



National Research and Development Centre
for adult literacy and numeracy



Putting good practice into practice: literacy, numeracy and key skills in apprenticeships

Part two: Revisiting and re-evaluating (May 2005)

An evaluation report for the Qualifications and Curriculum Agency (QCA)
and the Learning and Skills Development Agency (LSDA)

Olivia Sagan, Edmund Waite and Steve Cowan, with Helen Casey and Karen Evans



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CONTENTS

PREFACE	
EXECUTIVE SUMMARY	1
Introduction	1
Models for including key skills	2
Front-loaded delivery	2
Embedded provision	3
Teacher attitudes	3
Trainee attitudes	3
Staff training	3
Bureaucracy	4
Employer links	4
Training needs	4
Conclusion	4
INTRODUCTION	5
EVALUATION OF PROGRESS IN THE SIX CENTRES	7
Centre A	
FMA in Care, Retail and Administration	7
Centre D	
FMA in a variety of areas including Plumbing, Electrical Installation, Motor Vehicle Maintenance, Carpentry, Construction/Building, Administration, Hairdressing, Beauty and Catering	8
Centre E	
AMA in Heating and Ventilation	10
Centre F	
FMA/AMA in Bricklaying, Carpentry FMA (with pre-FMA programme of 14 weeks)	12
Centre G	
FMA/AMA Modern Apprenticeship in Racehorse Care (FMA) standard nine-week residential group	13
Centre H	
FMA in a variety of areas including Painting and Decorating, Hairdressing, Carpentry and Plumbing	14
SUMMARY OF FINDINGS	17
Benefits of using front-end models of delivery	17
Benefits of combining front-loaded and embedded models of delivery	17
Additional features impacting on success	18
Training for staff	18
Conclusion	19
APPENDIX 1	20

NRC
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Preface

NRDC is presenting this evaluation report, written in May 2005 but being published now in the spring of 2007, in response to continuing interest in - and importance of - its subject matter. The publication of *Prosperity for all in the global economy – world class skills* by Lord Leitch in December 2006 has drawn fresh attention to the need for employment-based literacy and numeracy development.

This report is the second in a series focused on the implementation of different approaches to literacy and numeracy within vocational apprenticeships. A third NRDC study, again revisiting these apprenticeship programmes, is exploring literacy and numeracy development within the workplace context, to complement this earlier work on the taught or 'day-release' part of these programmes.

This series of studies exploring literacy and numeracy in apprenticeships complements other NRDC publications on embedded literacy and numeracy¹ and on working with young learners. We hope you find it useful and would welcome your views and comments.

Helen Casey

Executive Director, NRDC

April 2007

¹ "You wouldn't expect a maths teacher to teach plastering..." *Embedding literacy, language and numeracy in post-16 vocational programmes – the impact on learning and achievement* (London: NRDC, 2006) and *Embedded teaching and learning of adult literacy, numeracy and ESOL. Seven case studies* (London: NRDC, 2005).

Executive Summary

Introduction

This report follows on from an earlier publication on apprenticeship programmes by the National Research and Development Centre for Adult Literacy and Numeracy (NRDC), entitled *Putting good practice into practice: literacy, numeracy and key skills within apprenticeships* (NRDC: January 2004).

The first report was an evaluation of a development project by the Learning and Skills Development Agency (LSDA)*. The project explored the impact of using what is known as a 'front-end' or 'front-loaded' delivery model, which concentrates literacy, numeracy and wider key skills at the beginning of apprenticeship frameworks. This was in contrast to a range of previous practices, including that of covering key skills as an addition at the end of programmes.

This follow-up study, *Part two: Revisiting and re-evaluating (May 2005)*, sets out to return to six of the original eight sites observed, to describe the progress and developments that took place in 2004–5, after the initial report was published. The six centres revisited were:

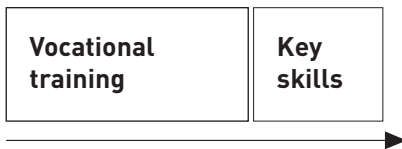
- Centre A – Foundation apprenticeships in Care, Retail and Administration
- Centre D – Foundation apprenticeships in a variety of areas including Plumbing, Electrical Installation, Motor Vehicle Maintenance, Carpentry, Construction/Building, Administration, Hairdressing, Beauty and Catering
- Centre E – Advanced apprenticeship in Heating and Ventilation
- Centre F – Foundation and advanced apprenticeships in Bricklaying and Carpentry, plus 14-week pre-foundation programme
- Centre G – Foundation and advanced apprenticeship in Racehorse Care
- Centre H – Foundation apprenticeships in a variety of areas including Painting and Decorating, Hairdressing, Carpentry and Plumbing.

In these six centres, there is continuing evidence of increased numbers of trainees completing key skills portfolios, often in considerably shorter timescales than had previously been observed. There is also a consistent pattern of increased retention on the programmes. The trainers report the use of 'front-loaded', 'key skills first' approaches to programme organisation, and more recently-developed embedded approaches, as significant in securing these improvements.

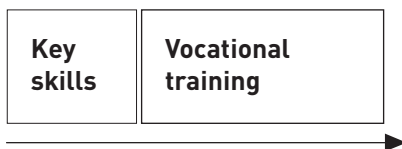
Note: The LSDA was succeeded by the Learning and Skills Network (LSN) and the Quality Improvement Agency for Lifelong Learning (QIA) in April 2006. We retain reference to the LSDA here as the body that commissioned this report from 2004–5.

Models for including key skills

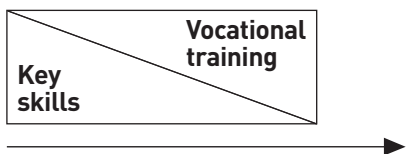
In the centres participating in the 2003–4 LSDA development project, there was a common pattern in apprenticeship programmes for the key skills element to be added just before the completion of the apprenticeship framework, so that key skills were often experienced as an ‘afterthought’:



The LSDA project introduced the implementation of a ‘front-loaded’ approach, where literacy, numeracy and key skills were introduced at the beginning of apprenticeship programmes:



Several of the centres we revisited had taken the front-loaded approach and developed it by including or ‘embedding’ key skills within the ongoing vocational training. This enabled trainees to further develop and support their literacy, numeracy and key skills as they progressed towards completing their apprenticeship frameworks. In this approach, the amount of key skills decreased progressively during the period of vocational training:



Front-loaded delivery

The centres have found that front-loaded delivery capitalises on the tendency for trainees’ motivation to be higher at the beginning of the programme. It is also an effective means of ensuring that achievements in key skills occur early on in the apprenticeship programmes. This sends out a signal to trainees that they need these skills as a precondition for undertaking their portfolio.

The interplay of timing and approach with trainees’ motivation levels was considered essential in catching trainees’ enthusiasm early:

‘To me an upfront model is just an induction, and saying what key skills are and then getting them timetabled straight away, and if you achieve that you’ll find you have a guaranteed high success rate for the full framework. Those areas that aren’t that upfront in terms of inducting about the value of key skills, then you find that they timetable them in February or March or in the second year of the course – well you’ve lost the whole agenda by then. You have to have it at the beginning.’

Embedded provision

The findings contain a number of elements that corroborate the findings of the NRDC case studies of embedded provision, *Embedded teaching and learning of adult literacy, numeracy and ESOL. Seven case studies* (London: NRDC, 2005). The integration of key skills with occupationally-relevant activities allows trainees to recognise the relevance of the former in a variety of vocational and occupational settings: by presenting key skills in contexts that are both real and relevant, embedded provision can counteract resistance towards the learning of literacy and numeracy and enhance trainees' engagement and motivation. Integrating or embedding key skills into multi-faceted activities accustoms trainees to using these skills in situations that would naturally arise at work. Embedded provision therefore enhances the application of these skills.

Teacher attitudes

The attitudes of literacy, numeracy and key skills teachers towards vocational work, and of vocational teachers towards key skills, are crucial to the success of embedded provision.

In one centre, the key skills tutor had personally engaged in occupational skills training. This considerably raised her credibility amongst the trainees and enhanced her ability to make key skills appear relevant. She was able to actively demonstrate links between key skills and vocational areas by drawing on her own familiarisation with aspects of the trainees' occupational training.

Embedded provision enables vocational tutors to engage with the delivery of key skills. This allows for greater identification with and sense of 'ownership' of key skills amongst vocational tutors. Collaborative work between the vocational and key skills tutors in designing the course and writing assignments was seen as important. This can enhance positive feelings towards key skills amongst vocational tutors, which in turn impacts positively on trainees' attitudes.

Trainee attitudes

When the researchers discussed front-loading and embedding with a large group of first-year apprentices, the latter displayed a high degree of self-confidence and assertiveness and were able to explain the relevance of certain key skills to their chosen trades. Negative views about the key skills components were absent; instead, the trainees expressed a sense of achievement with their progress in portfolio-building and the completion of tests.

Staff training

Centres need access to:

- Specialist training for those responsible for literacy, numeracy and key skills
- Training for vocational staff in incorporating inclusive approaches to literacy, numeracy and key skills within their teaching
- Support for staff teams and managers in developing a positive culture with respect to literacy, numeracy and key skills.

Bureaucracy

There were a number of concerns expressed about the level of bureaucracy involved in delivering these courses. Some centres reported problems with administration surrounding key skills in a vocational context. For instance, Centre G lamented the complexity of key skills funding, and Centre H reported that an audit of course codes registered onto the management information system had revealed a number of errors sufficient to depress achievement rates by 8 to 10 per cent, due to confusion on the part of teaching staff in entering data. Allocating sufficient administrative resources and support for trainers could allow for sharper attention to rates of progress and individually-targeted activities.

Employer links

Closer links between the employer and training provider assist in establishing the relevance of key skills amongst trainees. Some of the most effective practice observed exists where the employer is also the training provider and training outcomes are linked to pay and promotion.

Training needs

There is a tendency for college-based courses and staff to retain a college-type learning setting when providing professional training for work-based tutors of literacy, numeracy and key skills. However, it was suggested that such training should be rooted in vocational settings instead.

Conclusion

The six centres in this study are all now committed to the principle of embedding, and the recent data gathered indicate that an emphasis on embedding key skills throughout the course has had a positive effect on retention, progress and completion. In all centres, the teaching of key skills in the initial training has taken a central role in the occupational training.

Introduction

This report follows on from an earlier NRDC publication on apprenticeship programmes entitled *Putting good practice into practice: literacy, numeracy and key skills within apprenticeships* (NRDC: January 2004).

Putting good practice into practice was an evaluation of a development project by the LSDA. The LSDA project explored the impact of using what is known as a 'front-end' or 'front-loaded' delivery model, which concentrates literacy, numeracy and wider key skills at the beginning of apprenticeship frameworks. This is in contrast to a range of previous practices, including that of covering key skills as an addition at the end of programmes.

The current study, *Part two: Revisiting and re-evaluating (May 2005)*, sets out to return to six of the original eight sites observed, to describe the progress and developments that took place in 2004–5, after the initial report was published.

These were some of the key findings of the 2004 report:

- Early indications of the success of the various front-loaded delivery models were positive, though inconclusive.
- The planning of key skills within apprenticeship frameworks had a wider organisational impact, with reported improved practice in areas such as assessment and maintenance of individual learning plans (ILPs).
- A whole-organisation belief in literacy, numeracy and the wider key skills as essential underpinning for vocational and technical knowledge was important for the success of provision and learners.
- The attitudes, skills and experience of teachers delivering front-end/embedded key skills were essential elements in effective delivery.

The current project, commissioned by the Qualifications and Curriculum Agency (QCA) and the LSDA, and funded by the Department for Education and Skills (DfES), sets out to:

- examine the longer-term impact of front-end delivery in terms of both hard and soft outcomes
- explore the embedding of key skills in vocational courses and qualifications (defined broadly as the process of acquiring literacy and numeracy as contextualised within a vocationally- and occupationally-relevant setting).

The research team revisited six of the original sites in order to conduct semi-structured interviews with project managers and collect data on completion and retention. Samples of embedded teaching and learning materials were also gathered. This report provides brief summaries of findings from the six centres, each one presenting different approaches and displaying different strengths. This is followed by key findings and recommendations. The findings emerge from the synthesis of the qualitative and the quantitative data. The interview schedule used is attached as Appendix 1.

The project was led by NRDC Associate Director Helen Casey. The evaluation team comprised Olivia Sagan, Edmund Waite and Steve Cowan, advised by Professor Karen Evans at the Institute of Education, University of London.

The centres re-visited were:

- Centre A – Foundation apprenticeships in Care, Retail and Administration
- Centre D – Foundation apprenticeships in a variety of areas including Plumbing, Electrical Installation, Motor Vehicle Maintenance, Carpentry, Construction/Building, Administration, Hairdressing, Beauty, and Catering
- Centre E – Advanced apprenticeship in Heating and Ventilation
- Centre F – Foundation and advanced apprenticeships in Bricklaying and Carpentry, plus 14-week pre-foundation programme
- Centre G – Foundation and advanced apprenticeship in Racehorse Care
- Centre H – Foundation apprenticeships in a variety of areas including Painting and Decorating, Hairdressing, Carpentry and Plumbing.

Centres B and C, included in the first study, were not included in the follow-up specification.

Evaluation of progress in the six centres

Centre A – FMAs in Care, Retail and Administration

Current delivery of key skills

Based in a substantial training centre, this site caters for a range of trainees in care, retail and administration. The bulk of the key skills training is conducted within workplace settings after negotiation with managers. Some of the trainees come with considerable training needs, so training activities have to cater for the full range of their abilities.

There is a specialist lead trainer for key skills who has recently passed a Cert. Ed. and has transferred and adapted ideas from her training into her work at the centre. She is fully integrated into the centre team and has played a significant role in securing active support and understanding of the relevance of key skills training from all of her colleagues. Support for key skills is also given priority and is part of the overall management ethos of the centre.

Trainees were following ten-week blocks in which they would cover significant sections of the framework. The lead trainer aimed to make training sessions fulfil several purposes simultaneously. For example, we observed sessions in which key skills in number and communication were combined with Working With Others. There was a balance between individual, paired and group activities, which mirrored the changing demands encountered in the workplace:

'I think the content of the sessions is becoming more imaginative. We are becoming more confident in our own teaching, becoming better at what we are doing and I think they are enjoying it. I think that if they enjoy it then they will want to complete the key skills.'

The 'front-loaded' approach was partly adopted in response to resistance towards key skills in some occupational fields, such as social care. It was felt that older employees within existing management tiers tended to be less supportive of key skills. The training of managers in the care sector was identified as an issue:

'They seriously need to look at the qualifications of the people who are assessing the 481. They need to show that they need and want to develop their own English, maths and IT [skills]. That is a massive, massive problem.'

The front-loading in the ten-week block provided an opportunity to devise occupationally-relevant activities, which often fed into improved work performance.

Another important benefit of adopting this delivery approach was that it enabled the tutors and trainer to get to know the strengths and weaknesses of the trainees from the outset, track their initial progress, and set individualised activities with achievable targets. The trainees could see signs of progress and completion after each session, and this enhanced their motivation. Trainers reported improved completion rates within the apprenticeships as a result of front-loading.

There was a strong feeling that the dropping of ICT requirements was a retrograde step, especially as more trainees than ever possess a considerable degree of knowledge and skill in this area to begin with.

The quality of the physical environment was another noteworthy feature of this centre. There was evidence of student work, achievement and activity displayed on every wall in each room. Although there were defined spaces, the essentially open-plan environment created a sense of the centre as belonging to the trainees. The trainers' personal and occupational experiences were thus shared with the trainees, helping to create links and identifications with them.

Recent data on achievement, progress and retention

Data from February 2005 shows that key skills achievement has already reached 48 per cent for the September 2004 starters, despite their only being five months into their programmes. Nineteen more trainees are expected to succeed by June 2005, potentially raising the achievement level to 75 per cent. In comparison, the September 2003 starters, 17 months into their programmes, have achieved a 41 per cent success rate, with two further key skills achievements possible. The numbers of early leavers without key skills completion has dropped from 54 per cent in 2003 to 24 per cent in 2004. These figures are being realised despite the fact that literacy and numeracy levels at entry are low; for example, 15 out of 70 Business Administration Level 3 trainees had assessed learning needs.

Achievement figures for Care, Retail, Admin and Customer Service trainees combined

Starting date for learners	2003	2004
Total no. of learners registered for key skills	46	70
Achievement	19 achieved key skills (41%), 2 still in learning at Feb 05	34 achieved key skills (48%), 19 still in learning at Feb 05

Centre D – FMAs in a variety of courses including Plumbing, Electrical Installation, Motor Vehicle Maintenance, Carpentry, Construction/Building, Administration, Hairdressing, Beauty and Catering

Current delivery of key skills

This centre provides front-end provision of key skills for certain courses, culminating in a four-day residential course at a holiday centre, at which trainees undertake intensive revision of key skills combined with outward-bound curriculum activities mapped to the key skills curriculum. At the end of the four days, the trainees take City and Guilds Level 1 Literacy tests using satellite vans provided by the college. Recent residentials have been completed in October 2003, November 2003 and March 2004.

An advantage of front-loading key skills is that it ensures that standards are achieved early on in the course, avoiding the risk of a lack of achievement only becoming evident at a later stage. This type of delivery also capitalises on the apprentices' recent experiences of school. The certification (in adult literacy) is important in creating a sense of achievement.

In this particular centre, front-loading and embedding are seen as two options with differing

advantages. Front-loading appeals to people who like to get the key skills element 'out of the way'. Resource implications also sometimes dictate the employment of a front-end model:

'A lot of courses are taught by vocational experts who are not necessarily key skills experts. If you take an embedded route, that's great for a vocational teacher who has enough competency in key skills to ensure that if upskilling is required, they can offer that in a vocational setting.'

Equally, an embedded approach cannot be undertaken unless the vocational tutor is fully committed to key skills provision, or has access to the expertise of a specialist key skills colleague.

The key skills manager argues that some courses are 'easier to embed' than others. Courses in business, electricity, plumbing and bricklaying are seen to allow for relatively easy embedding (perhaps because of the perception that their curricula offer more scope for the embedding of these types of skills). On the other hand, the childcare curriculum, for example, may be more suited to a front-loaded approach.

The college is clearly committed to embedding key skills. A key skills development manager was appointed 18 months ago with a view to improving key results which have been poor in recent years. The development manager has been working to raise the profile of key skills in curriculum areas. The main challenge has been to overcome the tendency of some vocational tutors to see key skills as a peripheral aspect of the framework. These tutors also tend to see key skills as being outside their remit: 'I don't teach Maths and English – they put that barrier up'. However, the process of embedding has facilitated a more positive shift in attitudes:

'They can see the value of embedding and the assignments do fit very nicely with a lot of vocational awards.'

There is therefore a greater sense of 'ownership' of key skills at this centre than there was two years ago. The backing of vocational areas is crucial to the process of embedding: vocational tutors 'must feel they are part of the process - otherwise they won't support it'.

All the key skills tutors engage in the process of writing assignments which are then approved by the vocational tutor in question. It is believed that the process of embedding should be a collaborative exercise between both groups of tutors.

In the view of the key skills manager, sector skills councils should play a more involved role in developing the process of embedding:

'I think awarding bodies and sector skills councils should work more hand-in-glove to develop projects and [on] embedding timetables, almost, which can then become commonplace for all awards... at this point you do this... at this point you do that.'

She suggests that sector skills councils could put mandatory assignments within site diaries, which are a common feature of many apprenticeship courses.

The college uses City and Guilds qualifications for all courses, which creates commonality throughout the college. There is one external verifier and 'everyone is working to the same standards'.

Recent data on achievement, progress and retention

These apprenticeships are two-year courses due to complete in summer 2005, and indications of the effects of embedding on progress and completion were not available during the writing of this report. Accordingly, the current project collected more recent data on residential course outcomes for the cohort due to complete by summer 2005, which suggests that this particular type of front-end delivery has produced sustained achievement in key skills. For example, according to data from the most recent residential course, 100 per cent of learners achieved one or more key skills qualification(s).

Centre E – AMA in Heating and Ventilation

Current delivery of key skills

The lead trainer in Centre E expressed the view that, since adopting a front-loaded approach to key skills, the results have been 'brilliant'. This is in contrast to continuing difficulties the same training provider is having with an earlier cohort, where 75 per cent of fourth-year trainees still have not completed their key skills.

This centre reports that front-loading has two important benefits. Firstly, front-loaded delivery means that the teaching of key skills capitalises on the trainees' initial enthusiasm and motivation, so targets tend to be achieved more rapidly. Secondly, as progress is tangible and linked to explicit training schedules, retention is no longer an issue.

At this centre trainees are working towards Communication and Application of Number (AON) at Level 2 and ICT at Level 1. It is believed that trainees bring higher levels of ICT knowledge into their training, and can possibly achieve Level 2 with little additional effort.

At the beginning of the course, efforts are made to link key skills to occupational demands:

'We tell them what the benefits are for our trade, why we need ICT skills and why they need to do presentations to colleagues and clients, communication on a day-to-day basis on site, reading and understanding complicated drawings. We try to show them how they will be using such skills.'

The trainees attend the course in three-week blocks and are taken through a structured practical skills programme. The key skills programme runs alongside this and is linked to the occupationally-focused training. It was felt that incorporating key skills elements into multi-faceted activities made it easier for trainees to appreciate their relevance. We observed work involving the use of ICT equipment, delivering group presentations, designing PowerPoint slides, researching technical topics and preparing reports, all within a single activity undertaken by pairs of trainees who then shared their work with the whole group. Additionally, every trainee has an ILP which is reviewed for each training block, so the tutor targets those areas the trainee needs to cover in particular time frames. This structure provides focus for both trainer and trainee and establishes achievable goals. The high level of progress-tracking allied to equally high levels of recording establishes a professionalism which further stimulates trainees.

There was support for the efficacy of the **Skills for Life** Diagnostic Test, which was felt to be more trainer-friendly than the Key Skills Builder Initial Assessment package. If the training

approach is structured by the use of ILPs and a high degree of individualised task-setting, it is important that tools are appropriate and easy to use.

The presence of two cohorts of trainees on sites around the country who had experienced front-loading was reported to have a positive effect in dispelling negativity and cynicism initially felt from older trainees. It is anticipated that by the end of 2005, when the third cohort have experienced front-loading, the predominant view on site will be one of recognition of the value and validity of what is being offered. Longer-standing trainees are now seeing relative newcomers outstripping them in terms of completion.

Considerable stress was laid upon the extent to which the parent company had established an alignment between its training ethos, practical training programmes and the provision of resources and facilities to turn intentions into realities. This meant that young trainees saw that everyone in the company was undergoing some form of continuous professional development.

The centre further emphasizes the significance of key skills for career development by setting up a gallery featuring photographs and career portraits of each trainer and manager on the site. This provides trainees with positive examples of individuals who have achieved their current successes by combining technical and key skills.

This centre is about to extend its provision of key skills training from plumbing into electrics and carpentry courses. The procedures adopted from plumbing training are going to be disseminated to existing lead trainers in the allied trades.

Recent data on achievement, progress and retention

Centre E reports a strengthening of achievement in key skills to such an extent that they expect a 100 per cent achievement rate by the end of the first year. Evidence for this could be seen from the detailed tracking records for each apprentice and the equally detailed target revisions in the ILPs. The recent data shows that for the cohort beginning in 2003, 14 out of 20 completed the full Key Skills Qualification in their first year. For the 2004 cohort, all of the apprentices are expected to achieve key skills by the end of the first year.

Starting date for learners	2003	2004
Total no. of learners	20	22
No. of learners taking external tests	14 in first year, 5 still to be assessed.	
Progress in completing portfolio	14 out of 20 (70%) completed the full Key Skills Qualification in the first year. 1 left course, 1 still to re-sit Comm. Test. 4 still working towards key skills (expected to complete in summer 2005).	All 22 expected to complete by summer 2005.
Retention rate	19 out of 20 (95%) still employed. 1 person left for another employer.	21 out of 22 (95%) still employed. 1 person left due to personal reasons.

Centre F – FMA/AMA in Bricklaying, Carpentry FMA (with pre-FMA programme of 14 weeks)

Current delivery of key skills

Centre F is a training centre of a national construction company serving apprentices from the region. The FMAs and AMAs in Bricklaying and Carpentry undertake a pre-programme course lasting 14 weeks which familiarises the trainees with the company and the demands of construction sites and allows for an early introduction to the key skills components.

The intake criterion is based upon applicant attitude rather than prior achievement in school, and pre-screening through interview and diagnostic testing is undertaken. Despite the often low levels of prior achievement, the success rate in terms of outcome and retention has continually improved.

At this centre there is one specialist key skills trainer who is employed on a consultancy basis. She chose to resume work at the centre after experience at a further education (FE) college which she felt was too far removed from the work base. As the company has decided to participate in the front-loading project and commit itself to this approach, there is a high degree of understanding and support from the occupational tutors. They meet regularly with the key skills tutor to discuss aspects of their training that may be relevant to key skills and can be highlighted and reinforced during their sessions. The key skills tutor has personally engaged in occupational skills training so that when necessary she can include practical demonstrations in her teaching. This has engendered considerable respect and enhanced her ability to make key skills relevant.

The key skills tutor discusses the life-paths and life courses with trainees, identifying their career goals at various stages in their lives. She then asks them to map out the range of skills they will need in order to be able to fulfil the goals they have set for themselves. Key skills are then introduced as a response to the trainees' own ideas of what is required. The concept of ownership of the training is thus established at the outset.

The key skills trainer meets regularly with all of the training staff to clarify learning goals. She is able to actively demonstrate links between key skills and vocational areas by drawing on her own familiarisation with aspects of the trainees' occupational training. This considerably raises her credibility amongst the trainees.

When we discussed front-loading and embedding with a large group of first-year apprentices, they displayed a high degree of self-confidence and assertiveness. They were able to explain why certain key skills were relevant to their chosen trade and expressed a sense of achievement with their progress in portfolio-building and the completion of tests.

Whilst we could observe substantial administrative and personal support from the centre manager and other staff, the excellence of key skills training here is largely down to the vocationally-driven commitment and energy of the key skills tutor herself.

It was suggested that some reconsideration of the nature of professional training for literacy, numeracy and key skills tutors is required. The key issue was the tendency for college-based courses and staff to assume a college-type learning setting, rather than rooting their training in work settings.

The successes in key skills training at this centre have attracted attention within the industry,

within training circles, and even in the local media. Accolades are prominently displayed on notice boards for all to see, thereby demonstrating to trainees that what they are doing is worthwhile and important. The trainees displayed admiration of their key skills tutor and clearly enjoyed their association with such a high-profile member of the organisation. This is in contrast to situations, sometimes found elsewhere, in which the key skills tutor is perceived as being on the margins of the overall training programme.

The key skills tutor spends considerable time developing ideas for sessions to ensure that all the activities are embedded. Consequently, the teaching of key skills in the initial training is seen to be central, rather than peripheral, to occupational training, and does not distract from the main occupational purpose of the training. In fact, these trainees are currently involved in building a new key skills centre.

Recent data on achievement, progress and retention

Centre F reports improved retention rates for the October 2004 cohort. Of those who continued the course after the initial-14 week induction, retention is at 100 per cent. Completion rates have improved since the original August 2003 pilot. Data from February 2005 shows that, five months into the course, 50 per cent of the October 2004 cohort has already completed the key skills component, with an expectation that nearly all will complete within their first year. This compares favourably with the November 2003 cohort where the completion rate, after a period of 26 months in training, is 68 per cent.

Centre G – FMA/AMA Modern Apprenticeship in Racehorse Care (FMA) standard nine-week residential group

Current delivery of key skills

The FMA consists of a nine-week residential pre-employment training phase (PET) involving intensive vocational training in racehorse care as well as the front-end provision of key skills. The front-loaded delivery of key skills has been established for some time (preceding the LSDA development project) and takes place for practical reasons; the trainees gain employment all over the country after the nine-week course and it would therefore be 'a logistical nightmare to get them back here to do the key skills'. The Exceptional Employer Referrals (EERs), who have fairly extensive, pre-existing experience in racehorse care, undertake a shorter course (a week to ten days) in which they also undertake front-loaded delivery of a smaller number of key skills. According to the project manager, there is some resistance towards key skills on the part of the apprentices:

'They don't want to do it... there's no money in it for them... they've got a job... they don't need to do it for their job... they are not in supervisory positions... and the employers aren't fussed either... The NVQs affects their pay package – but key skills makes no impact at all on pay.'

In response, the manager stresses that it is a requirement which links in to the overall qualification.

The consultancy support and training provided by the LSDA development project has had a major effect in facilitating the embedding of key skills on the AMA project. We saw examples of projects on worming and clipping which met requirements of the NVQ but also covered aspects of ICT Level 1, Communication Level 2 and AON Level 2. Adapting key skills to the

vocational context of racehorse care makes them more acceptable to the apprentices, while the generic nature of the tests remains their 'biggest gripe'.

The manager provides an honest appraisal of his centre's approach to key skills: 'If they don't get all their key skills and all their framework we don't get all our money... let's be honest about it... there is a financial impact of trainees not achieving their key skills'. He maintains that 'we didn't choose to do key skills, we had them thrust upon us'. There is frustration with additional work or bureaucracy surrounding key skills amongst employees of the centre.

The centre has a single awarding body in the form of the British Horseracing Education and Standards Trust (Bhest), which is funded by the racing industry. The use of a single awarding body is both more cost-effective and straightforward.

In terms of the impact of front-end provision or embedding on retention and completion, the manager believes that, with regard to the FMA:

'key skills is not a retention factor... if people leave, it is to do with occupational or personal factors. People don't leave because they can't do their key skills or because they don't want to do them. It's not a factor.'

Retention on the front-end course has been consistently at or around 75 per cent for the last six or seven years.

The success and retention rates on the AMA course, on the other hand, have increased substantially in recent years. This is attributed to a more dedicated approach to key skills, including the use of embedding and front-loaded delivery. All the assignments have been rewritten by a local key skills tutor who has successfully integrated key skills into the overall framework. This has had a major effect in overcoming resistance:

'so if you embed it and incorporate it and start doing key skills from the beginning you can spread the pain and they are doing it at the same time as they are learning about clipping or whatever which is one of their NVQ units.'

Recent data on achievement, progress and retention

The recent data from this centre suggests that front-loaded delivery on the FMA programme, which has been in place for several years, produces consistently high outcomes over the long term. The NVQ achievement rate on the AMA in 2002–3 was 21 per cent and full framework achievement was 14 per cent. In 2004–5, the NVQ achievement rate stands at 62 per cent and full framework achievement at 37 per cent.

Centre H – FMAs in a variety of courses including Painting and Decorating, Hairdressing, Carpentry and Plumbing

Current delivery of key skills

This centre has been working towards the goal of developing integrated and front-loaded approaches to key skills provision for some time. The key skills manager finds that the front-loading of key skills is associated with more motivated tutors:

'To me an upfront model is just an induction, and saying what key skills are and then

getting them timetabled straight away, and if you achieve that you'll find you have a guaranteed high success rate for the full framework. Those areas that aren't that upfront in terms of inducting about the value of key skills, then you find that they timetable them in February or March or in the second year of the course – well you've lost the whole agenda by then. You have to have it at the beginning.'

Effective induction and initial assessment allow for the programming of a 'pre-course' in key skills if this is required. For the purposes of induction, the key skills manager has produced a variety of PowerPoint presentations that advocate the importance of key skills.

There is cross-college support for key skills. Each curriculum area has a 'link tutor' who can provide support in key skills. The key skills manager stresses the centrality of these skills to all vocational courses. In this context, front-end delivery entails 'the recognition that if you can't write evidence in your portfolio then you're not going to have a portfolio at the end of the day'. A variety of models have been employed, including a dedicated upfront programme in the first term (in the case of Painting and Decorating) as well as a 'weighting' system whereby key skills would make up a larger percentage of the course in the early months before gradually diminishing as the course progressed. The key skills manager stressed the importance of offering a range of models of provision in response to the needs of the trainees and curriculum area.

The degree to which staff are engaged with key skills is a vital factor in determining the effectiveness of the course. The ultimate goal is for all vocational trainers to have some skills in the teaching of key skills. Certain courses, such as Hairdressing, are already quite far advanced in this respect. Training is provided so as to allow the vocational tutors to collect the right evidence. The effect of this process of transferring responsibility for key skills to the vocational areas is that '[the vocational tutors] want to own the thing more than they have done in the past'. The vocational tutors have also started their own internal verification of portfolios. In the view of the key skills tutor, vocational tutors are best placed to most effectively integrate key skills into the courses, owing to their knowledge of the technical course in question.

The manager sees the main challenge as being one of lack of confidence: some vocational tutors feel (unjustifiably in his view) they are unable to deliver key skills.

In terms of organisational developments, each apprenticeship programme is set a development plan for key skills. 'Service Level Agreements' are also established with the heads of departments. These encompass specific targets for their area as well as recommendations for how they should access support.

The key skills manager feels that there should be more training, on a national basis, in the value of key skills, as well as in administrative issues relating to key skills in a vocational context. After spending four days trawling through the Individual Learning Records (ILRs) and making sure that all the codes were correctly registered, he found that annual achievement levels were in fact 8 to 10 per cent higher than they had appeared as a result of inaccurate coding.

The centre works to ensure that free support in key skills is offered to all areas, including drop-in centres for tutors so that they can access support at all times. The staff development programme offers tutors the chance to undertake key skills themselves.

The centre uses a single awarding body, City and Guilds, and is happy with this system. They are a self-accrediting centre for key skills. The only suggestion is that 'there should be more consistency amongst the external verifiers'.

Overall, the manager stresses the importance of winning the support of the staff, of undertaking early and effective induction and initial assessment, and of providing sufficient support for key skills for tutors. Effective administration is also vital.

Recent data on achievement, progress and retention

At this centre, it is noticeable that the Painting and Decorating course, which had relied on front-end delivery over several years preceding the LSDA development project, has achieved continual progress in key skills achievement over the last four years: 19 per cent in 2000–1, 39 per cent in 2001–2, 48 per cent in 2002–3 and 51 per cent in 2003–4.

Results in other curriculum areas which have not relied solely on front-loading have been more variable over the four-year period.

Summary of findings

Benefits of using front-loaded models of delivery

The findings from the six centres revisited underline some key advantages of front-end delivery:

- Front-loaded delivery is an effective means of ensuring that achievements in key skills occur early on in the apprenticeship programmes.
- Where assessments, ILPs and delivery of key skills are left until later in programmes, literacy, language and numeracy skills (LLN) may be neglected and potential achievement lost.
- Front-loading is an effective means of according priority to key skills: it sends out a signal that trainees need these skills as a precondition for undertaking their portfolio.
- Front-loaded delivery capitalises on the tendency for trainees' motivation to be higher at the beginning of the programme.
- Early completion of key skills has enabled newer trainees to leap ahead of their more established counterparts within the workplace and on site.
- Front-loaded delivery can be an effective means of offering extra contextualised support to cohorts with literacy and numeracy needs early in their vocational course.
- This type of delivery can be appropriate when vocational course providers do not have sufficient resources or expertise to undertake fully-embedded delivery. Equally, it can be helpful in breaking down attitudes of resistance or opposition to key skills amongst vocational tutors.

Benefits of combining front-loaded and embedded models of delivery

The combination of front-loading with embedded delivery can be a particularly effective model for training. This approach prioritises key skills, making it clear that they are central to all portfolios, whilst also drawing on all the advantages of embedded provision:

- Embedded provision allows trainees to recognise the relevance of key skills in a variety of vocational and occupational settings.
- By presenting key skills in contexts that are both real and relevant, embedded provision can counteract resistance towards the learning of LLN and enhance trainees' engagement and motivation.
- Understanding of key skills is also enhanced when they are learned through integration with occupationally-relevant activities.
- Integrating or embedding key skills into multi-faceted activities accustoms trainees to using them in naturally-arising situations – thereby enhancing the application of these skills.
- Embedded provision enables vocational tutors to engage with the delivery of key skills. This allows for greater identification with and sense of ownership of key skills amongst vocational tutors. This process can enhance positive feelings towards key skills amongst vocational tutors, which in turn has a positive impact on their trainees' attitudes.
- It is also important to acknowledge the diversity of settings in which key skills are related to vocational settings and to stress the need for flexibility in delivery approach. The current

phase can be seen as one of transition where key skills are being embedded in varying degrees. In this context, centres have to make decisions on whether specific courses have the necessary resources and expertise to undertake embedding effectively. Where such resources and expertise are lacking, dedicated front-end provision may be preferable as a means of safeguarding achievement in key skills.

- The six centres in this study are all committed to the principle of embedding, and have reached varying stages in implementing embedded provision.
- The recent data gathered indicate that an emphasis on embedding key skills throughout the course has had a positive affect on retention, progress and completion.

Additional features impacting on success

In addition, the following examples of good practice or effective strategies were observed in the six centres:

- Close links between the employer and training provider assist in establishing the relevance of key skills amongst trainees.
- Some of the most effective practice observed exists where the employer is also the training provider and training outcomes are linked to pay and promotion.
- Providing modern, high-standard accommodation, resources and facilities establishes a professional setting and serves to motivate trainees.
- Celebrating the success and achievements of trainees through carefully-planned and professionally-executed wall displays.
- ICT is used extensively in some centres to build positively on the existing strengths of the learners, whose ICT competencies are often well developed.
- Clear and well-planned training, supported by structured trainee assessment and course evaluation, contributes to more efficient delivery of key skills.
- Allocating sufficient administrative resources and support for trainers allows for sharper attention to rates of progress and individually-targeted activities.
- Trainers would benefit from training and professional development which is tailored towards their work-based settings and requirements, rather than that which presumes a traditional college or classroom environment.
- Trainers, especially those who undertake a leading role in key skills, can benefit from training support and networks.

Training for staff

The centres in this study have taken different approaches to equipping staff for the challenges in ensuring trainees emerge literate, numerate and vocationally successful. Some, such as Centre F, have used specialist key skills staff to work in collaboration with vocational colleagues. Others have used vocational staff to take on the responsibility for literacy, numeracy and key skills.

Centre H describes the importance of vocational staff engaging with key skills, but also reports a lack of confidence amongst staff in taking on responsibility for areas which they themselves feel unsure about. Creating opportunities for vocational staff to develop their own literacy and numeracy skills is one response to this situation. It is also important to create an environment in which staff with different expertise can work together for the benefit of trainees.

The picture that emerges, from this as well as other NRDC studies, is one in which flexibility of approach is needed to ensure that staff can work together to meet trainees' needs for both vocational and key skill/LLN development. It is unlikely that every vocational tutor will become an expert in literacy and numeracy. Similarly, it is unlikely that a literacy or numeracy tutor will develop vocational expertise to match that of their vocational colleagues.

Centres need access to:

- Specialist training for those responsible for literacy, numeracy and key skills
- Training for vocational staff in incorporating inclusive approaches to literacy, numeracy and key skills within their teaching
- Support for staff teams and managers in developing a positive culture with respect to literacy, numeracy and key skills.

Conclusion

In all the centres revisited, there is continuing evidence of increased numbers of trainees completing keys skills portfolios, often in considerably shorter timescales than had previously been observed. There is also a consistent pattern of increased retention on the programmes. The trainers report the use of front-loaded, 'key skills first' programme organisation and embedded approaches as significant in securing these improvements.

In promoting the value of front-loading and embedding, it should be recognised that the ways in which they can be implemented vary according to local resources and occupationally-specific factors. Diversity and flexibility of approach should be keywords in any wider discussion.

Appendix 1

Interview Schedule

A: Exploring the impact of the previous project on the work of the centres

- 1 How has the work undertaken in the previous project impacted on the achievement of trainees in terms of both hard and soft outcomes?
- 2 Has there been any noticeable difference in attitude/motivation of learners towards key skills/LLN work?
- 3 How have you developed your teaching and learning strategies as a result of this project?
- 4 What organisational developments have taken place to allow for the planning, implementation and evaluation of new ways of working?
- 5 What do you think have been your most successful strategies in overcoming barriers to achievement of key skills/LLN?
- 6 What strategies have not delivered what you had hoped they would?
- 7 What are the benefits of starting key skills/LLN early on in the frameworks? Are there any resource implications?
- 8 How do you provide support for those who struggle with key skills/LLN?
- 9 Any other issues or points of interest/relevance to raise?

B: Exploring issues of embedding

- 1 How are you currently embedding key skills/LLN in your apprenticeships frameworks with particular reference to NVQ, Technical Certificate and ERR provision?
- 2 Do you intend to further develop embedded approaches? If so, how?
- 3 What could your vocational awarding bodies do to further help your learners achieve key skills/LLN certification? Are there other areas where the awarding bodies could provide additional help?
- 4 Do you have different/common awarding bodies for vocational qualifications and key skills within your frameworks? If so, what are the dis/advantages of this?
- 5 Do you have examples of curriculum materials with key skills/LLN embedded?
- 6 Have there been any further opportunities for relevant training/continuing professional development (CPD) since the first project took place? What training/CPD do you think is now needed?
- 7 On the basis of your experience, what advice would you give other centres on embedding key skills/LLN into vocational work?
- 8 Any other issues or points of interest/relevance to raise?

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