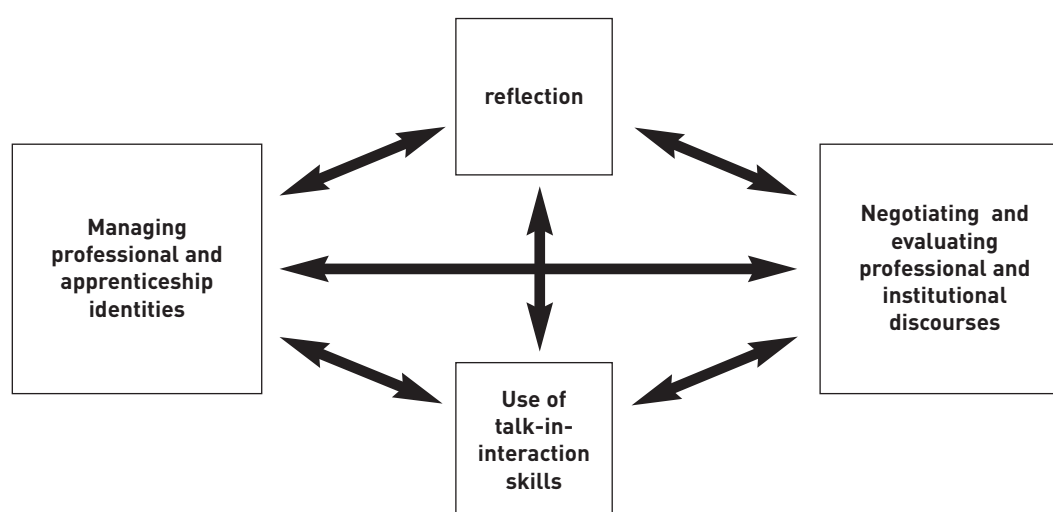
The development of new themes requires an understanding of the dilemmas faced by nurses as they are required to "adapt", especially the dilemma between drawing on existing professional values and changing their practices and associated values. These dilemmas are multi-faceted - they are about language-use and draw on the details of current everyday nursing practices, which are also rapidly changing - and so curriculum development should be (as it is in this course) collaborative and multi-disciplinary in order to be responsive to the complexities of both personal and social change.

Although never made explicit, an understanding of the institutional-professional discourse nexus forms part of the teachers' and learners' knowledge/expertise base. This could be made more overt and thematised (applied across modules), helping to extend the notion of reflective practice. For example, nurses might be able to write more precisely about fruitful classroom

and workplace tensions in their reflective diaries if teachers had an analytic language (e.g. institutional versus professional discourse) to describe these tensions. In addition both communications and nursing tutors can learn from each other about how to teach professional and institutional discourses in different but complementary ways.

The course is outward looking (e.g. keeping in touch with learners when the course is over, teachers networking with local hospitals) and draws expertise in from outside (e.g. visits from nurses, using nurses as teachers). This is so the course can connect to multi-faceted dilemmas about language-use, and everyday current, rapidly changing, nursing practices which are faced by nurses as they are required to "adapt".

So, learning is effective on this sort of course when teachers with distinctive outside/insider identities collaborate within a common framework which is sensitive to interaction and discourse, drawing in current experience and information from an ever-changing outside environment. This learning ecology can be represented as follows:



It would appear that targeted, preparatory courses for professionals, such as nurses, are highly relevant and motivating in helping them to achieve their professional goals. For those planning such courses, understanding and working with learners' professional identities is as important as teaching new knowledge, and teachers need to reflect together on this dual focus. The learners are also nurses and therefore both they and the teachers have to negotiate between these two identities. Decisions have to be made by learners about what to accept and what to challenge. Learners have to achieve their own balance between the need to learn from the purpose-driven elements of the course and the need to be true to their own professional identity.

It should also be noted that the process of mutual reflection afforded by joint curriculum planning and team building can be enriched by teachers developing their own analytic language, facilitated by an awareness of how language-use is embedded within particular workplace practices. In this instance, the institutional and professional discourses required for the NHS context cut across subject and communication expertise.

Conclusions

There are many relationships between language and subject teaching, not just one. The preparation for supervised practice course is a good site for exploring these complex relationships. Nurses on the course have the task of relating their existing professional expertise to new work contexts, making connections between their existing and new knowledge. This task is described by learners and teachers in terms of learning communication skills. An exploration of how knowledge and communication skills are learned across the course's different modules (taught by different teachers who specialise in either nursing or language), and how participants decide what is to be learned and when, can have something to tell us about the complexity of language-subject relationships.

The learners see the course as helping overcome linguistic resistances to the pursuit of their careers in a new country, health system, and workplace. Nurses say they know how to do their job. But sometimes they cannot use *professional* language, e.g. ways of talking to patients. They also lack communication skills to do their job within a new *institutional* context: there are unfamiliar discourses and texts at interviews, e.g. ways of talking about nursing accountability and the nursing code of conduct. At first glance, nursing teachers tend to focus on institutional discourses and texts, and communication skills teachers on professional discourse and interaction. However, classroom practices are more complex than this.

In nursing classes although teachers tend to prioritise institutional texts, these are related to professional discourses. In the course of using documents to explain the concept of accountability, teachers have to refer to everyday professional practices. In the context of a problem-solving activity, learners' professional judgements are at times subsumed by, and at other times challenge, the teachers' interest in accountability.

There is a concern to make the course coherent, to provide a "matrix" in which different modules can be engaging with the same themes, e.g. relationships with patients, but with a different knowledge and skills base. By using the more differentiated concepts of institutional and professional discourse we can start to chart similarities and differences across modules in more precise ways. There may be tensions as well as links between professional and institutional discourses, and it may be helpful to bring these more to the surface within the course.

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Appendix

transcription conventions

stress	stressed syllable
{ }	unclear speech
= the nurse = who	
= doctor =	overlap
he	
=said	one turn very quickly following another
{4}	pause in seconds
p-	part of a word abruptly cut off
hhhhh	laughter
?	end of tone unit: final rising tone
,	slight final rise
.	final fall

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Course for overseas nurses

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Case study seven

'Sporting essential skills'

Margaret Walsh - LSDA, Northern Ireland

Introduction

The hardest task that any essential skills⁹ tutor encounters is the recognition by tutors that they are trying to embed skills which, in isolation are not necessarily, valued by (in this instance) the keen sports trainee. Along with all the attendant barriers that essential skills gaps erect, essential skills tutors have to strive to make the core curriculum attractive in the face of the appeal of the vocational subject.

Context

The project took place at Fermanagh College in Northern Ireland which has a wide rural catchment of students. Its essential skills programmes are provided in two main contexts: discrete essential skills programmes and integrated vocational programmes. Sports studies are offered at both further and at higher education levels: NVQ Levels 2 and 3, 1st Diploma, BTEC National Diploma, HNC and HND. College management had planned for mapping exercises (completed early January 2004) to be done prior to delivery with the case study group.

Fermanagh College regard the gain from their involvement in this project in several ways:

- the students will benefit from the essential skills support;
- tutors will have a wider understanding of each area of work and the attendant expertise gained can be utilised throughout the college;
- materials resources (exemplar materials for grounding/mapping) arising from the work of the Project will be valuable for future programmes; and
- finally, management hope that through the dissemination of the various research, some forms/packs of teaching/learning resources will be shared amongst the participating colleges. The college regards this as a way to further add value to the work carried out and for some exemplar impact on actual embedding delivery of the various vocational areas.

⁹ The Essential Skills for Living Strategy and Action Plan was launched on 9 October 2002. In the strategy essential skills are defined as the ability to read, write and speak English, and use mathematics at a level necessary to participate in society and working life.

2004 has been designated *European Year of Education through Sport*; this has added significance, relevance and appeal to both staff and students.

Staff

The Sports tutor is a very experienced FE lecturer who has managed to establish rapport with colleagues and students alike; he (Keith) has the added distinction of being an experienced, and somewhat successful, Olympic trainer and coach. Keith manages and teaches on most of the sports courses at Fermanagh College. The essential skills tutor has experience of teaching subjects other than literacy and numeracy in FE. She (Nadine) undertook additional tutor qualifications to specialise in this provision within the College. Nadine has established an effective working relationship with the sports team to help embed essential skills within sports courses. Nadine is aware that her learners' real impetus for learning is vocationally driven. Her student-centred approach allows her to empathise with them and helps her motivate them to achieve their goals whilst improving and developing their essential skills.

Group

The *group of students* consists of seven trainee sports coaches aged between 18 and 21 based in a rural school. The group are in the initial stages of the course – 1st for Sport, NVQ Level 2 and are studying for a coaching award in basketball. One day a week students attended a training placement and other days were in a sport-related placement. Their day at Fermanagh College involved vocational training and essential skills. The essential skills work was based on individually assessed needs; students' levels ranged from Entry Levels to Level 1. There are four male students and three female students. Each student has a particularly favoured sport, such as swimming, soccer or Gaelic football. Nadine is able to find a theme common to all these, as well as basketball and coaching, in order to embed essential skills. Indeed, in one session she drew upon what the students' wider sports interests could bring to the topic.

Issues and implications

Initial assessment of need was carried out by the essential skills tutor within a group setting, in order to gain a level to match teaching against the core curriculum. The purpose of the assessment was clearly explained and potential barriers such as embarrassment, resentment or other negative feelings, that could occur amongst a group of young adults about their ability to do the assessment well or better than others, did not arise. This was due in part to the skill of the essential skills tutor in handling the process of care and sensitivity. The ethos of the college is such that it has gone some considerable distance to put in place essential skills assessment across the board and as part of the college induction programme. This has the effect of lending some weight to the view that these are the skills that underpin most of the programmes offered by the college. Nadine draws upon student experiences to establish ownership and interest in the generic topic of coaching and the related essential skills and also to make her work evident and keep the students' attention.

One of the major concerns for embedding teams is the choreography of it all; the vocational expert has to amend and adjust training materials to suit all levels of students. Simplification of material is, ultimately, beneficial to all students in terms of access to information. The essential skills tutor is involved at this stage but cannot be fully involved in vocational decisions. The essential skills tutor has to make decisions about how and when to embed.

Decisions about reinforcing vocational work within a literacy model, which may serve to undervalue the vocational teaching, tend to cause some concern. In addition, the essential skills tutor has to prepare for individual students needs and, which may involve re-modelling the vocational input in a more appropriate way.

Nadine decided that the best approach to embedding was to plan sessions based on material covered in vocational classes but that it was crucial to also address specific items arising from sessions in which she participated. This was very effective in practice, On one occasion student A felt '... no need to take notes because ... everything's in the (vocational) handout ...'; later, during the essential skills session student A actively took summary notes saying that it was '... easier to remember things that way' ... but that she was '... too embarrassed ...' to write notes '... in front of all the others ...' who didn't take notes.

On another occasion Keith was working with the students on timing, a very specific skill within coaching work. Most of the students participated well, seeing the relevance and necessity of the topic. I observed that effective learning had taken place. Later, however, when Nadine reinforced this objective using a local, practical context (money and travel timetables), I was fascinated that the students not only enjoyed the work and participated fully but also began to make further learning links to sport. Nadine supported this and it was gratifying to observe the students making links for themselves.

One of the first vocational sessions I observed was 'What is Coaching' and it involved looking at the skills and characteristics of sports coaches. The essential skills tutor took an active part in this session. The later essential skills session explored this topic further by using it as the basis for discussion to enable Nadine to get to know the students and diagnostically assess their strengths and needs and facilitate student participation (via ideas storm/summary) to secure knowledge and understanding.

Generally, the students' perceptions of literacy are that the sessions are an invaluable addition to their main programme of learning (sport). They said that the literacy sessions are less stressful and time-pressured and that the sessions gave them 'time to think'.

Conclusions

Mapping exercises result in excellent tools for embedding but have a tendency to create massive workloads for the essential skills tutor. This is because they do not have the discernible context from which to start.

Vocational teaching was, for the most part, prescriptive, certainly during the observed theoretical part of the programmes I observed. This is the nature of such programmes. I believe that the more reflective practice of the essential skills (embedding) sessions serves to produce more effective learning.

Whilst the interactions between Keith and Nadine (in this case study) were wholly adequate and pre-planned, there is a danger that the bulk of the workload in other embedding situations will, ultimately, fall to the essential skills tutor.

In order for the embedding sessions to be effective, the essential skills tutor has to balance the choice of drawing in other contexts familiar to the students with new vocational contexts

whilst allowing students to construct their own way of learning. These sessions followed a sequence of learning, thinking, re-learning and doing, which appeared to be effective.

I believe that the students became increasingly confident in their vocational abilities, not only because Keith is a very experienced practitioner who went some considerable way to ensure that those learners with literacy needs were equally supported but also because of the more leisurely pace of the essential skills sessions during which they could repair their errors and consolidate their vocational language and skills development.

I believe that the embedding work done at Fermanagh College is the beginning of a process that will highlight literacy work as positive and beneficial from the perspective of the vocationally motivated student. However, I would stress that traditional roles are potentially changing and much collaboration on pedagogy and course content is needed between embedding team members.

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