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BACKGROUND

Introduction

The Learning and Skills Council Black Country commissioned the Workplace Basic Skills Network, Lancaster University to conduct an action research project into literacy, language and numeracy support in construction. The aim of the project was to carry out action research that would lead to an improvement of literacy, language and numeracy learning within construction provision delivered by Black Country learning providers. It was intended that this project would contribute to the achievement of the Black Country's literacy, language and numeracy targets. The support of literacy, language and numeracy within vocational courses is also important for the national Skills for Life strategy and the national skills strategy.

The scope of the project was to establish a benchmark of current best practice in embedded delivery. It intended to:

- investigate the needs of learners and their employers
- to establish current embedded literacy, language and numeracy local practice and capacity and areas for improvement on construction courses
- to share best practice and different models of embedded literacy, language and numeracy delivery with the local provider network
- to working with up to 6 local employers to establish and meet their literacy, language and numeracy needs through a range of customised methodologies
- to track the medium and long-term learning outcomes for individual learners and where necessary, providing support for local providers to develop their capacity for embedded provision.

The project had a three-year plan that is included in Appendix 2.

The research has adopted the NIACE (March 2003) working definition of embedded literacy, language and numeracy:

“Embedded literacy, language and numeracy (LLN) means learning these skills in the context of another course/activity. The course/activity must include appropriate teaching and learning activities which build on an individual’s existing skills, are set against the framework of national standards for literacy and/or numeracy, aim to develop sustainable, transferable skills. The balance of LLN in relation to the other subject(s) will vary and may alter as the course/activity progresses. The course/activity promotion may or may not identify the LLN element but within the course/activity, learners will develop an awareness of their progress in these skills. Individual assessment will identify LLN needs at an appropriate point before or during the course. Learning plans will identify LLN learning goals and targets to be achieved and progress made”.

EXECUTIVE SUMMARY

The Learning and Skills Council Black Country commissioned the Workplace Basic Skills Network, Lancaster University to conduct an action research project into literacy, language and numeracy support in construction. The aim of the project was to carry out action research that would lead to an improvement of literacy, language and numeracy learning within construction provision delivered by Black Country learning providers. It was intended that this project would contribute to the achievement of the Black Country's literacy, language and numeracy targets. The support of literacy, language and numeracy within vocational courses is also important for the national Skills for Life strategy and the national skills strategy. The scope of the project was to establish a benchmark of current best practice in embedded delivery.

Methodology

The initial research consisted of consultation with appropriate regional, national and international agencies to establish existence of existing resources. Face-to-face and telephone interviews were conducted with providers and employers outside the region to obtain further examples of best practice. An additional survey about embedding literacy, language and numeracy in construction courses was developed and circulated to the membership of the Workplace Literacy, language and numeracy Network. A steering group was established to provide guidance and direction. A working group of local providers was formed from December 2003 to December 2004. The working group decided the terms of reference and priority actions for the coming months. Meetings were held on a regular basis to progress activities. The research methodology and analysis has been predominantly qualitative rather than quantitative. This was an informed decision to ensure that the maximum opportunities of identifying best practice and benchmarking could be obtained.

Findings

Provider Perspective

- *Literacy, language and numeracy needs*

Providers estimated that between 20%-90% of construction learners (i.e. those on foundation and intermediate construction courses) had literacy, language and numeracy needs. The extent varied across providers and the highest level of need occurred amongst providers that attracted learners from disadvantaged backgrounds. The majority of learners undertaking training on construction programmes were under 25 and automatically accessed initial assessment. A range of commercial (e.g. Basic Skills Agency Initial Assessment) and in-house assessment materials were used. It was identified most local providers were not assessing learners over 19 on part-time courses for literacy, language and numeracy development needs. One of the providers provided support during the evening theory sessions. At the time of research no provider was delivering literacy, language or numeracy to local construction employers. The project had intended to research a variety of delivery models within construction companies but this was not possible.

- Literacy, language and numeracy delivery

Many of the vocational representatives interviewed did not perceive a difference between literacy, language and numeracy and Key Skills. This indicated a need for awareness raising to ensure that the relationship between the two is understood. This is particularly relevant in the light of the planned convergence and the move towards embedding delivery of literacy, language and numeracy within the main curriculum. At the time of the initial research it was found that many providers were in the process of evaluating the most appropriate delivery methods for their learners.

- Key Skills

The initial research found that some providers were working towards the allocation of Key Skills tutors and sometimes Basic Skills Tutors within curriculum areas to develop contextualised learning. Six out of the seven providers had developed contextualised Key Skills assignments and customised worksheets. All providers and learners preferred this approach. However, there was one disadvantage expressed: students found it difficult to sit an end test that did not have any vocational relevance. This is an issue that is also relevant for embedding literacy, language and numeracy provision as the same Key Skills test is taken.

- *Literacy, language and numeracy support*

Literacy, language and numeracy support in the theory sessions usually took the form of discreet support to the whole group so that individual learners were not singled out for attention. This was seen to correspond to the nature and culture of the student groups. However, such a delivery method does not guarantee that individual needs are being met or that progress in literacy, language and numeracy is being recorded. Co-tutoring i.e. where the vocational tutor and the literacy, language and numeracy tutor deliver the sessions as a team was being developed at one of the colleges but it had not been implemented long-enough to evaluate its effectiveness. All of the providers gave portfolio support and this was viewed as essential for the completion of the Key Skills portfolio. Discrete support was also offered by some providers and was found to be effective.

- Literacy, language and numeracy support staff

Some providers felt that the support tutor needed to be a literacy, language and numeracy specialist but vocationally aware whilst others advocated that the support tutor needed to be or have been a vocational tutor but trained in literacy, language and numeracy support. There are practical and management implications for each of these approaches and further continuing professional development training would be needed to ensure that tutors have

appropriate vocational and subject specialist knowledge. Although providers evidenced awareness of literacy, language and numeracy issues it was reported that in practice some vocational tutors had difficulties accepting the need for literacy, language and numeracy support on construction courses.

Employer perspective

All employers interviewed had experience of staff with literacy, language and numeracy development needs. Each employer was aware of individual cases but the size of the need within each organisation had not been quantified. None of the employers believed that this was an issue that employers were responsible for addressing. A small sample of telephone interviews revealed a reluctance to discuss the issue, which through discussion with experts in the field, was seen as reflective of the attitude within the sector. This highlighted the need to develop literacy, language and numeracy awareness amongst local construction companies.

Learner perspective

Three out of twenty learners interviewed found that literacy, language and numeracy support had been beneficial. All learners were happy with the quality of the support that they received although some wouldn't have completed their Key Skills portfolio by choice. There were no indications that a particular mode of delivery was more effective than another. A learner tracking survey was conducted a year after the initial interviews. Two learners participated in a telephone interview and one learner returned a written questionnaire. The results of the learner tracking suggested that the perception of the benefits of literacy, language and numeracy change over time.

Resources

At the time of the initial research (January 2003) there were few resources to support literacy, language and numeracy within construction courses. A limited

amount of industry based resources were available but these tended to be written for Key Skills support rather than for literacy, language and numeracy. Since the survey the Adult Literacy, Language and Numeracy Strategy Unit, DfES have published embedded resources for Trowel Trades (August 2004) and more are planned.

Action Research Working Group

An action research working group of literacy, language and numeracy representatives was formed to participate in a range of research activities to explore the most effective ways of supporting learners with Skills for Life needs within the construction programme area. The group identified its terms of reference and two meetings per term were agreed. Priority activities were identified as the development of a construction screening tool for learners over 24, the development of materials and approaches to prepare construction learners for the level 2 national test and the contextualisation of course materials. During the life of the working group a draft screening assessment tool was developed but there were difficulties in implementing all of the aims of the working group because of pressures that various member organisations were experiencing.

Conclusion and recommendations

- Only one provider assessed learners over 19 who were attending evening provision. It is recommended that initial assessment for all part-time evening class learners be introduced, to ensure that an appropriate learning programme is planned.
- A range of embedded literacy, language and numeracy models was identified during the research. It is recommended that providers implement good practice identified in the publication of the NRDC embedded literacy, language and numeracy research project when it is published.

- Many providers have moved towards full-time Key Skills staff attached to the vocational area and one provider is recruiting a full-time literacy, language and numeracy support tutor for construction. It is recommended that the capacity for literacy, language and numeracy support continue to be strengthened.
- Almost all providers offered some form of literacy, language and numeracy support in the theory sessions but only one provider offered support in practical sessions. It is recommended that providers consider the benefits literacy, language and numeracy support in practical sessions of construction programmes.
- Similarly, only one provider offered literacy, language and numeracy support to part-time evening learners. It is recommended that the need for literacy, language and numeracy support be considered for part time evening learners in accordance with initial assessment results and the learners' individual learning plans.
- There is a need to develop and build capacity of literacy, language and numeracy staff who can teach in a vocational context and are able to develop effective contextualised provision. It is recommended that CPD training activities are developed to build capacity and to strengthen embedded delivery.
- It was generally believed that vocational tutors would benefit from continuing professional development in literacy, language and numeracy awareness and training in working as a team with literacy, language and numeracy staff. It is recommended that vocational tutors receive Skills for Life awareness training as part of the Skills for Life Quality Initiative strategic whole organisational approach. It is also recommended that joint team building/embedded delivery training be developed for vocational tutors and literacy, language and numeracy practitioners.
- Literacy, language and numeracy skills were not seen as a dominating issue with the employers interviewed. Some employers were reluctant to discuss

or admit that poor literacy, language and numeracy skills existed amongst the workforce. It is recommended that a series of employer awareness raising activities be developed to promote understanding of the issues.

- The action research Working Group model was effective in enabling local colleges to share good practice and to consider common approaches. However, a difficulty encountered during the life of the project was securing the time to develop the screening tool.

METHODOLOGY

The initial research consisted of consultation with appropriate regional, national and international agencies to establish existence of existing resources. A desktop review of relevant existing research and materials was conducted. Appendix 5 contains a list of construction related literacy, language and numeracy resources. Individual and group interviews with nine local provider organisations (nineteen members of staff), eight employers and twenty learners took place to establish their perspectives and issues to be addressed. Individual learners were interviewed from three provider organisations and their permission to participate in tracking the medium and longer-term learning outcomes was obtained. In addition, face-to-face and telephone interviews were conducted with providers and employers outside the region to obtain further examples of best practice.

An additional survey about embedding literacy, language and numeracy in construction courses was developed and circulated to the membership of the Workplace Literacy, language and numeracy Network. In addition, a detailed assessment questionnaire was sent to all local providers (Dudley College, Dudley Future Skills, Sandwell College, Sandwell Future Skills, Sandwell New Horizons, Walcat, Wolverhampton City College). The information requested related to the academic year 2002/3. The information from Dudley Future Skills related to the period January – July 2003.

The action research nature of the project enabled additional lines of enquiry to be followed up. One of these was the extent to which the Health and Safety Test, part of the Construction Scheme Certification System (CSCS) award, would highlight literacy, language and numeracy skills needs of construction employees. Participant observation was employed in this aspect of the project. By the end of 2004 all employees on new build sites will have to carry a

Construction Scheme Certification award. Many practitioners within the industry believe that this is a positive development but the literacy, language and numeracy implications of the introduction of the CSCS card have yet to be explored. One aspect of CSCS scheme that was of immediate interest to the project was the possibility that the Health and Safety test might indicate potential literacy, language and numeracy needs of students. This was investigated by a combination of telephone interviews with CITB staff, providers, employers and completion of the test.

A second feature of the action research has been to establish a steering group to provide guidance and direction. Members of the steering group are from a range of construction industry interested backgrounds i.e. Black Country Business Link, LSC Black Country, Carillion Training, the regional CoVE, a national CoVE and the CITB. The Steering Group have met approximately every six to eight weeks.

A third feature of the action research was the creation of a working group from December 2003 to December 2004. During the second half of the project representatives from local colleges were invited to participate in a working group. The working group decided its terms of reference and priority actions for the coming months. Meetings were held on a regular basis to progress activities.

The research methodology and analysis has been predominantly qualitative rather than quantitative. This was an informed decision to ensure that the maximum opportunities of identifying best practice and benchmarking could be obtained. It was thought at the beginning of the project that a series of employer case studies (outlining literacy, language and numeracy needs of employees, identifying and implementing possible solutions) would be possible. Results of the initial research indicated that this was not a suitable or feasible

method and alternative methods of obtaining employer feedback were applied.

Although the scope of the project was focused on literacy, language and numeracy, it was decided to include Key Skills findings because of the inclusion of Key Skills in the FMA (Foundation Modern Apprentices) framework the close relationship between literacy, language and numeracy and key skills. Many research interviewees referred to key skills when asked about literacy, language and numeracy. (It is anticipated that the DfES commissioned convergence project of literacy, language and numeracy and key skills will develop strategies to address combined effective delivery).

PART ONE: INITIAL FINDINGS AND ANALYSIS

Headline Industry Statistics

The industry consists of six different sectors (civil engineering, commercial, facilities, housing, industrial and refurbishment; each has its own characteristics and economic fortunes. The Construction Trends Survey (2002) reports that contractors are optimistic about the long-term output growth over the next twelve months but are less positive about the current climate that they are experiencing. Regional statistics are available only at West Midlands level (the DFES report that smaller breakdown of statistics would affect the reliability of the data) and it is necessary to be aware of the limitations of the data given the mobile and temporary nature of contractors within the industry. For example, a company might be registered in the West Midlands but may work locally and nationally for varying time periods depending on the task. Similarly, contractors from anywhere in the country could undertake new orders that are recorded in the local area.

However, it is worth noting some regional facts and trends to illustrate the size of the sector in the region. It is reported in the Construction Industry Annual Statistics 2002 that there has been a steady increase in new work reported by contractors by region for the West Midlands over the last ten years (£1.7 million in 1991 to £2.6 million in 2001). The most significant growth sectors during this time were private industrial and private commercial. The statistical breakdown of the latest records is presented in the table below.

2002	Contractors output £million in the West Midlands
New Housing – Public	75
New Housing – Private	1,005
New Housing – Infrastructure	639
Other New Work – Public	573
Other New Work – Private industrial	473
Other New Work – Private Commercial	1,094
Repair and maintenance – Housing	1,425
Repair and maintenance – Public	838
Repair and maintenance – Private	930
All Work	7,051

In 2001 there were 14,916 firms registered in the West Midlands. The number has remained relatively stable since 1997 when 14,656 companies were registered. The local sector is seen relatively buoyant with an increasing amount of output.

Provider Perspectives

- *Literacy, language and numeracy needs*

Providers estimated that between 20%-90% of construction learners had literacy, language and numeracy needs. The completed questionnaires suggest that there is a wide range of literacy, language and numeracy needs amongst learners. However, the extent of the need can be seen to reflect the learner groups on the programmes. The highest levels of literacy, language and numeracy needs were recorded for those learners who are from disadvantaged backgrounds e.g. Sandwell New Horizons and Future Skills Dudley. At Future Skills Dudley, a provider where the programmes are aimed at those who have been unemployed, 90% of all the full and part-time learners had literacy, language and numeracy needs. Sandwell New Horizons offers programs to learners who are similarly disadvantaged. All of the learners on the painting and decorating and woodcraft course needed literacy, language and numeracy support.

There is evidence to suggest that some of the learners are referred or are unsuccessful with providers who are offering higher level courses e.g. FMA but are accepted by other providers who offer foundation or intermediate courses. This is likely to account for the 100% literacy, language and numeracy need at Sandwell New Horizons. Sandwell New Horizons have a local catchment area and are a main provider for Job Centre Plus. At Dudley College the 37.5% of all learners on Construction courses (full-time Trowel Trades – 44% and Carpentry 33% and evening carpentry – 33%) were assessed as having literacy, language and numeracy needs.

- *What is the age profile of those affected?*

The results suggest that the majority of the learners undertaking training on construction programmes with poor literacy, language and numeracy are under 25. This is reflective of the age profile of the courses generally. At Dudley College 83% of those needing literacy, language and numeracy support were aged between 16-18, 5.6% were aged 26-34 and 11.1% were between 35-44. At

Future Skills – Dudley 78% of those needing literacy, language and numeracy support were between 19-25, 13.6% were between 26-34 and 2.7% were between 35-44 and 5.5% were over 45 years old. At Sandwell New Horizons all of the learners needing literacy, language and numeracy support were aged between 16- 18 years old. At Sandwell College it is estimated that between 50-60% of 16-18 year old full-time learners on construction courses and between 10-20% of adult learners have literacy, language and numeracy needs.

- *How many are working in construction?*

None of the learners requiring literacy, language and numeracy support at Dudley College or at Future Skills Dudley were employed in construction but at Sandwell New Horizons 70% of them were part-time students employed in construction. Given the small sample, it is difficult to assess the impact of low literacy, language and numeracy on the local industry.

- *Assessment*

Providers interviewed assess most full-time students at the beginning of the academic year. A range of assessments is used with 16-18 years olds: the BSA assessment, Target Skills, Key Skills level and in-house tools. By contrast, students over 19 are informally assessed and their literacy, language and numeracy needs are not identified unless this becomes apparent during the course. The decision to complete Key Skills accreditation for those learners over 19 is encouraged but tends to be optional amongst providers. An analysis of the assessment packages in use is detailed below. Many providers use a combination of assessment packages. Some commented that they have begun to implement the Diagnostic Assessment package (2003).

	BSA	Target Skills	Key Skills	In-house
Dudley College			√	√
Future Skills Dudley			√	√
Sandwell College			√	
Sandwell New Horizons	√			
Sandwell NHS		√	√	
Smethwick Future Skills			√	
Stourbridge College	√	√	√	√
Walsall College			√	√
Wolverhampton College	√		√	

It is appropriate that most providers use both literacy, language and numeracy and Key Skills assessments as there is a need to assess both areas of skill. However, a gap in the assessment of learners who are 19+ exists. Although it could be understood why Key Skills assessments may be viewed as not appropriate for those learners over 18 there is still a benefit in assessing for literacy, language, and numeracy, particularly in the light of retention and achievement. The Ofsted and ALI inspection report for Literacy, numeracy and English for Speakers of other languages: a survey of current practice in post-16 and adult provision (2003) highlights the importance of this:

“Retention, achievement, success and progression rates must be carefully monitored against realistic but ambitious targets. There is a need for simple but effective systems to assess the effect of learning and language support on learners’ achievements in their main programme of study.”

At present, literacy, language and numeracy needs amongst the 19+ group of learners tends to be identified on an informal and ad hoc basis. An early assessment would help providers to quantify the scale and nature of support required at the beginning of the courses.

Name of Assessment	Providers Reasons for Use
Skills Builder	User Friendly on CD rom Results analysed to show strengths and weaknesses in Key Skills
Interview and application form	Initial indications of literacy, language and numeracy needs, to assess learner self-confidence and to provide early talking points informing the learner profile.
BSA Initial Assessment	Required on contract Mapped to the national curriculum
Target Skills 2003-4	User friendly, on CD ROM
BSA diagnostic assessment tool (slightly in-house customised)	Used normally as a back-up to determine nature of problem in relation to specific course elements

The Initial Assessment of Learning Support Needs and Planning Learning to meet Needs in the Good Practice Series, DfEE (2001) endorses the use of a range of assessment tools. It suggests application forms, references, interviews and formal tests for collecting literacy, language and numeracy assessment information. In practice, most providers are using a mixture of assessment tools and all use the interview and application form as part of the assessment process. The Common Inspection Framework also focuses on whether the provider's " initial assessment provides an accurate basis on which to plan an appropriate programme of work." The importance of the accuracy of initial assessment is demonstrated in the recent Ofsted and ALL report of Literacy, numeracy and ESOL: a survey of current practice in post-16 and adult provision (2003):

“In colleges and work-based provision, there is a need for courses for vocational tutors to learn how to assess and teach the literacy and numeracy skills integral to the vocational curriculum.”

However, in one organisation there is the use of a key skills assessment tool to screen for literacy, language and numeracy needs. The Key Skillsbuilder, produced by West Nottinghamshire College, is designed for the initial assessment of Key Skills and has 22 workbooks to support learners with their individual needs. This suggests that Key Skills and Literacy, language and numeracy are seen as similar if not the same amongst many providers. This is a finding that also emerges in relation to literacy, language and numeracy support.

- *Key Skills Tutors*

Five of the seven providers interviewed, who delivered Key Skills to a group of students on the same course, were moving towards having a Key Skills/Literacy, Language and Numeracy tutor dedicated to delivering key skills and literacy, language and numeracy support to construction courses. One provider delivered Key Skills to a mixed group of learners because of the number of construction learners involved (two apprentices). In this instance, additional support in both Key Skills and Literacy, Language and Numeracy was given to the two learners on a 1:1 and small group (of two) basis.

Many providers expressed the desire for a tutor who is allocated full-time to service the construction department (one provider was currently recruiting for such a tutor). Some providers (6/7) are in the position of having a Key Skills Tutor who is allocated to some construction courses but the tutor is not a formal member of the curriculum staff. Many providers reported that Key Skills had been managed originally from a central department in the organisation but there was a movement towards individual departments managing this aspect of

the intermediate construction awards and foundation modern apprenticeships. The current thinking amongst providers is that Key Skills can be delivered in a more relevant and effective way for the learners if it is vocationally contextualised. (Such a perception is endorsed by the learners interviewed and is described in more detailed in the Learner Perspective section of the report).

- *Health and Safety Test*

The issue of whether the Health and Safety Test would provide an indication of literacy, language and numeracy needs was raised at an early stage in the project. Nine different Health and Safety Tests are offered by CITB, depending on the construction specialism and expertise (e.g. demo and plant, plumbing), have been in use since 2000. Each test is has between 35-40 questions and the candidate is given 45 minutes to complete. It has been found that in practice, most candidates usually complete in 20 minutes. There is a 15 minutes practice session. It is expected that individuals book the tests.

It can be arranged for the test to speak the questions via a voice over or reader recorder but this needs to be requested in advance and a letter from doctor, employer or training centre is required. Currently (2003), if a candidate fails a test a report that highlights weak areas can be requested. The CITB are developing the test for use over the Internet. It is already in use for overseas test centres. The Health and Safety test needs to be taken within 6 months after the expiry of the card.

The onscreen test uses colour well and has an easy touch screen. The language used in the test questions undertaken by the research suggests that this could be problematic for candidates with low levels of reading. It is estimated that the sentence construction and vocabulary is approximately E2/3. Understandably, there is a heavy use of context specific multi-syllabic words. The sentence construction was regularly over 10 words per sentence in questions.

Throughout the test the time taken so far is recorded at the top left hand part of the screen. This could potentially be off putting to someone who is struggling to make sense of what is written on the screen. An inexperienced reader would need familiarity with context to help understand words. The use of multi-choice is beneficial as could help some candidates attempt a question. Although a candidate could guess the answers knowledge of Health and Safety is required. It is possible that a poor reader could cope by keyword recognition and readability but this could be problematic as only words are used in the test. There are no visual cues (e.g. illustrations or pictures) provided.

It is not possible to evaluate fully whether the test would identify candidates with literacy, language and numeracy needs because of the many factors that could contribute to a poor test score. For example, the candidate could have difficulty with language and individual words, there could be difficulties using computers or the answers might not be known. Similarly, the use of multi-choice could enable a candidate to use common sense and/or contextual knowledge to work out an answer.

- *Key Skills Tasks and Assignments*

Almost all providers (6/7) have developed Key Skills assignments that are contextualised and have customised worksheets to support the delivery of numeracy, literacy and IT for construction courses. Similarly, any Key Skills support work is linked to the trade subject. Most providers have mapped the Key Skills criteria to the main vocational course and use evidence for Key Skills assignments from the main course where possible. Additional vocational Key Skills assignments are developed to ensure that all the remaining criteria are met. All providers believed that this was a much better approach than the previous one of generic task and assignments. The learners interviewed also seemed to agree with this. The integration of Key Skills learning with the

vocational area is effective. It also ensures a certain amount of consolidation, possible transfer of skills and a more affective contextual application.

- *Key Skills Test*

Many providers commented that students found it difficult to sit an end text that does not have any vocational relevance. This is particularly poignant when the key skills sessions are contextualized to retain interest and motivation. Some providers stated that they initially believed that vocationally relevant Key Skills tests were planned. There does appear to be an anomaly between the contextualised Key Skills session and the generic Key Skills Tests. Although it is good practice not to teach to an assessment there is a need to ensure that learners are able to relate to the questions they are expected to answer. In order to prepare learners and address this to an extent many providers gave students practice tests and exam preparation. The action research working group identified the need to develop preparation training for learners.

- *Where does literacy, language and numeracy fit in?*

Some providers have recognised the need to link literacy, language and numeracy and key skills. There does appear to be a need to be flexible and responsive in addressing literacy, language and numeracy and Key Skills needs of the learners. One provider is planning to deliver literacy, language and numeracy training before key skills training in the next academic year (2003-4). This is a useful approach as it will begin to develop learners literacy, language and numeracy before they have to apply their skills. Such an attitude is encouraged by the QCA definition of the relationship between adult literacy, language and numeracy and key skills: "The skills comprising adult literacy and numeracy underpin and provide progression into the key communication and application of number." It also suggests that short intensive blocks of literacy, language and numeracy training would be a productive and effective approach.

Interestingly, most construction providers interviewed were not aware of the difference between the literacy, language and numeracy and key skills but did perceive that both Key and literacy, language and numeracy addressed the same, if not similar, areas e.g. English and Maths skills. The perception of the close relationship became apparent as many providers described provision for both subjects simultaneously. Key Skills and literacy, language and numeracy are understood to address similar root problems.

- *Literacy, language and numeracy support*

Support in theory sessions:

Where it was recognised that literacy, language and numeracy support was needed in the theory sessions it usually took the form of a support tutor who discretely supports each learner in the group. All of the providers interviewed gave additional portfolio support to the students if needed. This usually took the form of a 1:1 or small groups and was discretionary. One provider commented that some of their learners would not be able to achieve the main qualification without portfolio support.

Many providers interviewed have an established strategy for supporting literacy, language and numeracy during theory sessions. The vocational tutor teaches the theory and the literacy, language and numeracy tutors supports all students in the group) as and when required. Some literacy, language and numeracy tutors are “shared” between groups. Discrete provision to the whole group rather than an individual learner is a favourite approach with many providers. The reason given for this was does not single out individuals for attention. Providers are able to fund this by additional supported being required by one of the learners. It was acknowledged that the whole group benefit and that this kind of support is in keeping with the nature and culture of the student group. In practice, there is a mixed response to this delivery method. Some providers

commented that other learners find this support useful but one provider perceptively observed “those requesting help are not always the ones requiring it.” This approach can be problematic as it does not guarantee individual needs are being met or monitoring of literacy, language and numeracy learning is taking place.

An alternative proposal is the introduction of co-tutoring where the vocational tutor teaches the vocational aspects of the course and the literacy, language and numeracy tutor teaches at literacy, language or numeracy point in the session. There appears to be two main advantages: tutors have an equal standing and there is no separation between literacy, language and numeracy and the vocational content of the course. Three of the local providers are developing a team teaching method of providing literacy, language and numeracy support during theory sessions. This approach has not been implemented long enough for providers to evaluate its effectiveness.

Both methods of supporting the theory sessions can be seen to have benefits and perhaps the best option would be a flexible combination of approaches. This would ensure both high quality individual support combined with contextualised literacy, language and numeracy group teaching.

- *Separate group literacy, language and numeracy support*

An alternative is where a small group of students receive, sometimes short intensive, literacy, language and numeracy support separate from the course teaching. Two providers have offered this in the past. It was seen to be useful in that teaching was customised to the vocational group and was able to address specific problems.

An alternative to pre-established group support was the flexibility of setting up literacy, language and numeracy support to a group of learners need when

needed. If a whole group has problems extra support can be set up for the group. This is a method of literacy, language and numeracy delivery that is highly responsive to learner needs. An example of this occurred recently for a plumbing course. Such an approach has the advantage of being learner centred but has the possibility practical implementation issues e.g. teaching staff. However, it is reactive rather than a proactive approach and does not ensure that relevant needs are met. The recent Ofsted/ALI report Literacy, numeracy and English for speakers of other languages: a survey of current practice in post-16 and adult provision (2003) reports that there is a need to develop the “embedding” of literacy, language and numeracy within the context:

“In all provision, specialist literacy, numeracy and ESOL tutors need to pay greater attention to ensuring that what they teach is relevant to learners’ vocational needs and their broader interests... Greater attention should be paid to improving the literacy and numeracy of young people employed in construction work...”

- *Literacy, language and numeracy staff*

The development of strategies to address literacy, language and numeracy needs of construction course learners requires staffing and continuing professional development. In some instances amongst local providers, this has resulted in a different way of deploying literacy, language and numeracy staff. For example, one provider is in the process of implementing two full-time literacy, language and numeracy tutor posts to support the vocational division. There are two schools of thought about the background and experience required for literacy, language and numeracy tutors operating in a vocational context.

During the research of this project both options were reported to be successful. One is that the tutor needs to be a literacy, language and numeracy specialist

but must be vocationally aware i.e. have some knowledge of the subject that is being taught by the vocational tutor. This is seen as particularly important for relating to the students and in relating literacy, language and numeracy to detailed aspects of the course. Some providers endorsed this attitude and cited effective examples. Similarly, Leeds College of Building also reported the effectiveness of this approach. Where a tutor did not have vocational awareness, some providers gave the opportunity to attend taster sessions. Providers in the Black Country reported that this had been more successful than employing a tutor with no vocational subject awareness. The Black Country LSC Vocational Core Curriculum Training dissemination event held in Oldbury in January 2003 endorsed this perception.

The second approach is that the literacy, language or numeracy tutor needs to be or have been a vocational tutor but is also literacy, language and numeracy trained. The latter is not the vocational tutor in this context but has a detailed knowledge of the subject. A similar perspective was held by one of the seminar leaders at the NIACE Embedding Literacy, language and numeracy dissemination event held in Coventry in March 2003. The more general issue is the degree of subject specialism that is perceived to be required. There are also practical and wider implications of requiring all literacy, language and numeracy tutors to have experience teaching a vocational subject, particularly given the range of courses taught within the construction curriculum.

- *Vocational tutor training*

The question of whether literacy, language and numeracy training (a minimum of some form of literacy, language and numeracy awareness) is needed for vocational tutors is valid. Although providers evidenced awareness of literacy, language and numeracy issues it was reported that, in practice, some vocational tutors still have difficulties accepting the need for literacy, language and numeracy support on construction courses. There appears to be some

scope for continued professional development in awareness and understanding about literacy, language and numeracy and team teaching amongst vocational tutors. A provider who had been developing many innovative approaches reported still experiencing resistance from one of the vocational tutors. Vocational tutor awareness is an aspect of “embedding literacy, language and numeracy” which needs further development.

One of the providers out of the region (Leeds College of Building) is considering encouraging all vocational tutors to train in literacy, language and numeracy through the TPI initiative (2003). The intention is that vocational tutors will be literacy, language and numeracy aware. An added advantage is that course tutors would be able to identify students who are struggling and decide on an appropriate action. A further advantage was identified by The Black Country LSC Vocational Core Curriculum Training dissemination event. It was suggested that ideally literacy, language and numeracy-aware vocational tutors would be able to modify course materials and teaching styles to ensure the students with low literacy, language and numeracy are not disadvantaged.

- *Embedding language, literacy and numeracy in course design*

Two providers expressed the desire for literacy, language and numeracy to be an integral part of the course. One provider felt strongly that the key to this approach was the integration of literacy, language and numeracy into the design of the syllabus. It could be argued that this would enable literacy, language and numeracy to be delivered as a natural and highly contextual part of the course. This would not solve any general literacy, language and numeracy needs that students have but it would enable the course needs to be addressed in a highly specific way.

However, there could be several implications of such an option. The time constraints needed to deliver such a course could be a problem. Many

providers already report difficulties ensuring that students complete within the existing timescale so it is likely that additional literacy, language and numeracy and/or key skills content would place a further burden on the timescale of portfolio completion. It also raises the issue of the purpose of embedding literacy, language and numeracy: is to deal with the wider aspects of literacy, language and numeracy needs? or is it to address highly contextualised skills? There are further questions of course management, staffing, funding and timescales which would need to be considered. The NRDC Embedding Literacy, language and numeracy project is exploring best practice in this area.

- *Literacy, language and numeracy support to part-time evening students*

Whilst offering an extensive range of literacy, language and numeracy and key skills support to full and part-time day students only one provider offered similar options to evening students. One of the main reasons for this is the focus on Key Skills acquisition and literacy, language and numeracy support for 16-18 year olds. It was generally believed that learners over 18 were likely to have addressed any literacy, language and numeracy needs and were able to access support if they requested it. However, there does seem to be an argument that learners on part-time evening courses should be given similar opportunities to daytime students. Two fundamental reasons for this would be providing equal opportunities and the potential literacy, language and numeracy need of students aged over 25. None of the providers interviewed had quantified the extent of literacy, language and numeracy needs of learners on courses delivered in the evening.

One regional provider reported that it had dedicated literacy, language and numeracy and IT tutors for evening sessions. The sessions are staffed with a vocational tutor and either a literacy, language and numeracy or IT tutor. Learners have responded to this well. A further ingredient of success has been the consistency of allocated staff over a few academic years. The same

member of staff has worked with different course groups within construction. Staff/learner relationships and rapport with different course groups have developed.

- *Literacy, language and numeracy support in practical sessions*

Whilst most providers are aware of the need to support literacy, language and numeracy in the theory sessions of construction courses the practical sessions are not supported. Providers did not report that this was an area of difficulty but one provider had just begun to offer support in practical sessions that was proving effective. This seems an area of developing literacy, language and numeracy support that could be explored to ensure that the needs of learners are met in all learning situations.

- *Construction Literacy, language and numeracy/Key skills Centres*

One provider operates literacy, language and numeracy/key skills support from a centre for construction students. The existing centre offers 1:1 tuition and up to 2 x2 hour sessions a week if needed. Individually customised literacy, language and numeracy support is offered. It has proved very popular with the learners and has been able to respond flexibly to learners needs. Such an approach to literacy, language and numeracy support tends to deal with the literacy, language and numeracy needs of the whole person rather than those required in completing a section of the course.

In some cases, the provider had secured additional ESF funding has been secured so that the learner can develop their literacy, language and numeracy to complete the course. However, this was not always feasible and it was reported that the learners sometimes left courses because of funding issues rather than course completion or literacy, language and numeracy acquisition. Appendix 4 contains an analysis of current funding streams (2003) for additional

