National Research and Development Centre
for adult literacy and numeracy

PROGRESS REPORT

Identifying effective workplace basic skills strategies for enhancing employee productivity and development

Scoping and pilot study report

Katerina Ananiadou, Rachel Emslie-Henry,
Karen Evans, Alison Wolf

Institute of Education, University of London,
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Publications
NRDC
Institute of Education
20 Bedford Way
London WC1H 0AL.

Telephone: +44 (0)20 7612 6476
Fax: +44 (0)20 7162 6671
email: publications@nrdc.org.uk

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Executive summary

1 Aims of the project

The aims of the project are to:

- Identify when and how workplace basic skills programmes are effective in improving adults' measured language, literacy and numeracy skills.
- Assess the effectiveness of workplace programmes on productivity (for example, sickness and absence rates, job satisfaction) and other lifecourse variables (employment stability, earnings, promotion, enrolment in further educational programmes, quality of life).

This area is under-researched and is changing and expanding rapidly at present. From September 2002 to June 2003 we therefore carried out a scoping and pilot study designed to:

- Provide a full review of the relevant literature.
- Develop a detailed methodology, based on extensive site visits and desk research.
- Examine the availability of population data about provision and participants, and make consequent decisions about sampling frames and procedures.
- Establish contacts with and secure agreement from future participants in the main study.
- Develop and pilot instruments for the main study.

During the period of the scoping study we were successful in obtaining substantial funding from the Economic and Social Research Council (ESRC), which has enabled us to design a study which is both wider in scope (numbers of schemes/learners) and longer in duration (with a five year longitudinal design) than was originally envisaged under sole NRDC funding. The design and instruments discussed here will be used for the expanded co-funded study, due for completion in 2008, but with interim reports at regular intervals.

2 Literature review

As part of the scoping and design work, we conducted a thorough review of the literature available on workplace basic skills provision. Part way through the project, we were asked by the Analytical Services (AS) division of the DfES to prepare a formal literature review addressing a number of specific questions related to the benefits to business of workplace provision. Some additional AS funding allowed us to incorporate relevant literature from a broader field, related in particular to the general impact of training on companies and individuals. This part of the review drew on work carried out by the Centre for the Economics of Education, a DfES-funded research centre in which the Institute of Education is also a partner.

Key findings from the literature review are presented in this report. The full review is published separately and is available from: www.nrdc.org.uk or by emailing: publications@nrdc.org.uk

3 Development of methodology

During the scoping study we developed a detailed methodology for the project, making sampling decisions and selecting instruments. The final design includes use of quantitative and qualitative data and focuses on an initial sample of around 40 providers and 400 learners. These represent four sectors: health and care; food processing; cleaning and transport maintenance services.

There will be four main data collection points for all participating learners, providing for a full 24-month follow-up period. A sub-sample of learners will also be interviewed in greater depth. Provider data will include that from tutors, managers and supervisors, as well as information about measures of organisational capital, and teaching and learning approaches. Learner data will cover attainment, attitude and lifecourse variables. In most cases it has been necessary to develop and pilot new or modified instruments.

4 Sampling issues

We would have liked to sample schemes using a more or less complete natural sampling frame, and drawing a sample either on a random basis, or stratified by sector or focus (literacy/numeracy/ESOL). However, it became clear that this information was not going to be available within our research timeframe because there was no comprehensive database. Reasons for this include the fact that workplace projects are funded through a variety of different programmes and methods, and that the nature of provision changes and expands rapidly.

We therefore looked for data that were more limited in coverage and that might be aggregated for our purposes. In the end we decided we would have to depend on an opportunity sample, and tap all the various networks and contacts that pre-dated our scoping work or that we had established during it.

We report here on the major possible sources of data and contacts that we tapped. This may provide other researchers and practitioners with a useful and time-saving overview. In building up our list of schemes to participate in the study, the Workplace Basic Skills Network, the Union Learning Fund, the Employer Training Pilots and contacts made through Pathfinder consortia have been particularly helpful. Please note that participants have been promised full confidentiality and cannot therefore be named in our report.

5 Securing participation

Through the networks and contacts built up during the scoping study, we have been assembling a list of participant schemes across the four sectors selected for research. As noted earlier, our success in securing ESRC funds means that the proposed sample is larger than originally envisaged. We are currently in the process of completing our sample and full data collection cannot begin until December 2003, as we have to complete the relevant literacy assessment instrument, with which there were also delays beyond the research team's control. We will, however, commence interviews with teachers/trainers and managers during the autumn. We are currently in the process of completing our sample. Full data collection will begin in January 2004, when the relevant literacy assessment instrument has

been developed. Interviews with teacher/trainers and managers began in autumn 2003; interviews and tests of learners began in January 2004.

6 Developing pilot instruments

Following our piloting, we plan to use six instruments and to collect background data (subject to informed consent) on employees' workplace histories. Of the six instruments listed below, we have either completed or are in the process of completing piloting for all but the last. This is a Canadian instrument developed by collaborators at the University of Ottawa and still requires piloting in a UK context. The existence and availability of this instrument only became evident at the end of the piloting period, but it is potentially very valuable as a measure of learning provision.

i Structured questionnaires for employees/learners (modified for successive sweeps).
ii Semi-structured interview schedules for employees, tutors and managers.
iii The Effective Lifelong Learning Instrument (ELLI), measuring learning attitudes.
iv A writing exercise.
v A reading and writing assessment tool.
vi An inventory of teacher attitudes and practices, which measures teaching styles and philosophy.

The structured questionnaire aims to collect basic demographic information and learning history about the participants, as well as quantitative information about their attitudes towards their jobs and workplace training. It is reproduced in Appendix I, and incorporates questions selected or designed after a review of companies' instruments for measuring employee attitudes.

The interview schedules will be used in the context of semi-structured interviews with a sub-sample of employees and with samples of managers and tutors. The aim will be to explore in more depth some of the issues addressed in a standardised, quantitative way in the structured questionnaire. Some additional topics will also be raised. Drafts appear in Appendix 2.

ELLI is an instrument designed by researchers at the University of Bristol in order to assess 'learning power', by which is meant the dispositions, experiences, attitudes and beliefs that shape the nature of an individual's engagement with learning. We are revalidating it for use with adults since it was originally developed for children and adolescents.

The writing exercise asks participants to provide us with a short written piece about their feelings towards learning in the past, present and future. It aims to provide additional insight into the participants' feelings about learning in their lives in general and thus to complement the information obtained by the structured questionnaire and the semi-structured interviews.

The literacy assessment tool is currently being piloted by the National Foundation for Educational Research (NFER) under a contract from NRDC, scheduled to be delivered in December 2003 it was delivered to us in January 2004.

A new assessment tool was commissioned after an extensive review made it clear that no existing instrument was able to provide secure, reliable measures of small changes in

attainment in reading and writing across a wide range of attainment. The Adult Basic Skills Strategy Unit (ABSSU) has been closely involved with its development and it will also be used for other intervention studies by NRDC. It will be mapped to the National Standards.

7 Concluding issues and future work

The scoping study underlined the absence of a national register of workplace provision and the problems associated with creating one, although this is now being addressed by the relevant agencies. Nevertheless, we were able to establish a network of contacts and are building up numbers of participant schemes with whom full data collection will commence in the near future. The need for new instruments was identified in a variety of areas and these have now been commissioned or adapted from existing materials.

Finally, we wish to emphasise that both our literature review and our discussions in the field have underlined the dearth of well-founded research in this area and the interest of both employees and providers in the matter of work-place basic skills.

1. Aims of the project

The aims of the project are to:

- Identify when and how workplace basic skills programmes are effective in improving adults' measured language, literacy and numeracy skills.
- Assess the effectiveness of workplace programmes on productivity (for example, sickness and absence rates, job satisfaction) and other lifecourse variables (such as employment stability, earnings, promotion, enrolment in further educational programmes, quality of life).

The project focuses on initiatives to improve adults' literacy, numeracy and language skills through workplace-linked tuition. These may involve programmes actually delivered in the place of work or that recruit through employers and/or unions. The number of such programmes has been growing rapidly in recent years and is expected to grow further in the light of recent measures announced by the government. There are many adults with low skills levels in the workforce: 3.5 million according to the Moser report (DfEE, 1999). It is argued that linking basic skills teaching to workplace requirements may offer the incentive to enrol and the motivation to continue, which are lacking in general-purpose, external classes.

However, there has been very little research since the 1980s (for example, Sticht and Mikulecky, 1984) to provide empirical support for the above arguments or to examine the extent to which work-based programmes are successful in changing the occupational prospects of participants. In a recent review of research covering the UK and other English-speaking countries, Payne (2003) highlighted the lack of academic interest and research in the field of workplace basic skills, particularly in the UK.

Because of the lack of research in this area and the very rapid changes and expansion that have taken place, we carried out a scoping and pilot study (from September 2002 to June 2003) designed to:

- Provide a full review of the relevant literature.
- Develop a detailed methodology, based on extensive site visits and desk research.
- Examine the availability of population data about provision and participants, and make consequent decisions about sampling frames and procedures.
- Establish contacts with and secure agreement from future participants in the main study.
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During the scoping study we were successful in obtaining substantial funding from the Economic and Social Research Council (ESRC), which enabled us to design a study that is both wider in scope (numbers of schemes/learners) and longer in duration (a five year longitudinal design) than was originally envisaged under sole NRDC funding. The design and instruments discussed here will be used for the expanded co-funded study, due for completion in 2008, but with interim reports at regular intervals.

2. Literature review: the findings

As part of the scoping and design work, we conducted a thorough review of the literature available on workplace basic skills provision. Part way through the project, we were asked by the Analytical Services (AS) division of the DfES to prepare a formal literature review addressing a number of specific questions related to the benefits to business of workplace provision. Some additional AS funding allowed us to incorporate relevant literature from a broader field, related in particular to the general impact of training on companies and individuals. This part of the review drew on work carried out by the Centre for the Economics of Education, a DfES-funded research centre in which the Institute of Education is also a partner.

The key findings of this review were that:

- There is robust evidence that poor literacy and numeracy skills have adverse effects on the earnings and employment prospects of individuals. A number of large-scale UK surveys have shown that people with good literacy and numeracy tend to have higher wages and better chances of being in work than people who lack basic skills (see Bynner and Parsons, 1997; Dearden et al. 2000; Machin et al. 2001). This situation is not fully explained by differences in formal qualifications between the two groups. This in turn suggests that improvements in basic skills among adults should increase their earnings, reflecting their greater value to employers. However, there is little direct evidence of such results.

- Labour market studies indicate that very few jobs can be performed properly without basic skills, and that the skills required (especially numeracy skills) will further increase in coming years. There is limited information concerning the costs to UK employers of poor basic skills among the workforce. One report (ALBSU, 1993) suggests that in 1992 they cost an average of £165,000 per year in companies employing 50+ workers, and up to £500,000 per year for larger companies (equivalent to £208,000 and £626,000 respectively at 2002 prices). However, these figures have been widely criticised for methodological deficiencies (e.g. Robinson, 1997) and, in any case, are out of date.

- No systematic data are available for the UK on the benefits to employers of investing in basic skills training. International evidence is also very limited but some studies have suggested that employer-provided literacy and numeracy courses may raise productivity, improve the use of new technology in the workplace, contribute to enhanced customer satisfaction, save time, and reduce costs (see Bloom et al. 1997; Pearson, 1996; Hollenbeck, 1996; Krueger and Rouse, 1998). However, these results are based on a handful of research studies and must therefore be treated as extremely tentative, and in need of corroboration.

- Those employers who have sponsored basic skills training are generally positive about the experience. Although not all those interviewed by researchers perceive any impact on measured outcomes such as productivity, there is no evidence that employers who have sponsored basic skills training have found it to be either burdensome or an unnecessary expense (Krueger and Rouse, 1994; 1998).

- Far more evidence is available on training in general than on basic skills training, and a number of well-constructed studies show a positive impact on business performance. There is a sizeable body of literature attesting to the improvements in productivity stemming from

workforce training, while some studies have found that training was associated with higher levels of innovation and/or better financial performance (see, for example, Keep et al. 2002; Barrett and Hovels, 1998; Green, 1997). Studies of employees have consistently found that training led to improvements in earnings (see, for example, Blundell et al. 1999; Greenhalgh, 2002; Blundell et al. 1996; Arulampalam et al. 1997).

- Concerns are sometimes raised about the poaching of trained workers, but the evidence points strongly in the opposite direction. Workplace training is associated with longer job tenure, a reduced likelihood of individuals quitting the firm, and with lower labour turnover for the company as a whole (Dearden et al. 1997; Green 1997). Researchers have also found a statistical relationship between provision of training and higher levels of worker commitment to the organisation as measured by expressed loyalty, pride in the organisation and agreement with its values. (See, for example, Dex and Smith, 2001.)

- Studies on the effects of basic skills training in the workplace are scarce. There is a real and urgent need for more research on this topic. Both large-scale quantitative analyses (assessing the benefits and costs of literacy/numeracy training on representative datasets) and case studies (investigating in depth the effects of basic skills training at particular workplaces) would be valuable. Because firms do not collect it, there is almost no data – and especially UK data – on rates of return to training of any kind or on training costs.

The full literature review is published separately and is available from: www.nrdc.org.uk or by emailing: publications@nrdc.org.uk

3. Development of methodology

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There will be four main data collection points for all participating learners, providing for a full 24-month follow-up period. A sub-sample of learners will also be interviewed in greater detail. Provider data will include that from tutors, managers and supervisors, and information on measures of organisational capital, and teaching and learning approaches. Learner data will cover attainment, attitude and lifecourse variables. In most cases it has been necessary to develop and pilot new or modified instruments, and these are described in section 6.

4. Sampling issues

We would have liked to sample schemes using a more or less complete natural sampling frame, and drawing a sample either on a random basis, or stratified by sector or focus (literacy/numeracy/ESOL). However, it became clear that this information would not be available within our research timeframe because there was no comprehensive database. Reasons for this include the fact that workplace projects are funded through a variety of different programmes and methods, and that the nature of provision is in a constant state of change and expansion.

We therefore looked for opportunities/schemes that were more limited in coverage and that might be aggregated for our purposes. In the end we decided we would have to depend on an opportunity sample, and tap all the various networks and contacts that pre-dated our scoping work or that we had established during it.

We report here on the major possible sources of data and contacts that we utilised. This may provide other researchers and practitioners with a useful and time-saving overview. In building up our list of schemes to participate in the study, the Workplace Basic Skills Network, the Union Learning Fund, the Employer Training Pilots and contacts made through Pathfinder consortia have been particularly helpful. Please note that participants have been promised full confidentiality and cannot therefore be named in our report.

4.1 Mapping of workplace basic skills provision

Our initial efforts in the first weeks of the study concentrated on scoping and mapping out the dimension of workplace literacy, numeracy and language initiatives across the country. It became clear to us that no one individual or organisation was in a position to provide a complete list of workplace programmes, either across the whole country or within a particular region. Even small geographical pockets of the country are hard to map as they encompass a range of localised projects, funded through a variety of routes and providers. Similarly, although there are many well informed practitioners in the field, their knowledge seems to be confined by geographic or sector boundaries, or more generally by the specific channels of communication that are open to them.

As an indication of the scale of a national mapping project, we subsequently found that the London Development Agency was employing a dedicated professional for a year to map out workplace basic skills initiatives in London alone. The rapidly changing nature of workplaces and the short-term funding periods for many programmes mean that such an exercise can provide only a snapshot, of uncertain relevance in the future. Overall, the main picture to emerge from the scoping phase of our study was that of extreme diversity and fluctuation of programmes across regions, sectors, individual companies and training providers.

The implication of this diversity and constant change and the absence of any national or regional register was that it renders impossible any systematic population or probability sampling of participants, companies and organisations involved in workplace basic skills training. Instead, as we discussed in section 3, we have decided to focus on a limited number of occupational sectors with high levels of basic skills needs and relatively high levels of employer activity. Within these we will build up opportunity samples through networks of practitioners, employers, unions and employer organisations, using contacts established by networking at conferences or

training events, personal contacts and word of mouth.

Finally, the development of a national online database of basic skills providers (not just in the workplace but across all contexts) may prove a useful tool for us. This is a recent project by the National Foundation for Educational Research (NFER) in collaboration with the Basic Skills Agency (BSA). The database is still under development and will eventually be used primarily by the Learning and Skills Council (LSC) at a national level.

4.2 Developing a network of stakeholder contacts in the field

As a natural outcome of our attempts to formally map provision, we were able to develop a network of known practitioners and other professionals in the field of workplace training. It was partly as a result of our informal talks and meetings with these people, as well as our attendance at conferences and training events, that we came to realise the full extent of diversity and fragmentation within the field.

One of our first and most valuable sources of contact information was the Workplace Basic Skills Network based at Lancaster University. The network is a national organisation working with regional, national and international agencies to help establish and manage workplace basic skills developments through the following strategic aims:

- Provision of specialist continuing professional development (CPD) courses for teachers.
- Provision of advice, guidance and consultancy services.
- Development of local and national networking and partnership opportunities with key agencies.
- Influencing and contributing to policy formulation.
- Commitment to evaluation and research.

More information on the network and its activities can be obtained from its website: www.lancs.ac.uk/wbsnet

Through discussions with professionals, we began to address some key questions which we discuss below.

How do workplace basic skills initiatives come into being?

An organisation may develop a literacy, numeracy and/or language programme for its employees in a variety of ways. The employer might search out a provider and ask them to set up such a programme; or a provider might contact an employer to offer a course. Trade unions and government agencies also often play a part in the process.

When a training provider approaches an employer directly to offer a course, the first step is normally for the provider to conduct an organisational or training needs analysis (ONA and TNA respectively) for the employer. ONAs and TNAs are frequently carried out by the tutors themselves, with or without training, although an increasing number of tutors have attended a one-day training course run by the Workplace Basic Skills Network. Larger providers tend to employ dedicated professionals to coordinate all workplace-related activity for their organisation. These people may sometimes have a business background, rather than a college or educational one, and in most cases they liaise with employers to perform the ONA themselves, with tutors responsible at a later stage for the actual delivery of provision.

The Brokerage Scheme, initiated by the BSA, is an initiative intended to be the first step in getting a course up and running. Its aim is to bring together employers and providers by training existing employer advisers to act as basic skills brokers. Rolled out nationally, this initiative would reduce the need for largely untrained and ill-equipped basic skills tutors to approach companies about courses.

The scheme was initially piloted in two areas, in West London in 1999/2000 and in the North East region in 2000/01, with a programme rolled out in 2001/02 into four more government regions: North West, Yorkshire and Humberside, West Midlands and Eastern. The scheme also continued in the North East. Brokerage activities took place in all 25 of the Local Learning and Skills Council (LLSC) areas in these five regions and resulted in 659 brokers attending training by the end of October 2002, of whom 397 (60 per cent) gained accreditation from the BSA.

In total, the brokerage activity in these five regions resulted in 1021 'leads' (i.e. referrals of employers to approved providers), with a total number of 297 employers and 2013 learners taking part in a workplace basic skills programme. An evaluation of the national programme has been carried out and is reported fully in *York Consulting* (2002). At the time the evaluation report was published, BSA plans for the Brokerage Scheme included an 'embedding project' which would continue to support the 25 LLSCs taking part in the programme, as well as providing resources to support the remaining 22 LLSCs in other regions in taking the scheme forward without the ongoing support of the BSA.

The creation of the Union Learning Fund (ULF) was announced in the Green Paper, *The Learning Age* (DfEE, 1998), with the intention of promoting trade union activity that is innovative and supports the government's objective of a learning society. Its overall aim is to support unions in partnership projects to develop work-based learning opportunities for employees. The fund is currently being administered by the LSC. In 2002/03, the ULF was in its fifth year and had funded over 300 projects, working with 70 different unions in 3000 workplaces, with courses ranging from basic skills to continuing professional development.

Of the original funding, £3 million was allocated to projects aimed specifically at improving employees' basic skills. A key factor in the development of such projects is the role of the union learning representatives. There are currently over 3500 such representatives, many of whom have been trained as a result of projects established by the ULF. Union learning representatives play a crucial role in the process of attracting employees to such programmes, because their position of trust can encourage those with basic skills needs to seek help. More information on the ULF can be obtained from http://www.learningservices.org.uk/

Another initiative in which the involvement of trade unions can be crucial is that of the Employee Development Schemes (EDS). These are schemes that provide funds for employees to take part in learning that is not directly related to their job, ranging from leisure interests and hobbies to improvement in basic skills. The aim is to encourage employees to return to learning, as well as to broaden their skills and develop their careers. One of the first schemes, known as the Employee Development and Assistance Programme (EDAP) was set up by Ford and its trade unions in 1987, offering a range of on-site learning activities for employees. EDS schemes differ from more conventional workplace basic skills programmes, not least because learning normally takes place in employees' own time, but also because it is mostly aimed at developing skills that are not work-related.

A more recent government-funded initiative is Employer Training Pilots (ETP), launched in

September 2002 by HM Treasury, the DfES and the LSC, in order to stimulate the development of skills among low-skilled employees. ETPs were originally launched in six LLSC areas: Tyne and Wear; Greater Manchester; Derby; Birmingham and Solihull; Essex; and Wiltshire and Swindon. Six additional pilots started in July 2003 in Berkshire, East London, Leicestershire, Shropshire, Kent and South Yorkshire. All pilot schemes offer free basic skills and NVQ Level 2 courses to low-skilled employees. Businesses that participate receive compensation for releasing their employees during working hours to attend the courses, with three different levels of compensation currently being piloted depending on the size of the firm. The Institute of Employment Studies is currently evaluating the scheme, in partnership with the Institute of Fiscal Studies and MORI. The evaluation will focus on three types of research questions:

- Employer-based, such as what sort of employers take part in the scheme.
- Employee-based, such as who takes part in the training and how employees are selected for courses.
- Delivery-based, for example examining capacity issues.

The evaluation report is due to be published in March 2005. For more information on the ETPs see HM Treasury (2002).

ABSSU has launched a promotion strategy to encourage employers to develop literacy and numeracy skills in their workforce. It includes the recent establishment of 'employer champions' and the development of the *Employer Toolkit* which contains advice, guidance and resources aimed primarily at human resource managers who are interested in basic skills training for their staff.

How are workplace basic skills initiatives funded?

Basic skills training is generally offered to employers without any direct costs, such as fees for the training provider or tutor. One important source of funding for the programmes comes from the government through the DfES and the LSC and LLSCs. Providers who receive this funding to enable them to offer free courses to employers have to comply with the national standards for adult literacy and numeracy when setting up their programmes and must map them to the national curricula. A number of schemes may receiving additional funding – or in some cases be entirely funded – from a variety of other sources, such as the Single Regeneration Budget, Regional Development Agencies, the Trade Union Council/ULF, UfI/LearnDirect, ESF or more recently the ETPs.

Of course, there are indirect costs to the employers for releasing staff to attend the training during working hours. Although this is a matter for negotiation between the employer and the provider and/or the trade union, on the whole it seems that staff get at least partial release to attend such programmes. Employers don't always offer release, sometimes employees come in to the training in their own time.

In late 2002, ABSSU commissioned a user-friendly 'funding mechanism guide' from Pricewaterhouse Coopers (PwC) to be used by employers considering setting up a basic skills programme. However, the project was abandoned when it was decided that the production of a comprehensive guide would be impossible at this stage because of the nature of the funding mechanisms and systems currently available.

How is the course content developed?

The development of any specific course can occur in a number of different ways and its exact nature may be linked to the way in which the course was initially set up.

Course content may be discussed between the provider representative and the employer very early on in the process, such as during the ONA/TNA. Individual employers may involve their staff in planning a suitable course, both those who attend the course and their line managers. Alternatively, an employer may decide independently what is required or leave the matter almost entirely to the provider. On the side of the provider, individual tutors often seem to be involved in the planning of a particular course and will also decide on changes to the original plan after the first few sessions have taken place, based on feedback from the students and their assessment of students' needs.

There are also many ways in which courses evolve as a response to feedback. Evaluation may come from employers, learners, line managers, tutors, and provider representatives. The impact of such feedback will depend upon how well established these lines of communication are and what purpose they are perceived to serve.

Interestingly, there seem to be far fewer requests for numeracy courses than for literacy and language (ESOL) ones. This is curious given labour market data providing clearer direct signs of national skill shortages in numeracy than in English language skills. Recent research findings confirm the importance of numeracy and mathematical literacy at the workplace (e.g. Hoyles, Wolf et al, 2002). It is considered that within an organisation, the need for numeracy skills is often less obvious to both employers and employees than the need for basic literacy. The essential numeracy components of any task are often more difficult to detect than those based on reading, writing or speaking. In particular, any lack of basic ability in spoken language in the case of ESOL employees tends to be very noticeable. Payne also reports that the area of numeracy, '... remains underdeveloped in relation to the workforce and workplace', and that '...there seem to be very few courses which address mathematical needs directly' (Payne, 2003:16).

As a result, our scoping study has focused on language (ESOL) and literacy provision although we are not ruling out the possibility of including numeracy programmes in the main project.

How are such initiatives evaluated?

At present, there does not appear to be either an advised method of evaluating these courses or an imperative for one particular party in the learning equation to undertake any form of direct evaluation. It is certain that some employers do evaluate courses and almost certain that others do not. Some providers carry out their own evaluation of schemes in which they are involved. These can be quite detailed and geared to development (for example, Key Skills Training at Fine Lady Bakeries (Bradell, (2000)).

The new tests, recently introduced by the government and which lead to national qualifications in language, literacy and numeracy, have not had a big impact on workplace basic skills provision. This could partly be due to ABSSU's policy on the matter, which says that employees receiving basic skills training at their workplace should not be compelled to sit the tests. Hardly anybody in the field has indicated that course participants are currently required or even encouraged to sit a test at some point. The contrast with college-based provision, where preliminary assessment leads to later formal testing, is very marked.

5. Securing participation

Through the networks and contacts built up during the scoping study, we have been assembling a list of participant schemes across the four sectors selected for research. As noted earlier, our success in securing ESRC funds means that the proposed sample is larger than originally envisaged. We are currently in the process of completing our sample and full data collection cannot begin until December 2003, because we have to complete the relevant literacy assessment instrument (see section 6 of this report), with which there were also delays beyond the research team's control. Interviews commenced with teachers/trainers and managers during Autumn 2003. Data collection started in January 2004.

6. Developing pilot instruments

Following our piloting, we currently plan to use six instruments and to collect background data (subject to informed consent) on employees' workplace histories. Of the six listed below, we have either completed or are in the process of completing piloting on all but the last. This is a Canadian instrument developed by our collaborators at the University of Ottawa, which still requires piloting in a UK context. The existence and availability of this instrument only became evident at the end of the piloting period, but it is potentially very valuable as a measure of learning provision.

As stated earlier, the study will use a mixture of methods and two types of complementary data will be collected: numerical and qualitative. The numerical data will be analysed using quantitative techniques. These data will include scores of participants' levels of skills obtained through a formal assessment tool (test), as well as demographic information, employment history, job satisfaction, perceptions of workplace training and attitudes to learning in general. The qualitative data will focus on the participants' learning biographies through the use of semi-structured interviews. Further, we will interview a sample of literacy and language tutors, as well as line managers/supervisors involved in the organisation and delivery of the programmes. These interviews will be open-ended, in order to evaluate the impact of course provision on the enterprise and on indicators of organisational capital.

Below we describe briefly the instruments that we have developed, some of which have already been piloted on a small sample of participants. A discussion of the pilot study follows in section 6.1.

i) Structured questionnaire for employees/learners

The questionnaire aims to collect basic demographic information about the participants, as well as quantitative information about their attitudes to their jobs and workplace training. It consists of three parts:

a The first part aims to collect basic factual information about the participants and includes questions about age, gender, number of years with the company/organisation, family circumstances, recent employment history, educational history and qualifications.

b The second part addresses the issue of job satisfaction (this being regarded as one of the factors on which training may have a positive impact) by asking participants to choose a rating for their feelings and attitudes towards different aspects of their work (e.g. hours, pay, relationship with colleagues, opportunities for promotion) as well as a rating for their job in general.

c The third part of the questionnaire aims to gauge participants' perceptions of the training they receive at their workplace, including questions about what they consider to be the main benefits of such training, how positive or negative they feel about receiving it and whether they would consider continuing with it in the future, either within or outside their workplace.

Individual questions were developed either by members of the research team or by consulting other questionnaires and survey instruments, such as the British Household Panel Survey, the British Social Attitudes Survey and staff perception surveys run internally by large organisations with their own staff. There was also some limited consultation with practitioners in the field. Some of the questions were re-worded or even completely withdrawn after the instrument was piloted on a small number of participants; in addition, some new questions have been added to the original version. The version included in Appendix 1 is the most recent, developed after analysis of the pilot data.

The questionnaire has been designed for use face-to-face or over the phone, although it could easily be adapted for self-completion if necessary. However, we do not think self-completion will be an appropriate method for administering it, given the nature of our population. Unless cost becomes a problem, it is therefore proposed that the questionnaire be administered face-to-face by a trained interviewer. It is estimated that it will take approximately 15 minutes to complete.

The current version of the questionnaire is intended for use in this form during the first sweep of data collection. In subsequent sweeps there will be no need to collect information on some of the variables such as age and sex. Some of the questions will need to be re-worded or additional ones added, because participants will have experienced the training and we will need to assess any changes in their attitudes towards the training and workplace more generally.

ii) Semi-structured interview schedules for employees, employers and tutors

These three interview schedules have been designed for use with a sub-sample of employee participants, as well as with a sample of tutors and supervisors or line managers involved in organising and delivering the programmes within each organisation. They will be used for open-ended interviews, estimated to last between 30 and 90 minutes.

The employee questions aim to explore in more detail some of the issues addressed in a more standardised, quantitative way in the structured questionnaire. They also cover some additional topics that lend themselves to a qualitative mode of enquiry and include questions on participants' attitudes and feelings to their job, their workplace and training, and how their workplace learning may affect their personal lives and their feelings about themselves.

The questions for tutors and employers aim to elicit views about the organisation and running of the programmes. Like the employee questions described above, they are for use in the context of open-ended, semi-structured interviews of up to one hour's duration. Questions for

tutors aim to obtain information about their role in setting up a programme, their input to any needs analysis and planning of the sessions, their views on how participants are progressing or benefiting from the sessions and the reasons behind these benefits. The questions for employers aim to obtain factual information about how the programmes were organised and set up, and to seek views on the benefits of the training to their employees and to their organisation as a whole.

iii) Effective Lifelong Learning Inventory (ELLI)

ELLI is an instrument designed to assess 'learning power', which is defined as 'the complex mix of dispositions, lived experiences, social relations, values, attitudes and beliefs that coalesce to shape the nature of an individual's engagement with any particular learning opportunity' (Broadfoot et al. 2002). It was developed by a team of researchers at the University of Bristol and has been trialled and used extensively with children aged between 8 and 16. In its current form, the instrument consists of 55 items describing values, beliefs or attitudes towards learning; the participant has to indicate how much he/she agrees with each statement on a four point Likert-type scale.

A factor analytic study carried out by Broadfoot et al. (2002) resulted in the identification of the following seven dimensions of learning power: growth orientation, critical curiosity, meaning making, dependence and fragility, creativity, learning relationships and strategic awareness. These dimensions were subsequently translated into a list of descriptors expressed in terms of the characteristics of an effective individual learner. For example, the creativity (vs. sameness) dimension can be captured by the following characteristics: risk taking (vs. playing it safe), playful (vs. literal) and intuitive (vs. rule bound). According to the authors, these dimensions can differentiate between 'efficacious, engaged and energised learners and passive, dependent and fragile learners'.

We thought that ELLI might prove a very useful instrument for use with the population of adult learners of basic skills, both in the context of this project and possibly in other areas of NRDC research. The very nature of most workplace programmes may, in many cases, not result in substantial improvements in literacy or numeracy skills. However, in the short term at least, it is quite possible that such programmes have an impact on participants' attitudes towards learning or on their learning power, helping them to become more effective learners and encouraging them to undertake further learning. As this instrument has so far been used only with children up to 16 years of age, we are currently testing it on a sample of adult basic skills learners in order to ascertain whether it is suitable for use with such a population and to identify areas where it needs to be changed. We expect this new, 'adult' version of ELLI to be ready for use by December 2003. The new, 'adult' version of ELLI is now ready to be used during the first sweep of data collection with learners.

iv) Writing exercise

We will be asking a sub-sample of employee participants to provide us, if they wish, with a short written piece about their feelings towards learning in the past, present and future. The participants will be asked to complete this in their own time outside the interview. We hope that the information provided through this exercise will particularly complement the qualitative data collected in the semi-structured interviews, providing additional insight into the participants' changing feelings about the role that learning has in their lives in general. In addition, it will provide us with an open-ended piece of writing that could be examined in conjunction with their scores in the formal writing tests.

v) Reading and writing assessment

After an extensive review of existing assessment tools for adult literacy (see also Brooks et al, forthcoming), it was decided that a new instrument would be necessary for use in our study, as none of the existing ones were sensitive enough to measure the small amounts of progress that participants may make as a result of workplace training. We know that most (if not all) workplace basic skills programmes tend to be quite short (2 hours per week for 10 weeks seems to be typical) and to have rather low attendance rates. We do not therefore anticipate that participants' levels of skills would improve by, say, one whole level (as defined by QCA) after attending a typical programme. We are also conscious that many programmes focus on writing, which is not covered by existing standards-based national tests.

NRDC's programme of intervention studies has created a general need for a sensitive, secure instrument with parallel forms, for use in assessing progress. Our study was thus one among a number for which the development of a new assessment tool was judged to be necessary. Test development, which is currently being carried out, was commissioned from NFER and will meet this project's particular needs as well as more general NRDC requirements. The new tool will use stimulus material in the form of a popular magazine/local newspaper and the emphasis throughout will be on the ability to perform real-life reading and writing tasks with authentic text. Elements of the literacy curriculum addressed in the reading part of the test are: following narrative and understanding main events (mainly for entry levels), identifying main points and understanding ideas and arguments (mainly entry 3, levels 1 and 2), finding information (all levels) and identifying text purpose (all levels). The writing part of the test will assess grammar and syntax, handwriting, punctuation, spelling and functional adequacy and relevance.

There will be two parallel forms of the test to enable comparisons of skill levels before and after training. Each of the parallel versions will have two sets of items: one aimed at the lowest levels and one at the highest, with each set consisting of 45 items. It is expected that the test will take no more than 30 minutes to complete.

Test items are currently being trialled by NFER and we expect the final version of the instrument to be delivered to us in December 2003. The final version of the assessment instrument was delivered to us in January 2004. Representatives from ABSSU were kept informed of the process of development and trialling of the instrument and a review meeting to discuss progress took place at the Institute of Education in July 2003. A detailed timescale for test development is attached in Appendix 3.

[vi) Teaching Perspectives Inventory

This inventory is being piloted, as a means of obtaining a measure of the teacher/tutors' teaching orientation in the various workplace literacy programmes. The Inventory has been developed and validated in Canadian Literacy settings, and we are assessing its usefulness for this study.

6.1 Preliminary findings from piloting exercise

We have piloted the structured questionnaire, the semi-structured interview schedules and ELLI on a small number of participants. As explained above, the new reading and writing

assessment tool is currently being trialled by NFER. We have unfortunately not received any completed writing exercises from pilot participants. We do not yet know why there was no response, but speculate that participants lacked time and interest, or perhaps found the task too much of a challenge. It could be argued that this lack of response indicates that the instrument is unsuitable for use in the project, at least in its current form.

i) Structured questionnaire

The questionnaire was piloted in two different sites:

i Three NHS hospitals receiving basic skills training through a county council (site 1).

ii One hotel and one catering company receiving training through a local FE college (site 2).

A total of 26 questionnaires were completed by 26 participants, six in site 1 and 20 in site 2. Of the 26 participants, 5 were male and 21 female; their ages ranged from 20 to 62, with the mean age being 39. The time they had been with their current employer ranged from 4 months to 35 years. The majority (N=23) were ESOL learners, that is, English was not their first language. Of those with English as an additional language, 15 stated that they never spoke English at home. The ages at which participants had left school/formal education ranged from 11 to 24, the mean being 17.5; only 9 participants had left school without any qualifications.

At site 1, we had the opportunity to administer the questionnaire face to face, whereas the second site would only agree to a self-completion, with the questionnaire delivered to individual participants through the programme coordinator or tutors. For this reason, a slightly amended version of the questionnaire was prepared, although this affected only the instructions and not the substantive part of the instrument. All participants received a small incentive, in the form of a voucher, for their participation.

Almost all participants reported that they found the training very useful and enjoyable. This is one of the pilot study findings that we wish to explore further in the main part of the project. In addition, participants expressed very favourable attitudes towards their tutors or trainers, which is particularly interesting as a contrast to the finding that many of these classes have low attendance and retention rates (see analysis below of semi-structured interviews). Poor attendance may therefore be related to employees' working patterns (for example, changing shifts) that make it difficult or impossible for them to attend. Alternatively, since organisations need to be seen to encourage their staff actively to pursue training, low attendance may stem from a poor general learning culture prevalent in the organisation where the training takes place. We will investigate these hypotheses in the main part of our study.

One of the important purposes of piloting the questionnaire was to establish whether the questions were worded in a way that was relevant and comprehensible to the interviewees, and whether the answer categories provided in the multiple-choice questions were relevant and included as many potential responses as possible. In order to check the latter, the questions were asked in an open-ended manner in the face-to-face interviews, allowing the participants to produce responses spontaneously and in their own words. The response categories we had already constructed were then used as further prompts after the participant had answered the question. In general, we tried to prompt participants whenever necessary to generate as many responses to the questions as possible.

On the whole participants were happy with the questions, both in content and form. In particular, no one refused to answer any of the questions on the basis that it was too intrusive or sensitive, despite warnings to the contrary by practitioners in the field when consulted at the design stage. Participants also had the opportunity to comment on the questionnaires and the study in general at the end of each interview through questions like 'What did you think of the questionnaire on the whole?' and 'Is there anything else you would like to add?' However, these questions elicited very short answers, affirming that participants found the questions interesting or enjoyable, but without producing any more substantial comments, particularly negative ones. This may have been a form of 'acquiescence' or 'social desirability' bias (that is, a general tendency to assent rather than to dissent, and to agree with the researchers), which would not be unexpected given the characteristics of our population. As a result, this aspect of the piloting work was quite difficult and, in some cases, impossible.

We made minor amendments to a few items in the questionnaire as a result of this piloting for example, certain questions were re-worded and some response categories were added and some deleted in the multiple-choice items. The amended version of the questionnaire is included in Appendix 1.

During the piloting of the questionnaire we were able to address the particular problem of the limited skills of some ESOL participants. We were already aware (as a result of the initial work carried out before the pilots) that a substantial proportion of employees receiving basic skills training at the workplace had English as an additional language. Some of these people were born, raised and educated in the UK, perhaps within a non-English speaking family or wider community; others were born (and possibly educated) outside the country but had lived in the UK for a number of years; others may only have arrived in the UK within the last few months with very little, if any, prior knowledge of the language. All of these participants can be classified as ESOL learners in terms of basic skills. Given the diverse range of practices in the field discussed earlier, the boundaries between ESOL and 'mainstream' literacy classes (intended primarily for learners whose first language is English) are not clear-cut; frequently, ESOL and non-ESOL participants are found attending the same sessions, particularly if numbers are low or employers and providers are trying to keep costs to a minimum.

The original scope of our study included all types of basic skills provision, that is literacy, numeracy and ESOL. However, we soon began to suspect that the level of English, particularly spoken, of some of the ESOL participants would be too low to allow them to participate fully in the structured interviews using the questionnaire and especially, in the more open-ended, in-depth ones. On the whole the pilot work confirmed these initial impressions. For example, two participants with a Kurdish background only managed to complete about half of the questionnaire within 30 minutes. This was achieved with difficulty and with the interviewers simplifying or explaining a lot of questions or individual words. It was not always clear that the participants had really understood the question and so we are not convinced that their responses can be treated as valid and reliable data.

A few potential participants were unable to understand what was required of them when we attempted to recruit them to the project just before the start of their English class. The researcher needed to explain the aims and context of the project and the process for participants (that is, to take part in a short questionnaire-based study), but failed to make herself understood. The group were Spanish speakers and the researcher, who also knew Spanish, overheard a comment from one person to the group as she was about to leave the room, that he had understood absolutely nothing she said.

The only way we could meaningfully include this sub-group of ESOL participants in the project would be to employ a fairly large number of professional interpreters, fluent in a wide variety of different languages, and trained or experienced in interviewing. This is well beyond the current budget of our project and it is also likely that the diversity of these adults would make the data very hard to interpret. We would need new versions of the tests, sensitive to improvements in English language vocabulary at very basic levels. After careful consideration and consultation with NRDC colleagues not directly involved in our study, we decided to include only ESOL participants whose standard of spoken English is sufficient for them to communicate reasonably fluently in a research interview. In terms of the national standards, spoken English at entry level 3 or above would be sufficient to participate in the project. However, we are aware that this decision will leave out of the study a substantial number of employees attending basic skills programmes at their workplace and that there is a need for more research in the area of ESOL workplace programmes in particular. The need for more research in the area is also stressed by Roberts (forthcoming).

ii) Semi-structured interview schedules

So far, we have had the opportunity to pilot the semi-structured interview schedules with five tutors and one programme manager of a training provider, working within two different schemes in two different parts of the country, but within the same sector (health and care). As with the structured questionnaire, one of the primary purposes of piloting the interviews was to establish whether the questions were relevant and interesting to the interviewees, and whether they tapped issues that these groups of people view as important in the context of workplace teaching and learning. On the whole participants were happy to answer our questions and found them pertinent and comprehensive. Minor amendments to the instruments were made as a result of the piloting process.

Below, we present a selection of extracts from these interviews, grouped in terms of the themes that we aim to explore further in the main part of the study. One of the most remarkable features of the opinions expressed is, once more, the diversity of views and practices that exists even among a small group of tutors.

Tutors' views on impact of Skills for Life strategy and related infrastructure

> *'We got (Regional Development Agency) money in 2000 so I suppose that money would have been related to funding after Moser.'* Programme manager

> *'The change it made was that suddenly everybody was convinced that all their friends couldn't read and write or count.'* Programme manager

> *'I can only think of one thing I would say in terms of recognising the development that is taking place, is that, you know, at the end of the day we have to relate what we're doing to the curriculum. So we're always limited ultimately... Sometimes you have to be a little creative to make the link.'* Literacy tutor

> *'You know, it's no good, I'm sorry you know they can sack me if they want (...), I cannot work in the national curriculum for all these students. It would just be contrived (...).'* ESOL tutor

> *'I don't feel in any way constrained by the curricula. I think the issue of compartmentalising people into ability levels is problematic (...). So I think the*

curriculum is a jolly useful document, very easy to work with in terms of relating what one's doing, you know, using it as a tool to analyse issues from a communications point of view. I don't think it's particularly helpful to set artificial limits around what you can do.' Programme manager

Tutors' views on employers' perceptions and attitudes to training

'So we did a training needs analysis, an organisational needs analysis, you know bearing in mind that their problem was recruitment and retention. That was the main reason for them having us here, with a supplementary reason that they obviously had all sorts of communication issues around having a multilingual, multicultural workforce, also interpersonal skills with customer care implications, if you like, among both non-native speaking and native speaking staff.' Programme manager

'I think we've had to go on a bit of a crusade in making our sessions appear to be valued (...) make it very, you know, very clear to them that it's relevant to what they'll be doing tomorrow, etc, etc.' ESOL tutor

'And the beauty of it is that it's not necessarily anything very complicated. It's basic language issues, things like the difference between 'do you want a cup of tea?' and 'would you like a cup of tea?'. That (...) is such a massive difference in customer service and customer response and yet nobody can put their finger on it.' ESOL tutor

Tutors' views on employees' attitudes to and perceptions of training and on attendance and retention[1] issues

'My sense is that, generally speaking, you know, contrary to popular opinion, people don't grab chances to get off work unless they think it's going to be more interesting than work or relevant to work (...) They've got to see some value in the activity.' Programme manager

'Well, consistent with the fact that people are still on the programme, it (i.e. feedback from learners on the training) indicates that they find it valuable.' Programme manager

'In terms of whether the programme helps with recruitment and retention, I think it's frightfully difficult to say. I don't think anybody comes to work for these programmes. And I don't think anybody stays at work because of the programme per se. So it's one of those things that is what, multi-determined (...).' Programme manager

Q: 'Why was it uphill?'
A: 'Well, just attendance really. I've been here two years now. But we tried it at two days a week which was too much for people (...) it was Tuesday and Wednesday but we cut it down to Wednesday and it was a bit demoralising because it got to the point that I was coming up on a Tuesday and there was nobody there.'
Q: 'So they (the learners) weren't supposed to come twice, were they?'
A: 'Yes they were, yes they could come twice, but we found that their bosses didn't really want them to come along twice.' ESOL tutor

'The biggest problem, the problem is retention[1]. That's always the problem because they (the students) don't have to be here really. They don't pay for the course, so they're not thinking 'I'm going to get my money's worth here' (...) And if I don't hold their interest they won't come (...) Well, that's the other thing, you know I could spend a happy Saturday night mapping everything and they wouldn't be here. Because they're very capricious, they will just suddenly not be here.' ESOL tutor

'My only frustration is, I wish the managers could spend a bit more time promoting the course (...) I mean, if they could, I would like a regular drip feed of new students, that is what I would like ideally.' ESOL tutor

'I'm sure they're finding it useful (...). I think probably they find it more useful in terms of generally being in England and surviving in England.' ESOL tutor

'Because although they come to the first session with perhaps, say, an element of compulsion, they're not there with a programme, 'right this is what we're going to do for the next 10 weeks' – it's very much right from the beginning what they would like to do, so talking around their job role and the issues that they see as being important to them that we could address.' Literacy tutor

'How do I feel the participants are doing? They're coming back. That's probably the most important thing.' ESOL tutor

iii) ELLI

As described earlier, ELLI is an instrument developed and validated on a sample of over 1000 children aged between 8 and 16. Its piloting process in the context of our project with adult basic skills learners is therefore rather different from those of the instruments described above, as we are effectively validating it on a different population.

The trialling process instruction started in April 2003 and finished in January 2004. A total of 215 questionnaires were completed by a sample of adult learners in a variety of settings and courses.

Factor analysis was performed on the data, in order to establish the number of dimensions of 'learning power' in adults, and to refine the instrument by eliminating any redundant items. This process resulted in the identification of three factors or dimensions of 'learning power', which we have provisionally labelled as: 'imagination/creativity', 'dependency/fragility' and 'growth orientation/challenge'. The instrument is now also considerably shorter, consisting of 44 items instead of the original 55.

[1] Retention refers to the training programme/course (not the company).