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Investigating the Benefits of English and Maths Provision for Adult Learners: Part 1 Quantitative Assessment

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Contents

Executive Summary

SQW Limited (SQW), the National Research and Development Centre for adult literacy and numeracy (NRDC, at the Institute of Education, University of London), GfK NOP and the National Foundation for Educational Research (NFER) were commissioned in December 2011 by the Department for Business, Innovation and Skills (BIS) to undertake a study of adult basic skills provision. The overall aim was to explore the evidence on skills gain and employment and social outcomes amongst basic skills learners, and to ascertain if there are any factors that lead to greater gains and outcomes. As well as yielding insight and evidence in its own right, the study was also seen by BIS as an exploratory piece that would inform future research and evaluation in this area, with the wider remit of the work including consideration of current research and other tools used to assess skills gains and exploration of models for using randomised controlled trials in the field of basic skills.

Overview

This study did not find definitive evidence on the factors that lead to greater skills gain: the existing assessment tools were unable to gauge learner progress and measure skills gain over a short period of time, in particular as it can take at least a year to progress between levels; and it can take longer than 11-18 weeks (the time between the two waves of assessments and surveys that were deployed in the study) to realise the economic and employment benefits in the labour market. No relationship was found between learning provider quality and outcomes, though this may be due to the reliance on imperfect data on provider quality.

There is evidence of outcomes in health and wellbeing, with statistically significant increases in life satisfaction, mental well-being, locus of control and self-esteem. In addition, around three-quarters of those with children felt more able to help their children with homework and almost all of these attributed this to their learning.

This report focuses on the findings from the quantitative component of the study (Part 1 of the study), which involved a survey of adult learners taking part in basic literacy and/or numeracy courses[1]. The survey was undertaken in two waves, separated by a period of a minimum of 11 and a maximum of 18 weeks, in order to track changes over time, and included a skills assessment to measure skills gains. Part 2 of the study involved qualitative research with nearly 30 learners.

This summary contains the headline findings from the quantitative part of the study, as well as including the main messages from the qualitative part.

Learners' motivations and perceptions of provision

Learners had already started their courses at the time of the first assessment and interview. The study had slightly higher proportions of learners on Level 2 courses than Level 1 or Entry Level courses. The backgrounds and characteristics of learners varied.

[1] A separate qualitative piece of research was undertaken, which is covered in a separate report.

For example, learners came from a range of ethnic groups, and around one-third of learners spoke English as a second language. Over one-half were unemployed or "not in the labour force". Whilst over one-half of learners had no qualifications, or had Level 1 as their highest qualification, some of the learners had previously had successful education careers.

Given the background of learners, there were strong employment-related motivations amongst learners. The majority of unemployed learners intended or expected to use the course to help them get into employment, and most of those in employment were motivated by getting a better job or promotion. However, motivations were not simply career or employment-related. The evidence indicated that self-improvement and self-fulfilment were amongst the most common motivations and objectives for learners. The qualitative research (Part 2) also found that whilst skills gains may be a common goal across the learner group, they do not all necessarily translate them into economic outcomes (such as employment and wage effects). Rather, for some learners the intended and actual outcomes are likely to be personal and socially-related.

In considering motivations, the evidence from the quantitative study suggests that these can depend on characteristics (such as age and gender), level of courses, and types of provision. There was an important distinction between learners, with socio/psychological factors apparently more important to those at Entry Level, and human capital factors for those learners on and/or progressing to higher level courses. For example, learners on higher level courses were more likely to mention getting on another course and the requirements of their work or professions as reasons why they had enrolled. In comparison, those on lower level courses (in particular Entry level) were more likely to report personal and social reasons, such as making friends, wanting to increase their self-esteem and improve their everyday life skills, as their reasons for joining the course. The qualitative part of the study also found that the backgrounds and contexts of learners affected motivations. Learners were found to have a variety of personal issues such as dealing with alcoholism, depression or bereavement; others had young families; and still others were strongly motivated by economic factors.

The breadth of motivations has been documented in previous research, and so both the quantitative and qualitative parts of the study re-iterate this evidence, and highlight the implications for providers. The key is that learners' motivations to succeed in their learning can be powerful drivers and should be acknowledged by providers in their course offer and in their wider support of individual learners. Courses with a narrow focus on employability or employment related outcomes, while superficially meeting learners' needs, may fail to adequately recognise, and harness, those broader motivations.

Indicators of satisfaction, enjoyment and attendance were positive. The data did not provide evidence of any links between ***satisfaction*** with learning or ***attendance*** at classes and factors associated with course quality (as rated by Ofsted in relation to college inspections), course level or course length. The data suggests that longer courses tended to increase the ***enjoyment*** of learning, which makes sense intuitively since longer courses allow learners to become accustomed to the learning environment and build rapport with their tutor and fellow learners. The research also found that learners on numeracy courses tended to be more satisfied with their learning experience, though enjoyed their learning less, than literacy learners. This may be due to the way that maths was perceived by learners, as something that was challenging and provided satisfaction once the challenges

were overcome, but was not necessarily something that they enjoyed as much as reading and writing.

The analysis showed that provision may not be working as well for those learners with additional needs: learners for whom English was not their first language were, on average, less satisfied with their learning; as were those learners with learning difficulties and/or disabilities. It is not possible to expand on the reasons for this lower level of satisfaction.

Learners' attitudes towards learning

Whilst learners reported improved attitudes towards learning, and also clearer ideas about life goals, the questions on attitudes that were tracked between the two Waves of the survey suggested relatively few changes in enjoyment and perspectives on learning across the sample as a whole. To some extent this reflects the baseline position at Wave 1, which suggested some already quite positive attitudes towards learning. It must be noted that Wave 1 was undertaken once learners were already on their courses, and so, if courses had a positive effect on attitudes in the first few weeks, this would not have been picked up in changes between Waves 1 and 2.

The evidence did not indicate any strong increases in how people used skills in their everyday life. There were a couple of exceptions with regards to the use of numerical skills to check accounts and balances and literacy skills to write notes, letters or email at home. This was surprising, in particular because the separate qualitative research (part 2 of the study) suggested that learners were indeed practising their skills outside the classroom. This part of the study identified three broad contexts within which learners were practising outside of the classroom:

- entirely new activities that learners had not considered in the past, in particular home or family-based activities such as writing postcards
- new practices within old activities, i.e. learners undertaking old activities but no longer shying away from the literacy or numeracy challenges within these activities, e.g. adding up the bill when out with friends
- doing old practices more effectively, e.g. being better able to help children with reading/their homework.

The differences in findings between the quantitative and qualitative parts of the study may be partly because the in-depth nature of qualitative interviews provided the opportunity to find out about a range of practices, and/or because the survey was not able to explore as many 'items' associated with skills practice. For example, the qualitative research suggested that numeracy learners improved their skills by doing things like household budgeting, calculating the bill and shopping, items that were not asked specifically about in the survey.

Skills gains from participation

The analysis assessed skills gains in three different ways:

- Learners were asked in Wave 2 whether they thought that courses had helped with their confidence and abilities. Albeit providing "weak" evaluation evidence, because of a tendency for beneficiaries themselves to overstate the effect of courses, this showed that a majority of learners thought they had increased their confidence in reading, writing and maths/numbers. In addition, 78% of literacy learners and 92% of numeracy learners thought their skills/abilities had improved. Over three-fifths of learners suggested that the course had helped "a lot" with these improvements, suggesting courses were having an *additional* effect. This complements the evidence from the qualitative study, which showed the important role of basic skills courses (and wider College support) in improving confidence, leading to positive decisions and/or plans to undertake further learning.

- Learners were asked to rate their abilities at Waves 1 and 2, and the responses were compared to measure changes over the 11 to 18 weeks between the two waves. The evidence did not suggest skills gains, with mostly similar proportions of learners reporting increases as decreases in relation to skills in daily life and skills in work. One potential reason for these findings, which the research has not been able to test as part of the study, is that the courses make learners more realistic as to their skill levels and alert them to the extent to which their low-level skills in the past may have hindered them, previously, in the labour market.

- Finally, learners were asked to complete an assessment at both Waves. Whilst we were only able to test skills gain during the course, rather than before learning started, we did see some modest gains for numeracy learners, with a small average gain in assessment scores between Waves 1 and 2. There was no evidence of gains amongst literacy learners overall, though some evidence to support positive gains (compared to the average change) for learners with English as their second language and Entry Level 1 learners (though the latter was based on a small sample). An important caveat to note here is that the assessments were undertaken 11-18 weeks apart, and so with a relatively short period between them; in addition, the first was undertaken some time into courses (rather than before or at the outset of courses).

Benefits in terms of employment and earnings

The evidence suggests that there were some indications of positive progress in the labour market, although given the limited time since course participation, and the resulting small numbers of learners that have progressed, it is difficult to be conclusive about these. For example, 59 learners (out of 665 interviewed in Wave 2) who were either unemployed or

not in the labour force at Wave 1 were in employment at Wave 2. The net increase of those in employment was much lower though, indicating a degree of churn in employment amongst this learner cohort: 32 more learners were employed by the time of Wave 2.

To emphasise the high levels of churn amongst the learner cohort, a much higher proportion (around one-quarter of learners) reported having got a job since starting the course, with around two-fifths of these suggesting that the course had helped them to achieve this.

One eighth of the respondents (to the Wave 2 survey) said that they had got a better job, promotion or pay increase since taking part in the course and around one-half of them reported that their course had helped them with this change. The actual pay increases were small and ranged from less than £0.50 to over £3.00 per hour. Most of the respondents received an increase of less than £1.00 to their hourly net pay.

Putting this evidence together, 37% of Wave 2 respondents reported that they had got a job or a better job/pay increase/promotion since taking the course. Levels of self-reported attribution of these labour market benefits to the course were 40%-50%. Therefore around 15%-18% of tracked learners stated employment-related benefits from their course. It must be noted that there may be some optimism bias associated with these findings, i.e. learners over-estimated the role of the course, and the evidence on labour market churn suggests that the sustainability of these benefits may be limited. A two-group (i.e. beneficiary group and comparison/control group) and/or longitudinal evaluation design may be able to provide more robust evidence of labour market effects.

More widely, 57% of respondent learners (from the Wave 2 survey) indicated that they had signed up to a further course, and so there is evidence that the basic skills provision was providing an important stepping stone towards future labour market benefits.

Wider social and personal benefits

The study made some key findings with respect to wider social and personal benefits.

There was strong evidence on ***parental activities with children*** under 18, with over two-fifths of learners with children reporting an increase in the extent to which they have helped their children with homework (for both literacy and numeracy learners), and just under two-fifths of literacy learners with children increasing the frequency with which they read to or with their children.

A major finding from the evaluation, on which there is relatively little in the existing evidence base, was the accrued benefits to health and well-being amongst learners. Life satisfaction, mental well-being, locus of control and self-esteem all showed a **significant increase** amongst learners. The greatest increase was in mental well-being and self-esteem. This presents evidence of health and well-being benefits associated with basic skills courses. The qualitative part of the study (part 2) concluded that there was more evidence on personal and social outcomes, and found marked effects on self-esteem, with a number of examples of how courses had helped learners improve their confidence and feel less socially isolated.

There was a link between health and well-being outcomes and the level of the qualification learners were working towards. Numeracy learners on higher level courses experienced a greater increase in their life-satisfaction, mental well-being and self-esteem than those on lower level courses. Literacy learners on higher level courses had a greater increase in their self-esteem and locus of control.

Despite the fact that the analysis controlled for various learners characteristics, there could still be some important variables that were not included (about the pedagogies used on the course, for example) and that might explain these relationships and produce compositional effects. Therefore, these results need further research with a different sample and more detailed information about the provision.

Conclusions

The study has shown that there is variation across the learner group in terms of their labour market status, levels of pre-existing qualifications and motivations and expectations of courses. This means that conclusions need to take account of the differing learner perspectives.

Based on the evidence in this study, whilst labour market outcomes, in terms of getting a job (for unemployed learners) and getting a better job (for those learners already in work), are common motivations across the learner group, the extent to which learners achieve these within a few months of their basic skills courses is relatively limited. Under one-fifth of learners attributed having got a job or an improvement in current job status to the course. This is perhaps unsurprising given that the courses were not specifically work-related, the short period of time following courses that fieldwork was carried out, and the wider context of a slow economic recovery. More widely, and encouraging, was the evidence that just under three-fifths of learners had moved on to further training. The qualitative part of the study (part 2) also concluded that it was early for evidence on job-related outcomes, but noted that there were favourable indications amongst learners in terms of improved ambition and progress to subsequent training.

More generally, therefore, basic skills courses are likely to provide a stepping stone towards economic benefits, and also contribute to personal and social benefits (including health and well-being). The value of basic skills courses can be understood comprehensively through the wider range of benefits, which includes those relating to health and well-being, and through measuring the benefits over a longer period of time. The personal and social benefits relate back to key motivations of the learner group in relation to self-improvement and self-fulfilment. There was evidence that courses were contributing to this in different ways, in particular through:

- increases in learners' confidence and abilities in reading, writing and maths/numbers

- the ways in which some of the skills were being deployed, in particular to help with everyday tasks and notably in family settings, such as helping children with homework.

The implication of these findings is that literacy and numeracy provision should not be framed solely in terms of increasing human capital. It may be that other outcomes, such as increased self-confidence and self-esteem, are more significant in encouraging and enabling learners to take the next step in their learning journey.

The study tried to assess how the quality of provision contributes to these effects. The methodology chapter of this report caveats that there are weaknesses in how the quality of basic skills provision can be specifically assessed. There have been other factors that have been related to outcomes, in particular those learners on higher level courses were more likely to have achieved health and well-being benefits. Detecting other contributory factors may require larger sample sizes in future studies, which incorporate both a longitudinal and two-group evaluation design.

1. Introduction

SQW Limited (SQW), the National Research and Development Centre for adult literacy and numeracy (NRDC, at the Institute of Education, University of London), GfK NOP and the National Foundation for Educational Research (NFER) were commissioned in December 2011 by the Department for Business, Innovation and Skills (BIS) to undertake an evaluation study on adult basic skills provision.

The study included a substantive piece of research on the benefits of basic skills provision for a cohort of learners from the 2011/12 academic year. The main part of this comprised a quantitative survey of learners undertaken in two waves, which included using assessment tools to measure skills progress. In addition, qualitative research was undertaken with a small group of learners with a focus on how learners practise skills outside of the classroom.

This report focuses on the quantitative research findings. A separate report has been produced on the qualitative components of the research. This report is structured as follows:

- In the next chapter the research design is described, looking in particular at the overall approach to the study and the methods deployed for survey and assessment. In doing so caveats are raised linked to the interpretation of the findings.

- In Chapter 3 the findings from the study are presented along with an exploration of ways to assess the quality of specific adult basic skills provision in Colleges. Formal measures of quality assess College provision as a whole, rather than adult basic skills provision specifically. Therefore, the provider quality study was undertaken to inform methods that could be deployed in the future to improve the assessment of how quality affects outcomes for learners.

- The profile of learners that were surveyed, including their training profile (e.g. which subjects and at what level they were studying), socio-demographic data, and their economic and employment profile, is presented in Chapter 4.

- Chapter 5 sets out the evidence on course experience, including motivations, expectations, satisfaction and self-reported course achievements.

- Chapter 6 presents the evidence on the benefits from taking part in courses, including employment and wage outcomes, benefits to confidence and self-esteem, the evidence on skills gains, and health and well-being benefits.

- Finally, Chapter 7 sets out the conclusions and implications for BIS.

2. Research design

This chapter sets out the research design for the quantitative part of the study. In so doing, the chapter describes the overall approach to the work, the methods deployed, the learner population that was in scope, and caveats to consider in interpreting the findings.

2.1. Overarching approach

The overall aim for the quantitative component of the study was to assess the evidence on skills gain and employment and social outcomes amongst basic skills learners, and to identify any factors that lead to the most effective gains and outcomes. The specific objectives were to:

- explore learners' perceptions of provision, in particular in terms of their motivations, expectations, experiences and satisfaction
- explore learners' attitudes towards learning, and their engagement with learning outside of their guided learning hours, e.g. learning undertaken at home
- explore the perceived impacts on the individual as a result of participation, for example in terms of their own perceived improvements in confidence and their use of skills in daily life
- measure skills gains from the participation in basic skills provision
- explore benefits in terms of employment and earnings
- explore other economic, social and personal benefits, including participation in future learning, participation in social and community activities and health and well-being effects
- develop the understanding of the factors that lead to greater effectiveness in achieving skills gains and outcomes (e.g. quality of provision)
- estimate levels of additionality associated with provision.

Whilst the study was to generate, in its own right, insights and evidence on the experiences and benefits of basic skills courses, it was also seen by BIS as an exploratory piece that would inform future research and evaluation work in the field (e.g. longitudinal studies, the development of new assessment tools, and randomised controlled trials).

The overall approach taken to the quantitative study was a sample survey, which was combined with a literacy or numeracy assessment, undertaken face-to-face in learners' homes. This was done in two waves to see if changes could be measured over a three

month period. The first wave was undertaken between April and the end of June 2012. Learners were then re-contacted at least 11 weeks later to complete a second wave survey and assessment. In practice, the second interviews were completed at points anywhere between 11 and18 weeks after the first interviews, between July and the end of September. Key reasons for this 11-18 week range were learners' availability particularly since the timing of the second wave overlapped with the summer holiday period, the Olympics and Ramadan. In addition, broken appointments had to be rescheduled, and there was a great deal of variation in the number of attempts required to get in touch with people.

The overall numbers of learners completing the surveys and assessments for literacy and numeracy sub-samples are set out in Table 1. The target completion numbers were 1,000 for Wave 1 (500 each for literacy and numeracy) and 700 for Wave 2 (350 each for literacy and numeracy). Some of the reasons for different response rates (and slower-than-expected achievement of survey completions) are explored later in this chapter under learning lessons.

Table 1: Survey/assessment completions

Sample	Wave 1 completions	Wave 2 completions	Retention rate
Literacy	509	310	61%
Numeracy	507	355	70%
Total	**1,016**	**665**	**65%**
Targets	*500 literacy, 500 numeracy 1,000 total*	*350 literacy, 350 numeracy 700 total*	*70%*

Source: SQW, GfK NOP. Note: Retention rate = wave 2 completions as % of wave 1 completions.

The two waves were intended to explore whether changes in skills attitudes and circumstances could be measured over a short period of around three months. In-scope learners for Wave 1 (discussed in more detail below) were those currently taking part in training, and given that the second wave was undertaken over the summer, the approach was effectively a 'one group design' using two time points, 'during intervention' and 'post intervention'. The chapter now turns to the detail of what was incorporated in the questionnaire and assessments to show how outcomes and factors associated with outcomes were to be measured and assessed.

2.2. Fieldwork methods

2.2.1. Survey questionnaire

Table 2 sets out the broad coverage of the Wave 1 and Wave 2 questionnaires. Basic data on learner characteristics (such as primary language, household composition, educational background and existence of learning difficulties) and initial learner motivations were only asked in Wave 1. A number of lines of questioning were repeated in Wave 2 in order to enable changes to be assessed between the two time points, in particular on:

- employment status

- health and well-being
- confidence and attitudes
- self-study.

The questionnaire also included *ex post* questions to explore learners' self-reported perceptions on whether the course had directly helped them to improve their skills or had resulted in social or personal outcomes, such as improvements in self-esteem, making new friends, taking part in voluntary activities and helping children with homework.

Table 2: Broad topics included in the survey questionnaire

Wave 1	Wave 2
Learner background, including primary language, age came to the UK (if relevant)	Not repeated for Wave 2
Household composition, in particular whether school-age children in the household	Not repeated for Wave 2
Existence of learning difficulties	Not repeated for Wave 2
Access to laptop and the internet	Repeated for Wave 2
Employment status and past status	Repeated for Wave 2, with additional questions on any pay rises, better jobs and extent to which this was due to the course
Deprivation measure, in terms of being able to afford particular items	Not repeated for Wave 2
Health and well-being measures	Repeated for Wave 2, with additional question on any life events (e.g. moved home, had a baby, lost a job, received a pay rise)
Educational history and possession of qualifications	Not repeated for Wave 2
Motivation for taking part in training	Not repeated for Wave 2
Confidence in skills in reading/writing or numbers	Repeated for Wave 2
Attitudes to learning	Repeated for Wave 2
Self-study and time spent learning outside the classroom	Repeated for Wave 2
Experience of basic skills provision and time spent in learning	Repeated for Wave 2
	Date of completion of course and/or reasons for drop-out
	Achievements resulting from the course, i.e. qualifications
	Perceptions of skills gains and extent to which this was due to the course
	Extent to which social and personal benefits have occurred since taking part in the course

Source: SQW, GfK NOP, NRDC

2.2.2. Assessment tools

All learners taking part in the survey were asked to complete either the reading test from the Go! Literacy Tests or the numeracy test devised by Professor Diana Coben. The versions of the tests were 'modernised' to bring them up-to-date (with the insertion of new images, for example), though no substantial revisions of the tests were made. Two versions of the tests were created specifically to see if skills gain could be measured, with versions for pre and post-test. For each version of the Go! Literacy Test there were two sets of questions for different levels of difficulty. The set of more difficult questions was intended for learners at Entry Level 3 and above, and the other set was for those at Entry Level 1 and Entry Level 2. Given that the Individualised Learner Record (ILR) does not specify individual Entry Levels for learners, each candidate took a 'locator test' to decide which version of the questions they should be given before they received the assessment.

A small number of assessment scripts were not completed (for example due to learner refusal) or were reported to be lost in the post; the number of completed scripts (which are lower than the numbers interviewed) is set out in Table 3. As can be seen with respect to the numeracy sample, Wave 1 assessments are missing for some of those completing the assessment at Wave 2. This means that the total number completing the assessment in both Waves (333 -these are the critical ones for the analysis) is slightly lower than the overall number completing Wave 2 (340) for the numeracy sample.

Table 3: Completion of assessments

	Wave 1	Wave 2	Total completing at both waves
Literacy	494	297	297
Numeracy	491	340	333

Source: SQW, NFER, GfK NOP

2.2.3. Fieldwork process

Learners were sampled from the ILR (in-scope learner population and provider selection is covered below). Learners were sent a letter in advance notifying them of the research, and providing the option (and Freephone number) to opt out. As per the conditions set by the ILR Data Service, all learners were contacted by telephone to set up interviews, which meant that only learners with phone numbers in the ILR were included within scope. Fieldwork interviewers contacted learners up to eight times, at different times of the day and week, in order to try to set up a time for an interview.

Interviews, covering the survey questionnaire (approximately 25 minutes) and the assessment (40 minutes for numeracy and 55 minutes for literacy), were completed in learners' homes. Permission for re-contact for Wave 2 was sought at Wave 1, with 96% giving permission to be re-contacted.

Given some problems in contacting learners, in particular for the literacy sample, SMS messages were sent to learners indicating that fieldworkers were trying to contact them. Some learners may have been screening out calls to mobiles, because the number from which the researcher was calling was unknown to the learner.

In Annex A lessons from the fieldwork implementation process are identified.

2.3. In scope learner population and provider selection

As agreed with BIS in the early stages of the study, the evaluation has targeted a particular cohort of adult basic skills courses. Therefore, the study's findings are generalizable for this population, subject to any caveats placed on particular findings. The cohort of learners that were in scope were those:

- undertaking approved Skills for Life learning aims in literacy or numeracy (but not ESOL) in the first release of the 2011/12 ILR and who are continuing learners
- on adult basic literacy and numeracy courses at Entry Level, Level 1 and Level 2 (including learners who spoke English as a second language)
- on what was previously classified as Adult Learner Responsive Provision (it excluded those on Employer Responsive Provision)
- studying at General FE Colleges (it excluded non-FE providers), and in classroom-based provision.

For some of the learners where English was a second language, it was entirely appropriate for them to be on adult literacy or numeracy courses. The feedback received from fieldwork interviewers suggests, however, that some learners may have been more appropriately on ESOL provision. It is difficult to be precise about the exact scale of this potential issue without having completed formal diagnostics with the survey respondents.

Within the cohort of learners in scope for the study, and working with the Wave 1 targets of 500 numeracy learners and 500 literacy learners, sampling was undertaken using the ILR extract provided. Quotas were not set for individual parts of the sample, though the sampling was undertaken with the aim of achieving approximately equal proportions of learners on 'good' and 'not good' provision, and a profile of learners that was in due proportion to the spread of the Levels of provision and the number of guided learning hours.

In the scope of the study, it was not possible to assess specifically the quality of provision of adult basic skills provision, and so Ofsted ratings for colleges' overall provision were used: 1= 'Outstanding', 2= 'Good', 3= 'Satisfactory'[2], 4= 'Inadequate'. As agreed between BIS and the researchers 'good' providers for the purpose of this study have been defined as those rated 1 or 2 by Ofsted, and 'not good' providers as those rated 3 or 4 by Ofsted. Clearly there are differences between individual Ofsted ratings, though this split was felt to offer some means of comparing learner outcomes by the quality of provision, albeit with clear limitations.

[2] Ofsted has this year changed the Grade 3 rating to "Requires improvement".

The potential for assessing the quality of basic skills provision specifically was explored, to inform BIS's work in the future. The findings for this pilot study are set out in chapter 3 of this report.

2.4. Analysis

The analysis is described in more detail in Annex A. This section confines the description of the approach to the most salient points. The analysis was undertaken in two parts:

- Survey analysis explored the findings from learner responses to Waves 1 and 2, and considered, in particular the following:
    - a basic descriptive analysis, e.g. of the characteristics of the learners, the nature of their motivations etc.
    - analysis to explore the associations between different variables, e.g. whether gender affected motivations
    - an examination of any observed relationships between satisfaction, attendance levels and enjoyment of learning, and the characteristics of learners and the provision they received
    - an assessment of any changes between Waves 1 and 2 in terms of learning, e.g. in the attitudes towards learning and in learners' perceptions of their own competences
    - an assessment of changes in health and well-being measures between Waves 1 and 2.
- Statistical modelling[3] was used to explore the relationship between outcomes (such as skills gains - based on assessment scores, attitudes to learning and well-being), and learner's background characteristics and circumstances (including the course they were on and the type of provision they experienced). There were two main parts to this analysis:
    - skills gain was investigated by looking for increases in test scores between the two test points, and exploring whether the changes observed were the same for all learners or whether there were differences between learners with particular characteristics (e.g. English as a second language, age, highest prior qualification)
    - other outcomes that might be anticipated as a result of taking part in the course (e.g. changes in attitudes to learning, self-evaluation of skills and health and well-being measures) were modelled using scores for each outcome measure and a time variable in order to see whether there was any

[3] Multi-level modelling was used, because the data is hierarchical. This means, for example, that learners from the same college may exhibit similar characteristics or outcomes, which needs to be taken into account.

association with the outcome and being on the course – or whether such changes simply took place for everyone.

2.5. Caveats to the evidence

With the approach described above, it is important to note a number of caveats to the evidence presented in this report.

The overarching approach was based on a 'one group' design. As is noted elsewhere, this is deemed as a 'simple'[4] or 'weaker' design[5], because of a tendency for beneficiaries to overstate the effect of interventions and the absence of a non-beneficiary group against which to compare their outcomes and responses. Indeed, as part of the wider remit for this study, the researchers were asked to determine options for improving the quality of evidence on adult basic skills provision by exploring the possibility of 'stronger' design through randomised controlled trials (RCTs). Whilst some of the outcomes assessed in this study are based on self-reported achievements, the research sought to overcome some of the weaknesses that can befall a one group design by using established scales (e.g. for mental health and well-being) and tracking these between two points in time, and by tracking progress using specifically-designed research assessment tools. However, it must also be noted that the assessment tools that were used (the Go! literacy tool and the Coben numeracy tool) themselves require updating.

The length of time between Waves 1 and 2 of the survey was set at approximately 12 weeks, in order to meet the timetable set by BIS. Whilst skills gain was to be explored as part of the study (as per the original research specification), it was always clearly acknowledged between the researchers and BIS that this is a relatively short period of time over which to see and/or measure any skills gain. Indeed, in reviewing assessment tools as part of the wider remit for this study, the researchers highlighted the fact that it is difficult to gauge small steps in learner progress using current assessment tools; it can take at least a year for learners to progress between Levels, for instance. Furthermore, given the timing of the study, the second wave of the survey was undertaken in the holiday period (summer 2012), and so there may have even been some skills atrophy for some learners. Ideally, research of this nature should leave a longer period between assessments, and seek to be consistent in the timing in relation to learners' course start and end dates. It may even be worth carrying out assessments at a third point in time, so that the extent to which skills development and progress is sustained can also be captured. Acknowledging this, variation within the sample of learners (in terms of the time since they had completed their course) has been taken into account by incorporating it as a variable in the modelling for assessing skills gains.

The variable adopted for overall provider quality was not specific to the provision being evaluated; rather it was a proxy based on Ofsted ratings for the Colleges more widely. This was the best-fit that could be used for the study, though it presents a caveat in understanding how quality affects skills and other outcomes. For example, if there was no

[4] See Dolan P., Fujiwara D. and Metcalfe, R. (2012) *Review and Update of Research into the Wider Benefits of Adult Learning*, Report to BIS, London, p.11

[5] See HM Treasury (2011) *The Magenta Book. Guidance for Evaluation*, HM Treasury, London, p109 and p122

observed statistical relationship between quality and outcomes, this could be a result of being unable to measure quality effectively, rather than indicating the absence of a relationship.

As an exploratory study, the sample sizes were set at the minimum required to carry out the study in order to yield meaningful results. Larger sample sizes may have been possible, subject to time and recruitment implications with respect to surveying learners, though would have required an increase in the resources available to the study. The sample sizes have limited the ability of the modelling that could be done to explore, for example, the factors that contribute to different learner outcomes.

The researchers note that BIS has been alert to these constraints throughout the study, and has actively been exploring ways of addressing them. As part of this study, the researchers undertook a pilot on improving the identification of ‘good’ and ‘not good’ provision amongst adult basic skills learning, which is reported on in the next chapter. More widely BIS has commissioned several other pieces of work that are relevant, including:

- a review of assessment tools used for research and accountability purposes, which recommended updating research assessment tools, and is now being progressed by BIS

- a Pathfinder project with Colleges to explore how accountability tools can be used to measure distance travelled

- an exploration of the options for a two group design that utilises RCT methodology, which has informed commissioning of an RCT by the Department.

3. Exploring the codification of provider quality for this study

An objective of the overall study was to develop the understanding of the factors leading to greater effectiveness, with one of the factors identified in the original BIS Terms of Reference relating to the quality of provision. In the absence of any other published and agreed measure of the quality of provision of basic literacy and numeracy, it was agreed that quality would be assessed using Ofsted ratings of providers. These ratings, however, are based on inspections of wider provision of Colleges, and may not reflect provision on adult basic skills courses. Therefore, to inform future research and evaluation in this area, a provider quality study was undertaken to explore whether more specific assessments could be made of adult basic skills provision that drew on existing information. This chapter sets out the findings.

The provider quality study was carried out in two stages: a pilot phase followed by a main study phase. In the pilot phase, a group of 12 providers was approached and given a range of options as to what quality assurance data they might be able to share with the research team. This scoping exercise served to gauge the feasibility of approaching a larger group of providers. Following this scoping stage a further 46 providers were approached. Overall, data was collected for eight providers.

3.1. Pilot phase

The pilot phase took place during May 2012. In this phase, 12 providers were approached. These providers were selected because the research team had good contacts with them (an opportunity sample). The information requested from the twelve providers included the following:

- **Anonymised teaching observation grades** for all teachers teaching literacy and/or numeracy at all levels.
- **College retention, achievement and success rates** for discrete literacy and numeracy courses, by age, by ethnicity, by disability/learning need.
- **Punctuality and attendance figures** for literacy and numeracy learners
- **Information on learner progression** on completion of literacy/numeracy courses
- **Recent inspection reports**: visits, monitoring, full inspections (in particular those related to literacy or numeracy).

Information was received from four out of the twelve providers. None of the four provided information on learner progression, however. The information received covered the following areas:

Table 4: Data received in pilot study

	Observation grades	Success/ retention	Attendance/ Punctuality	Ofsted
College A	✓	✓	✓	✓
College B	✓	✓	✓	✓
College C	✓	✓	✓	X
College D	✓	✓	✓	✓

Source: NRDC

Although each provider was contacted a number of times before they provided the information requested, a positive response from one-third of the sample, and the range of information they returned, determined that the research team would move to a second phase.

3.2. Main research phase

The subsequent research took place during October 2012. The information requested from the colleges was as in the initial phase. Forty-six additional colleges were contacted and asked to provide their quality assurance information. Following the initial request, providers received two follow-up telephone calls and one email.

Nineteen colleges indicated that they would provide data. However, only four colleges did provide data. This implies a good level of willingness, but constraints in providing the data. Indeed, the main reason given for not providing the requested data was the resource needed by colleges themselves to collate the data required. The information received was as follows:

Table 5: Data received in the main research phase

	Observation grades	Success/ retention	Attendance/ Punctuality	Ofsted
College E	✓	✓	✓	2008
College F	-	✓	-	2011
College G	✓(partial)	✓	-	2011
College H	✓	✓	✓	2008 plus (mock inspection)

Source: NRDC

3.3. Overall findings on provider quality

These findings are based on the information received from the eight colleges responding to the data requests outlined above.

3.3.1. Teacher observation grades returned

These are the results of the providers' internal teacher observations. Teachers are graded using Ofsted guidance, which grades them as: Grade 1 (outstanding), Grade 2 (good), Grade 3 (requires improvement) to Grade 4 (inadequate).

Ofsted has this year redefined the teaching observation grade 3 label from 'satisfactory' to 'requires improvement.' Their focus in assigning overall grades of 1 'Outstanding' and 2 'Good' is now based on the quality of teaching which is evidenced by teachers being graded 1 or 2. From the teacher observations it can be inferred that one-half of College A's literacy teaching, and just over two-fifths of College H's literacy teaching would not be considered to be of sufficient high quality by Ofsted. College G returned no data on teacher observations, though their Ofsted inspection report (March 2011) describes literacy and numeracy teaching as satisfactory overall. This indicates a tendency to grade 3 (at that time the descriptor for grade 3 was satisfactory).

The remaining four colleges who provided this information had over four-fifths grade 1 and 2 literacy teachers, suggesting good to outstanding teaching.

With respect to numeracy, College A had around three-tenths of teachers graded 3 and 4; College B had just under one-half at these two levels; and College D had just over one-fifth at these two levels. The remaining three colleges who provided this information had over four-fifths of numeracy teachers graded 1 and 2. College G returned no data in this category. As summarised above, their Ofsted inspection report, describes literacy and numeracy teaching as overall satisfactory. As with literacy, this indicates a general tendency to grade 3 ('satisfactory' at the time of the inspection) for numeracy teaching across the colleges, with a limited number of colleges that might prove the exception.

Table 6: Observation grades for literacy teachers

	Staff	Grade 1	Grade 2	Grade 3	Grade 4
College A	8	1	3	4	0
College B	8	3	4	1	0
College C	2	0	2	0	0
College D	11	0	10	0	1
College E	2	0	2	0	0
College G	-	-	-	-	-
College H	9	1	6	2	0

Source: NRDC

Table 7: Observation grades for numeracy teachers

	Staff	Grade 1	Grade 2	Grade 3	Grade 4
College A	7	2	3	1	1
College B	8	1	3	4	0
College C	2	0	2	0	0
College D	9	1	6	2	0
College E	2	0	2	0	0
College G	-	-	-	-	-
College H	7	2	4	1	0

Source: NRDC

3.3.2. Retention

These figures show each provider's total student numbers for literacy and numeracy, and their retention figure. These figures are compared with the national average.

- Three colleges had **literacy retention rates** above the national average. Of the two colleges with lower retention rates, one (College F) was only nominally below (one percentage point) the national average; the other (College C), however, was 18 percentage points below.

- Two colleges had **numeracy retention rates** above the national average. Of the three colleges with lower retention rates, one (College F) was only nominally below (one percentage point) the national average, the second (College D) five percentage points below, and the third (College C) twenty-six percentage points below. College H had a 100% retention rate across both subject areas.

- The College A, with a literacy/numeracy retention rate of 88%, had a better than national average in both numeracy and literacy provision.

Table 8: Provider retention figures for literacy and numeracy courses

	Student numbers	Retention %	% point variation from national average
Literacy		***National average = 85***	
College B	447	88	+3
College C	30	67	-18
College D	167	99	+14
College E	-	98	+13
College F	159	84	-1
College G	-	85	-
Numeracy		***National average = 87***	
College B	535	88	+1
College C	20	62	-26
College D	173	82	-5
College E	-	100	+13
College F	206	86	-1
College G	-	83	-5
Literacy & numeracy			
College A	1405	88	N/A – but above average
College H	1958	100	N/A – but above average

Source: NRDC

3.3.3. Success

These figures show each provider's total student numbers for literacy and numeracy, and their success rate. These figures are then compared with the national average.

Success rates of learners are determined by learner achievement in relation to the number of starts. This contrasts with **achievement** rates, which are measured by learner achievement in relation to the number of students still on programme. For example, if a college has 28 starts, of whom 6 leave, and 20 of the remainder achieve their qualifications:

- the achievement rate would be 20 out of 22
- the success rate would be 20 out of 28.

At this college, the achievement rate would be 90%, whereas the success rate would be 78%. Thus the success rate directly correlates with the college's ability to retain learners on programmes. For this reason, retention rates are critical to a college's measured success.

As can be seen in Table 9, College E and College H have success rates that are substantially above the national averages for both literacy and numeracy. The remainder of Colleges are within five percentage points of the national average, with the exception of College G for literacy (six percentage points below the national average) and College D for numeracy (12 percentage points below the national average).

Table 9: Provider success rates for literacy and numeracy courses

	Student numbers	Success rate %	Variation from national average
Literacy		***National average = 72***	
College B	447	70	-2
College C	30	-	-
College D	167	67	-5
College E	-	87	+15
College F	159	68	-4
College G	-	78	-6
College H	-	89	+17
Numeracy		***National average = 72***	
College B	535	73	+1
College C	20	-	-
College D	173	60	-12
College E	-	94	+22
College F	206	68	-4
College G	-	76	+4
College H	-	94	+22
Literacy & numeracy			
College A	1405	77	+5

Source: NRDC

3.3.4. Attendance

This table shows each provider's total student numbers for literacy and numeracy, along with each provider's attendance rate. There are no national average benchmark figures available for learner attendance. As can be seen in Table 10, even the data that was gathered is incomplete. For those Colleges with available data, College B and College E

have attendance levels of just below 80% for both literacy and numeracy. College D has a similar attendance rate for literacy, but a higher rate of nearly 90% for numeracy. College A and College H have the highest attendance rates of 88% and 96% respectively for literacy and numeracy combined.

Table 10: Provider attendance figures for literacy and numeracy courses

	Student numbers	Attendance %
Literacy		
College B	447	79
College C	30	-
College D	167	81
College E	-	79
College F	159	-
College G	-	-
Numeracy		
College B	535	79
College C	20	-
College D	173	89
College E	-	77
College F	206	-
College G	-	-
Literacy & numeracy		
College A	1405	88
College H	1958	96

Source: NRDC

3.3.5. Overall summary

These data, partial though they are, appear to allow for some judgement to be made on the overall quality of each individual provider, as measured against nationally benchmarked criteria. This could then form the assessment of quality for each provider, and so the quality of provision received by each of their learners. The table below uses colour coding to identify in which areas providers meet or exceed the national standards. Categories coloured green signify those areas where the provider is doing better than the benchmark value, red where the provider is substantively below the value and yellow where they are operating at around the expected level. Given that there is no specific benchmark for attendance, this table looks only at teaching quality, learner retention and success rates.

It is perhaps noteworthy that participating colleges' Ofsted ratings, which take account of a much broader range of areas than literacy and numeracy, **correlated only moderately well with literacy and numeracy criteria**. For example, College E showed a high correlation between its Ofsted rating (outstanding), and its literacy/numeracy rating, outperforming the national average in all literacy and numeracy criteria. In contrast, College G achieved a 2 in its Ofsted rating, but its literacy and numeracy scores were an even mix of above average, average and below average. A larger sample of colleges would be required to draw conclusions about correlations between Ofsted ratings and literacy and numeracy scores.

The approach utilised in this chapter could be used to assess provider quality for adult basic skills provision specifically. However, a note of caution is the significant resource that would be needed to collect the data given that only eight responses were received for this study. For this approach to be effective in providing a more specific variable on the quality of provision received by learners, and so informing a more rigorous assessment of how far quality affects outcomes, a comprehensive or close-to-comprehensive dataset would be required on the providers within a sample. Based on the experience of this study, experienced researchers with good contacts into the sector would need to be deployed, and it may require a combination of telephone calls and face-to-face visits to obtain the necessary data. Given the resources required, this approach may be most appropriate for studies involving smaller samples of colleges.

Table 11: Overall summary

	Teaching quality		Retention		Success rates		Ofsted rating
	Lit	Num	Lit	Num	Lit	Num	
College A							3
College B							2
College C							4
College D							2
College E							1
College F							2
College G							2
College H							3

Source: NRDC

4. Profile of learners taking part in the study

4.1. Characteristics of learners

This section sets out the basic characteristics of learners responding to Waves 1 and 2 of the survey. The tables in this section are based on the unweighted data and show the profile of the Literacy and Numeracy samples and also a comparison between Waves 1 and 2. This allows for an assessment of attrition and selection bias.

Table 12 shows data on the profile of learning being undertaken, examining, by Wave and literacy and numeracy samples, the distribution of the final sample of learners by provider quality, Level of learning, the type of qualification being sought and the hours of guided learning (banded into low, medium and high bands). Key points from the profile data are as follows:

- There was a broadly even split between those on "good" and those on "not good" provision[6]. Just over half of the learners were in provision deemed good or outstanding, with a minority (fewer than one in ten) in provision deemed inadequate by Ofsted. Even so, that means that around two fifths were taking courses in providers identified as only 'satisfactory' (or needing improvement).

- There were slightly higher proportions of respondents on Level 2 than on Entry Level or Level 1 courses, in particular in the case of the numeracy sample (nearly half of whom were studying at Level 2).

There was a broadly even split across the hours bands for learning.

Table 13 and Table B-1 (in Annex B) set out the socio-demographic profile of learners who responded to both Waves of the survey. A number of points are worth noting:

- Just over one-fifth of learners, for both literacy and numeracy, were aged 19-20, but the highest proportion, in each subject area, were aged between 25 and 29 (many of whom would have left school nearly a decade ago).

- Around one third recorded living in a household with children, most (more than two thirds) lived alone (around one in ten) or in households without child dependents (see Table B-1 in Annex B).

- Learners came from a range of ethnic groups, with white British learners making up around one-half of the literacy learners surveyed, and just over one-half of the

[6] As agreed between BIS and the researchers, "good" providers were defined as those assessed by Ofsted as being "Outstanding" or "Good" and "not good" providers were defined as those assessed by Ofsted as being "Satisfactory" or "Inadequate". Clearly there are differences between individual Ofsted ratings, though this split was felt to offer a means of comparing learner outcomes by the quality of provision.

numeracy learners surveyed. The ethnic profile of these learners does not reflect the national population, with a higher proportion of learners from Black and Asian backgrounds than would be expected from a random population sample. For example, Census 2011 indicates that just under 8% of England's 16+ population has an Asian ethnic background (compared with 17% of the Wave 1 sample) and just over 3% a Black ethnic background (compared with 15% of the Wave 1 sample).

- 36% of Wave 1 literacy learners spoke English as a second language (this reduced to 31% for Wave 2) [7]; and 30% of Wave 1 numeracy learners had English as a second language (this was 27% for Wave 2). Attrition rates for the study appear higher amongst non-native speakers.

- Around one-quarter of literacy learners and one-fifth of numeracy learners reported having a specific learning difficulty (primarily dyslexia), although formal diagnoses of dyslexia were less frequent than self-reported cases (see Table B-1 in Annex B).

Table 17: Training profile

	Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2	
	N	%	N	%	N	%	N	%
TOTAL	509	100	310	61*	507	100	355	70*
PROVIDER QUALITY (Ofsted)								
1 – Outstanding	58	11	30	10	40	8	33	9
2 – Good	212	42	131	42	210	41	157	44
3 – Satisfactory	216	42	132	43	223	44	142	40
4 – Inadequate	23	5	17	6	34	7	23	7
LEVEL								
Total Entry level	116	23	59	19	131	26	85	24
Entry 1	24	5	13	4	27	5	19	5
Entry 2	20	4	12	4	32	6	23	7
Entry 3	60	12	30	10	60	12	36	10
Entry NK	12	2	4	1	12	2	7	2
Level 1	190	37	116	37	141	28	102	29
Level 2	203	40	135	44	235	46	168	47
TYPE OF QUALIFICATION								
Certificate in Adult	215	42	128	41	226	45	165	47

[7] Note that it does not logically follow that these learners should have been on ESOL provision instead of basic literacy courses.

	Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2	
	N	%	N	%	N	%	N	%
TOTAL	509	100	310	61*	507	100	355	70*
Literacy/Numeracy								
GCSE in English Language/Maths	107	21	77	25	149	29	103	29
Functional Skills in English/Mathematics	187	37	105	34	132	26	87	25
HOURS (OF GUIDED LEARNING) BAND								
Low (2-60)	163	32	97	31	151	30	104	29
Medium (61-90)	160	31	102	33	195	39	135	38
High (91+)	186	37	111	36	161	32	116	33

Source: GfK NOP survey. Note: retention rate*

Table 13: Socio-demographic profile of Literacy and Numeracy learners by sweep (unweighted data)

	Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2	
	N	%	N	%	N	%	N	%
GENDER								
Male	183	36	112	36	164	32	100	28
Female	326	64	198	64	343	68	255	72
AGE								
19-20	118	23	69	22	120	24	80	23
21-24	72	14	45	15	96	19	66	19
25-59	312	61	190	61	286	56	205	58
60 and over	7	1	6	2	5	1	4	1
ETHNIC ORIGIN								
Asian or Asian British – Bangladeshi	18	4	10	3	24	5	16	5
Asian or Asian British – Indian	21	4	13	4	15	3	7	2
Asian or Asian British – Pakistani	28	6	17	6	29	6	22	6
Asian or Asian British - any other Asian background	25	5	10	3	14	3	8	2
Black or Black British - African	65	13	28	9	37	7	23	7

	Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2	
	N	%	N	%	N	%	N	%
Black or Black British - Caribbean	24	5	15	5	13	3	9	3
Black or Black British - any other Black background	7	1	3	1	8	2	6	2
Chinese	5	1	3	1	2	0	2	1
Mixed - White and Asian	4	1	1	0	1	0	1	0
Mixed - White and Black African	4	1	2	1	7	1	5	1
Mixed - White and Black Caribbean	4	1	3	1	9	2	6	2
Mixed - any other Mixed background	4	1	1	0	4	1	4	1
White - British	236	46	162	52	283	56	208	59
White - any other White background	35	7	22	7	1	0	1	0
Any other	24	5	17	6	28	6	19	5
Not known/not provided	5	1	3	1	22	4	13	4
MAIN LANGUAGE								
English	325	64	213	69	357	70	261	74
Other language	184	36	97	31	150	30	94	27

*Source: GfK NOP survey. Note: *Multiple choice question, so values do not add to 100%*

Table 14 provides the employment and economic profile of survey respondents. For both the literacy and numeracy samples, around (or just under) two-fifths of learners were classified as employed (over half of these being employed part-time), and between 14% and 18% were unemployed (varying slightly between the literacy and numeracy samples, and between Waves 1 and 2 of the survey). The largest proportion of learners, just under one-half, were classified as “not in the labour force”, that is in full-time education, unable to work due to sickness or disability, looking after the home/family, or retired. The work history of those participants who were not currently employed shows a relatively even split between those who had:

- held a paying job in the last three years
- held a paying job, but not in the last three years
- never been employed for pay (either full-time or part-time).

In Wave 2, respondents who were employed were also asked about their working hours and net wage. A higher proportion of numeracy learners were employed, and their average pay was higher at £10.80ph compared to £6.80ph reported by the literacy learners. On average, literacy learners worked 25 hours and numeracy learners 27 hours a week.

While just under one-third of the respondents indicated that they were not suffering from any material deprivation, over half indicated some level of deprivation in terms of limited disposable income (once bills were paid) for home heating, food or unexpected expenses.

Table 14: Employment and economic profile of Literacy and Numeracy learners by sweep (unweighted data)

	Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2	
	N	%	N	%	N	%	N	%
CURRENT WORK STATUS (wave 1) multiple choice								
Doing paid work employed/self-employed, full-time (30 hours+ per week)	61	12	32	10	71	14	43	12
Doing paid work employed/self-employed, part-time (fewer than 30 hours per week)	133	26	76	25	132	26	94	27
Voluntary/unpaid work	26	5	18	6	30	6	26	7
In full-time education/training	131	26	78	25	119	24	78	22
In part-time education/training	79	16	47	15	104	21	81	23
Looking after home/family	67	13	41	13	102	20	80	23
Retired	5	1	4	1	2	0	2	1
Unable to work through sickness/disability (temporarily or permanently)	28	6	22	7	27	5	18	5
Unemployed and looking for work	89	18	56	18	68	13	52	15
LABOUR MARKET STATUS SUMMARY(wave 1)								
Employed	193	38	108	35	203	40	137	39
Unemployed	89	18	56	18	69	14	52	15
Not in labour force	227	45	146	47	235	46	166	47
HOURS WORKED WEEKLY (wave 2 data only)								
Up to 14			18	16			21	13
15-21			38	33			42	27
22-28			9	8			15	9
29-35			29	25			35	22
36-42			14	13			37	23
43-50+			5	5			8	5
HOURLY NET PAY, £ (wave 2 data only)								

	Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2	
	N	%	N	%	N	%	N	%
Under 6.08			49	43			75	48
6.08 - 6.99			15	13			26	17
7.00 - 10.99			26	23			34	22
11.00 +			4	3			2	1
No data (refused, do not know, not stated)			20	18			19	13
WORK HISTORY (for those not in employment and unemployed)								
Held a paying job in the last three years	117	37	79	39	103	34	73	34
Held a paying job but not within the last three years	93	29	70	35	99	33	73	34
Never been employed for pay, full-time or part-time	106	34	53	26	101	33	71	33
HOUSEHOLD DEPRIVATION % WHO COULD NOT AFFORD (wave 1)								
To pay for a week's annual holiday away from home	265	55	162	54	266	53	185	55
To eat meat, chicken or fish (or vegetarian equivalent) every second day	77	15	40	13	62	12	36	10
To pay unexpected, but necessary, expense of GBP 500	320	67	191	66	301	64	205	62
To keep home adequately warm	51	10	26	9	35	7	21	6
HOUSEHOLD DEPRIVATION % WHO COULD NOT AFFORD (wave 1)								
0 of the above	127	28	79	29	129	29	95	30
1 of the above	87	19	57	21	82	19	60	19
2 or 3 of the above	222	49	132	48	215	49	147	47
All 4 of the above	20	4	9	3	15	3	10	3

Source: GfK NOP survey

The educational profile of survey respondents is set out in Table 15. As one would expect, over one-half had a highest qualification only at Level 1 or below (or no qualifications). This compares with 35% in the general population of England (source: Census 2011)[8]. Around one-fifth of learners had already achieved a full Level 2 (whether NVQ, GCSE or equivalent), and a minority of learners had already achieved qualifications at Level 3, 4 or 5. This was particularly evident amongst numeracy learners, with 14% of Wave 1 respondents having a highest qualification at Level 3 or above. This reflects the findings in

[8] Note that the Census indicator includes those aged 16 and above, and so it is likely to be lower than this for the population over 18 years old.

the qualitative research undertaken for the evaluation, which showed a variety of backgrounds amongst literacy and numeracy learners, including those who had otherwise successful educational careers, but who had struggled with a particular subject area (e.g. maths)[9].

Table 15: Educational profile of Literacy and Numeracy learners by sweep (unweighted data)

	Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2	
	N	%	N	%	N	%	N	%
HIGHEST QUALIFICATION (drawn from the ILR data)								
Entry level	52	10	24	8	53	11	32	9
Other qualifications below level 1	21	4	11	4	16	3	12	3
Level 1	131	26	85	27	113	22	77	22
Full level 2	92	18	55	18	111	22	80	23
Full level 3	35	7	26	8	43	9	34	10
Level 4	3	1	3	1	13	3	10	3
Level 5 and above	6	1	5	2	14	3	11	3
Other qualification, level not known	11	2	5	2	13	3	8	2
Not known	73	14	47	15	62	12	42	12
No qualifications	85	17	49	16	69	14	49	14
QUALIFICATION IN ENGLISH multiple choice (drawn from survey responses)								
A City and Guilds certificate	73	15	44	14	60	12	45	13
Other entry level qualification	127	25	75	25	111	22	74	21
A GCSE at grades D-G, a CSE 2 or under	129	26	84	28	104	21	72	20
A GCSE at grades A*-C, a GCE O Level, CSE Grade 1	50	10	28	9	142	28	102	29
An A- or AS-level	4	1	3	1	22	4	15	4
A certificate in higher education	5	1	2	1	3	1	2	1
A diploma of higher education and further education, foundation degree and higher national diploma, degree level qualification	13	3	7	2	14	3	7	2
Other qualification, level not known	34	7	23	8	16	3	11	3
A qualification in English gained outside the UK	43	9	16	5	20	4	16	5

[9] SQW and NRDC (2013) *Investigating the Benefits of English and Maths Provision for Adult Learners: Part 2 Qualitative Assessment*, Report to BIS

	Literacy				Numeracy			
No formal qualifications in English	117	23	75	25	84	17	59	17
QUALIFICATION IN MATHS multiple choice (drawn from survey responses)								
A City and Guilds certificate	42	8	24	8	47	9	32	9
Other entry level qualification	85	17	56	18	126	25	83	24
A GCSE at grades D-G, a CSE 2 or under	115	23	77	25	152	30	110	31
A GCSE at grades A*-C, a GCE O Level, CSE Grade 1	76	15	44	14	53	11	40	11
An A- or AS-level	5	1	5	2	4	1	2	1
A certificate in higher education	3	1	1	0	1	0	-	-
A diploma of higher education and further education, foundation degree and higher national diploma, degree level qualification	13	3	6	2	1	0	1	0
Other qualification, level not known	24	5	17	6	29	6	23	7
A qualification in Maths gained outside the UK	56	11	27	9	31	6	21	6
No formal qualifications in Maths	135	27	77	25	112	22	74	21
AGE LEFT FULL-TIME EDUCATION (drawn from survey responses)								
Never been in full-time continuous education	6	1	1	0	8	2	5	1
Up to 11 years	4	1	3	1	9	2	6	2
12 to 14 years	15	3	11	4	16	3	13	4
15-16 years	164	32	108	35	172	34	126	36
17-19 years	138	27	86	28	172	34	115	32
20-21 years	34	7	16	5	37	7	28	8
22 years or older	53	10	30	10	28	6	19	5
Still in full-time continuous education	95	19	55	18	65	13	43	12
PREVIOUS TRAINING TO IMPROVE READING/WRITING (literacy sample) or NUMBER/MATHS (numeracy sample) – drawn from survey responses								
No	305	60	188	61	328	65	238	67
Yes	203	40	121	39	177	35	116	33

Source: GfK NOP survey

Table 16 sets out the technology use of learners. The majority of learners (over 90%) had access to a computer or laptop at home, and nearly 90% had access to broadband. This is comparable to the wider population, with just under 90% of households in Great Britain

(with at least one adult aged under 65[10]) having internet access at home (source: Office for National Statistics).

Table 16: Technology use comparison between waves

	Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2	
	N	%	N	%	N	%	N	%
COMPUTER OR LAPTOP AT HOME								
Yes	469	92	287	93	473	93	338	95
No	40	8	22	7	34	7	17	5
INTERNET ACCESS AT HOME								
Yes, broadband	438	86	269	87	448	89	324	92
Yes, dial-up	4	1	3	1	4	1	4	1
Yes, via mobile phone/smart phone	15	3	11	4	16	3	6	2
No	51	10	27	9	37	7	20	6

Source: GfK NOP survey

[10] Households comprised only of people aged 65+ have been excluded from the comparable statistic as they have a significant bearing on the statistic, and 99% of adult basic skills learners in the sample were under 60.

Summary of key points

Learners came from a range of ethnic groups, with white British learners making up around one-half of the literacy learners surveyed, and just over one-half of the numeracy learners surveyed. The ethnic profile of these learners does not reflect the national population as indicated in the 2011 census, with a higher proportion of learners from Black and Asian backgrounds than would be expected from a random population sample.

36% of Wave 1 literacy learners had English as a second language (this reduced to 31% for Wave 2); and 30% of Wave numeracy learners had English as a second language (this was 27% for Wave 2).

Around one-quarter of literacy learners and one-fifth of numeracy learners reported having a specific learning difficulty, though fewer had a formal diagnosis.

The majority of the sample was either unemployed or "not in the labour force" (i.e. not working and not looking for work).

Whilst the educational profile showed a lack of formal qualifications amongst a large proportion of the sample (over one-half had no qualifications or a highest level at Level 1), the ILR data indicates that some learners have had successful educational careers.

5. Experiences of provision

5.1. Pre-course motivations and expectations

Learners were asked why they had decided to enrol on the course. A summary of their responses is set out in Table 17, which indicates that the most commonly mentioned motivations were[11]:

- that respondents enjoyed learning or got pleasure from it
- to increase self-esteem and self-confidence
- to get on to another course
- to improve skills for daily activities
- to increase social interaction.

Most of the learners mentioned enjoyment of learning (87% of literacy learners, and 83% of numeracy learners) as well as willingness to increase their self-esteem and confidence (83% of literacy learners, and 76% of numeracy learners) as their main motivators to enrol on the course. This was closely followed by some very practical motivators such as getting on another course and improvement of skills for daily life activities.

The vast majority of unemployed learners reported that they had decided to enrol on the course because they felt that it would help them to get a job. Three out of four of those learners who were in paid employment were motivated by the prospect of improving and developing skills for their current job or a new job.

[11] Note that learners could give multiple responses

Table 17: Why did you decide to enrol on this course? (multiple choice)

	Literacy			Numeracy		
	N	%	Missing or DK (N)	N	%	Missing or DK (N)
I enjoy learning/ learning gives me pleasure	441	87	2	418	83	6
To increase my self-esteem and self-confidence	421	83	5	383	76	2
To get me on another course	399	78	13	393	78	9
To improve my skills for daily activities (household work, shopping etc.)	378	74	-	369	74	1
To meet new people	321	63	8	262	52	4
My family/friends encouraged me	195	38	-	201	40	-
A teacher on a previous course encouraged me	133	26	3	126	25	2
My friends are on the course	105	21	-	111	22	-
To improve and develop skills for my current job, or a new job or promotion [a]	140	76	2	146	74	-
My employer/manager encouraged me [a]	16	8	1	31	20	2
To help me get a job [b]	86	96	-	63	98	2
Not really my choice - requirement for benefits, work or my profession [ab]	49	13	5	61	23	5
To help my child with school work [c]	130	82	-	111	72	-

Source: GfK NOP survey. Notes: [a] was asked only to those in paid employment; [b] was asked only to unemployed and looking for work; [c] was asked only to those with children (own, current or former spouse/partner, adoptive or foster children) aged 4-18 that are in school

There are differences in the motivating factors of learners depending on individual characteristics (such as gender, age and main language), and the type and level of provision that learners were on. For example, the tables in Annex D demonstrate that female learners on numeracy courses were significantly more likely to mention self-confidence as a motivating factor than their male counterparts; and females on literacy courses were also more likely to mention getting on another course as a motivating factor than male learners. There are three aspects that are worth highlighting:

- There were some differences in motivations dependent on the **age of learners**. Older learners were more likely to report increasing their self-esteem, enjoyment of learning, getting on another course and improvements related to labour market opportunities as their motivating factors. A higher proportion of younger learners said that they had been motivated to enrol on their course by friends who were on the course or through encouragement from a previous teacher. This suggests that peer groups and respected advisors are more important for younger learners.

- With regards to the **level of qualification**, learners on higher level courses were more likely to mention getting on another course and the requirements of their work

or professions as the reasons why they had enrolled. In comparison, those on lower level courses (in particular Entry level) were more likely to report personal and social reasons, such as friends, new contacts, increases in self-esteem and improvement of everyday life skills, as their reasons for joining the course. This highlights an important trajectory for learners, with socio/psychological factors apparently more important at Entry Level, with learners on and/or progressing to higher level courses identifying with the benefits to their own human capital.

- There were differences in the motivations of learners based on the **type of the qualification** they were working towards (see Table A-5). Learners working towards the Certificate in Adult Literacy or Numeracy reported personal and social reasons, such as increasing their self-esteem, improving their daily skills, meeting new people, and helping children with homework, more frequently than those working towards GCSEs in Maths or English, or Functional English or Maths. They were also more likely to report that they had been encouraged to participate by family/friends and by friends who were already on the courses. Those on GCSE courses were more likely to be motivated by the possibility of getting on another course or as a requirement for benefits, work or promotion. This may reflect the gatekeeper role of GCSEs and their higher value and currency in the education system. GCSEs are a requirement for entry to many courses, and are recognised beyond education (by employers for example) whereas the Certificate in Adult Literacy or Numeracy may be less well-recognised. It may be that learners understand this and so those who feel ready to progress onto further learning or to go on to employment are more likely to be studying for GCSEs. Those following the Certificate in Adult Literacy or Numeracy qualifications may be taking their first steps into learning and may not yet identify themselves with progression through the education system or onto work. Indeed, these learners may be re-entering education after bad experiences of the school system, as was found during the qualitative research with learners[12], and so may see an 'Adult' qualification as more relevant to them, and GCSEs as a potential 'turn-off'.

Survey respondents were also asked about what they wanted to achieve from the course. Virtually all learners, on both literacy and numeracy courses, cited course completion and getting a qualification and a high proportion identified improving skills for everyday or work tasks, raising self-esteem, and moving onto another course. Getting a better job was frequently mentioned by respondents in paid employment and getting a job was frequently mentioned by those who were unemployed. For those with children of school age, helping their children also scored highly.

Overall, the evidence indicates that learners were most interested in using the courses for self-improvement and self-fulfilment. However, there was also a direct link made by some learners to career progression (including, for the unemployed, getting a job) together with an indirect link through expectation that the course may help to improve skills and/or enable them to get on to a new course.

[12] See the separate report on the qualitative research commissioned as part of this study: SQW and NRDC (2013) *Investigating the Benefits of English and Maths Provision for Adult Learners: Part 2 Qualitative Assessment*, Report to BIS

That learners are motivated to join literacy and numeracy courses for a wide variety of reasons is well supported in recent NRDC research. The NRDC Learner Study noted that the most commonly mentioned were to improve literacy skills not acquired at school; to gain skills and certificates for employment; to help (grand)children with schoolwork and homework; and to meet other people (Rhys Warner et al 2008)[13].

The fact that motivating factors depend, to some extent, on learner characteristics, suggests that there are variations in motivations across the learner group. This aligns strongly with the varying motivations (and prior experiences of education) that was found in the parallel qualitative research.[14] The desire to improve one's employment prospects by gaining a qualification or improving one's skills may not be enough for a learner to engage successfully in learning. Learners' motivations for joining, and continuing to attend, literacy and numeracy classes go beyond those related to needs within their current employment, or perceived skills deficits in their everyday life. Swain (2005)[15] found that the main motivations for learning expressed by a group of numeracy students were: to prove that they have the ability to succeed in a subject which they see as being a signifier of intelligence; to help their children; and for understanding, engagement and enjoyment.

Learners' motivations to succeed in their learning are powerful drivers and should be acknowledged by providers in their course offer and in their work with individual learners. Courses with a narrow focus on employability or employment related outcomes, while superficially meeting learners' needs, may fail to adequately recognise, and harness, those broader motivations.

[13] Rhys Warner J., Vorhaus J., Appleby Y., Bathmaker A-M., Brooks G., Cole P., Pilling M. and Pearce L. (2008) *The Learner Study: The Impact of the Skills for Life strategy on adult literacy, language and numeracy learners*, London

[14] SQW and NRDC (2013) *Investigating the Benefits of English and Maths Provision for Adult Learners: Part 2 Qualitative Assessment*, Report to BIS

[15] Swain J. (2005) "'Beyond the daily application': motivations for adults attending numeracy classes" in *Research in Post-Compulsory Education*, Volume 10, Issue 3

Table 18: What do you want to achieve from this course? - (multiple choice)

	Literacy			Numeracy		
	N	%	Missing or DK (N)	N	%	Missing or DK (N)
To complete the course	506	99	1	501	99	1
To get a qualification	500	98	1	504	99	-
To improve my reading / writing / maths skills to deal with work tasks	450	88	1	432	85	4
To improve my reading / writing / maths skills to deal with everyday tasks (shopping etc.)	440	86	2	413	82	1
To improve my self-esteem	436	86	3	415	82	-
To move onto another course	428	84	20	407	80	19
To make new friends	339	67	7	323	64	6
To get a better job or a promotion or pay increase [a]	163	88	-	158	86	3
To get a job [b]	93	97	-	69	98	-
To be able to help my children with school work [c]	156	87	-	136	82	-

Source: GfK NOP survey. Note: [a] was asked only to those in paid employment; [b] was asked only to unemployed and looking for work; [c] was asked only to those with children (own, current or former spouse/partner, adoptive or foster children) aged 4-18 that are in school.

5.2. Course experience

Tables 19 to 21 set out the data on satisfaction with the learning experience, attendance levels and overall enjoyment. The results, on the whole, are positive, with:

- 68% of Wave 1 literacy learners and 70% of Wave 1 numeracy learners “very” or “extremely satisfied” with their learning experience (over one-fifth from each were “fairly satisfied”)
- over 90% of learners attending “most” or “all” of their classes
- around 90% of literacy learners and 87% of numeracy learners enjoying their learning “a fair amount” or “a great deal”.

Table 20: How satisfied are you with the current learning experience?

	Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2	
	N	%	N	%	N	%	N	%
Extremely satisfied	124	24	79	26	131	26	101	29
Very satisfied	224	44	148	48	224	44	159	45
Fairly satisfied	113	22	65	21	107	21	80	23
Neither satisfied or dissatisfied	17	3	11	4	13	3	6	2
Fairly dissatisfied	17	3	5	2	18	4	3	1
Very dissatisfied	9	2	2	1	10	2	5	1
Extremely dissatisfied	5	1	-	-	3	1	1	0

Source: GfK NOP survey

Table 21: Approximately what proportion of classes have you attended to date?

	Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2	
	N	%	N	%	N	%	N	%
All	210	41	132	43	172	34	139	39
Most	267	53	164	53	290	57	181	51
About half	25	5	11	4	37	7	22	6
Fewer than half	4	1	1	0	5	1	8	2
Very few	2	0	2	1	3	1	3	1

Source: GfK NOP survey

Table 22: How much have you enjoyed your learning so far?

	Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2	
	N	%	N	%	N	%	N	%
Not at all	9	2	4	1	12	2	6	2
A little	39	8	30	10	52	10	40	11
A fair amount	139	27	90	29	164	32	109	31
A great deal	322	63	186	60	278	55	200	56

Source: GfK NOP survey

The relationship between satisfaction, attendance and enjoyment of learning, and the characteristics of learners and college provision was explored through three-level panel data regression models. The full results are presented in Table B-1 in Annex B with the summary in Table 23.

The data does not provide evidence of any links between satisfaction with learning and attendance of classes and the guided learning hours, level or quality of the provision as rated by Ofsted. In relation to the absence of a link with the quality of provision, it is important to bear in mind the caveat cited in Chapter 2, namely that quality is based on a broad measure using College Ofsted ratings rather than a measure of the quality of adult basic skills provision specifically.

The data suggests that longer courses, however, tend to increase enjoyment of learning. This intuitively makes sense, since longer courses are more likely to enable learners to build relationships with their fellow students and their teachers, which may increase enjoyment. In addition, learners will have more time to become familiar with the learning environment and the college. These findings came out strongly in the qualitative research that was undertaken as part of this study, with tutors receiving significant praise, as well as the wider college environment, and learners commenting on the benefits of learning in their group[16]. For example, one learner said that she met up with other women to complete homework assignments together. Whilst the evidence presented in Chapter 6 does not necessarily conclude that longer courses lead to more positive outcomes, if basic skills courses are important as a key stepping stone to further learning and progress, then enjoyment (and the aspects that are related to this such as developing tutor, learner and college relationships) is a key factor in contributing to this.

The survey data also showed that learners on numeracy courses tend to be more satisfied with their learning experience, but enjoy their learning less, compared with literacy learners. This may be to do with learners seeing maths as a challenge, and something in which they have previously failed, but in which they now want to succeed as an intellectual challenge, even if they do not actually like maths as a subject. Their satisfaction, therefore, comes from proving that they can do it, rather than from enjoyment of the topics. On the other hand, whilst literacy learners may have similar previous experiences and challenges, their increased literacy skills means they are given access to more information and stimulation (and can access for themselves) that they gain enjoyment as well as functional value. There is no significant empirical evidence to justify this hypothesis: the qualitative research showed that numeracy learners also reported feeling more capable now, having previously been *"scared of looking stupid"*[17]. This meant that they had gained control of tasks like shopping, in which they could estimate the bill before getting to the checkout.

The analysis showed that provision may not be working as well for those learners with additional needs. Learners for whom English is not their first language were, on average, less satisfied with the learning. The same was true for learners with learning difficulties and/or disabilities who were, on average, less satisfied with the learning. It is not possible to expand fully on the reasons for this lower level of satisfaction, though the feedback from fieldworkers suggested that some learners that were interviewed may have been more appropriately on ESOL provision; this could account for lower satisfaction. This evidence gap could be explored in future research.

Older learners tended to report higher levels of enjoyment. Unsurprisingly, the data also showed the existence of a positive association between satisfaction with learning, enjoyment of learning and attendance. The strongest relationship was between satisfaction and enjoyment and the weakest was between satisfaction and attendance of classes.

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[16] SQW and NRDC (2013) *Investigating the Benefits of English and Maths Provision for Adult Learners: Part 2 Qualitative Assessment*, Report to BIS

[17] SQW and NRDC (2013) *Investigating the Benefits of English and Maths Provision for Adult Learners: Part 2 Qualitative Assessment*, Report to BIS

Table 23: Estimated effects (standardised betas) of provision characteristics on course experience

	Model:	Satisfaction with learning experience		Attendance of classes		Enjoyment of learning	
Numeracy (reference category: Literacy)		.06	*	-.07	*	-.06	*
Ofsted quality ratings (reference category: Ofsted quality rating 1)	2	.03		-.08		-.02	
	3	.05		-.04		-.04	
	4	.04		-.06		-.04	
Qualification level (reference category: Entry Level)	Level 1	-.04		-.00		.04	
	Level 2	-.02		-.01		.02	
Guided learning hours (reference category: Low 2-60)	Medium (61-90)	-.03		-.02		.07	*
	High (91+)	-.01		-.02		.13	***

*Source: GfK NOP survey. Note: The model includes individual controls, such as age, gender and some attitudes. Full models presented in Table B-1in Annex B. † p ≤ .1; * p ≤ .05; ** p ≤ .01; *** p ≤ .001*

Summary of key points

The evidence indicates that the most common motivations and objectives for learners are around self-improvement and self-fulfilment. Nevertheless, it is important to note that motivations can vary across learners, including depending on characteristics (such as age and gender), level of courses, and types of provision.

Most learners do intend or expect to use the course to get into employment (for those who are unemployed) or get a better job or promotion (for those in employment). Additionally many learners are seeking to improve their daily skills and potentially use the learning to help them get on to a new course.

Indicators of course experience in terms of satisfaction, attendance and enjoyment are favourable.

However, learners for whom English is their second language and those with a disability or learning difficulties were, on average, less satisfied with the learning, indicating that provision may not be working for all learners with additional needs.

6. Learner progress and outcomes

This section sets out the initial headline evidence on learner progress. In doing so, four types of outcomes are examined:

- labour market effects in terms of employment, improved employment and participation in further study
- skills gains, based on self-reported perceptions and drawing on the results from the formal assessments undertaken as part of the fieldwork
- changes in attitudes towards learning
- changes in health and well-being.

6.1. Employment and participation effects

Table 24 sets out the evidence on the effects associated with gains in employment and/or outcomes relating to participation in further study. The data draws on those respondents who took part in both Waves 1 and 2 of the survey. The evidence suggests that there are some indications of positive progress in the labour market, although given the limited time since course participation, and the resulting small numbers of learners that have progressed, it is difficult to be conclusive about these. For example, the table indicates that 29 literacy learners and 30 numeracy learners who were either unemployed or not in the labour force at Wave 1 were in employment by the time of the follow-up study. The net increase of those in employment is much lower though, indicating a degree of churn in employment amongst this learner cohort: the table indicates that a total of 14 more learners from the literacy sample, and a total of 18 more learners from the numeracy sample were employed by the time of Wave 2.

There is also a degree of churn in terms of those in the labour force. The overall numbers indicate that there was a net increase in the number of learners ***not*** in the labour force (from 18% to 23% amongst literacy learners, and 15% to 20% amongst numeracy learners). There were some learners who moved back into the labour force since Wave 1. For example, amongst those outside the labour force in Wave 1, some learners went into employment (as noted above), but a further 34 literacy and 27 numeracy learners were unemployed and looking for work.

It must be noted that a small number of learners (five from the literacy sample and 11 from the numeracy sample) who were unemployed at Wave 1 were studying at the time of Wave 2 (and so technically not in the labour force).

Table 24: Employment and further study outcomes between Waves 1 and 2

	Literacy		Numeracy	
	N	%	N	%
Employment and further study outcomes				
Employed Wave 2	122	40	156	44
Not employed	186	60	198	56
Unemployed	115	37	126	36
Not in the labour force	71	23	72	20
Employed Wave 1	108	35	137	39
Not employed	202	65	218	61
Unemployed	146	47	166	47
Not in the labour force	56	18	52	15
Difference in numbers and proportion employed between Wave 1 and 2	14	5	18	6
Improved employment status after training				
Of those unemployed in Wave 1				
Employed in Wave 2	10	18	9	18
In study in Wave 2	5	8	11	17
Of those not in the labour force in Wave 1				
Employed in Wave 2	19	13	21	13
Unemployed looking for work in Wave 2	34	23	37	22

Source: GfK NOP survey. Note: Table only includes data on learners taking part in both Waves of the survey

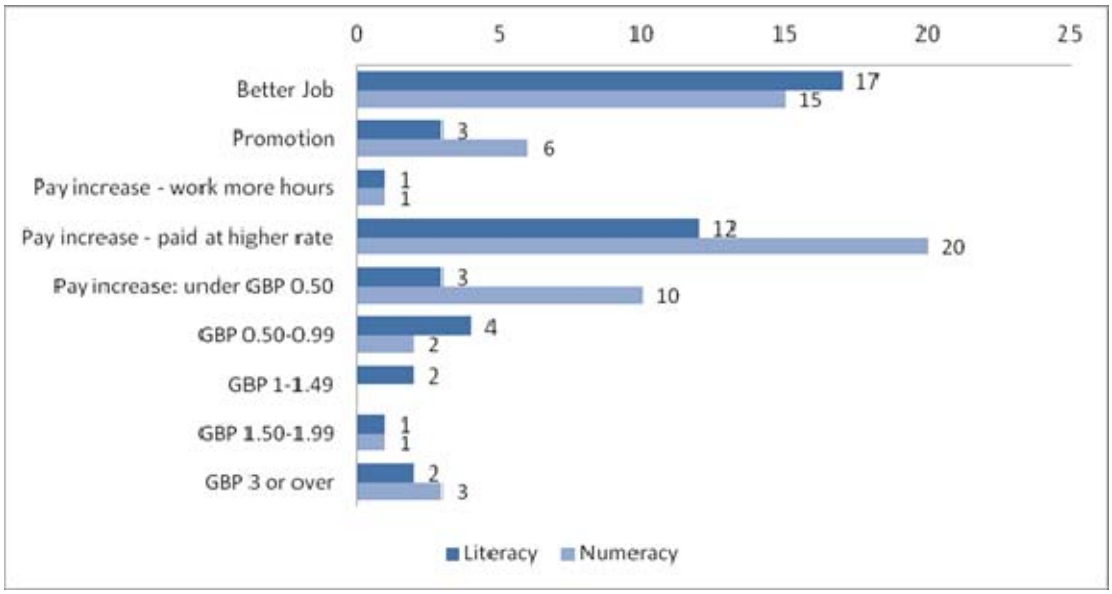
Learners were also asked if they had got a job or got a better job or a promotion or pay increase and, if this had happened since they were on the course, how much the course had helped them in this achievement (see Table 25). Around one-quarter of learners reported getting a job and just over two-fifths of these reported that their course had helped them in this.

One eighth of the respondents said that they had got a better job, promotion or pay increase and again around half of them reported that their course had helped them with this change. The actual pay increases ranged from less than £0.50 to over £3.00 per hour. Most of the respondents received an increase of less than £1.00 to their hourly net pay.

Putting the evidence together, around three-eighths (37%) of Wave 2 respondents said that they had got a job or a better job/pay increase/promotion since taking the course. Levels of self-reported attribution of these labour market benefits to the course were in the range of 40-50%. Therefore, just under one-fifth of learners achieved 'additional' employment-related benefits from their course in the form of getting a job or progressing in their jobs. It must be noted that there may be some optimism bias associated with these

findings (i.e. learners may have over-estimated the role of the course). The evidence presented earlier on labour market churn suggests that the sustainability of these benefits may also be limited. A more robust, two-group (i.e. beneficiary group and comparison/control group) and/or longitudinal evaluation design may be able to provide stronger evidence of labour market effects.

Figure 1: Number of respondents who got a better job, promotion or pay increase (in absolute numbers)



Source: GfK NOP survey

6.2. Skills gains

The analysis of skills gains considers several different aspects:

- direct perceptions of learners as to whether their confidence in their skills and use of skills has improved
- changes in perceptions of skill levels and the use of skills between Waves 1 and 2
- improvements in skills as evidenced by changes in learners' assessment scores between Waves 1 and 2.

6.2.1. Direct perceptions

Table 25 sets out the findings on self-reported effects resulting from courses. This shows that a majority of learners thought they had increased their confidence in reading (80% of literacy learners), writing (83% of literacy learners) and maths/numbers (90% of numeracy learners). Around 60-70% of those learners reporting improved confidence considered that the course had helped "a lot" in this regard. Similar proportions were evident when learners were asked whether their skills/abilities had improved. Smaller proportions considered that they were reading, writing or using numbers more often since the course (between 40 and 50% of learners from the respective samples), but attribution of the importance of the course to this increased practice was higher.

This provides some evaluation evidence of the contribution of courses to skills and confidence, albeit "weak" evidence given the potential for beneficiaries to overstate the effects and the absence of a non-beneficiary group against which to compare results. This was also backed up by the qualitative research, which found increases in simple self-reported confidence since the start of courses, but also growing confidence in the completion of tasks in everyday life, for example calculating the bill on social occasions, helping children with homework and/or reading, and in the work environment[18]. More generally, Table 25 sets out a range of other wider benefits, in particular improved self-esteem amongst learners, social benefits (i.e. making new friends), and, for those with children, improved abilities to help children with homework.

Table 25: Self-reported effects as a result of the course

	Literacy				Numeracy			
	Happened since the course		The course helped (a lot) out of those who experienced the event		Happened since the course		The course helped (a lot) out of those who experienced the event	
	N	%	N	%	N	%	N	%
DIRECT BENIFITS FROM THE COURSE								
Completed the course	282	94		-	332	96		-
Got a qualification	219	73		-	244	71		-
Signed up to another course	174	58		-	194	56		-
CONFIDENCE IN SKILLS AND THEIR USE								
Improved reading skills	241	78	170	71				
Increased confidence in reading	249	80	175	70				
Read more often	165	53	141	86				
Improved writing ability	240	77	170	71				
Increased confidence in writing	257	83	174	68				
Write more often	139	45	126	91				
Increased confidence in maths or with numbers					320	90	200	63
Improved ability in maths or with numbers					325	92	211	65
Work with numbers or use number skills more often					154	43	132	86

[18] SQW and NRDC (2013) *Investigating the Benefits of English and Maths Provision for Adult Learners: Part 2 Qualitative Assessment*, Report to BIS

	Literacy				Numeracy			
	Happened since the course		The course helped (a lot) out of those who experienced the event		Happened since the course		The course helped (a lot) out of those who experienced the event	
	N	%	N	%	N	%	N	%
OTHER SELF REPORTED BENEFITS								
Improved self-esteem	284	93	198	70	326	94	203	62
Made new friends	263	86	159	61	290	83	171	59
Made lifestyle changes such as diet/exercise/keeping more active	188	61	91	48	164	47	69	42
Taken part in voluntary or community activities you did not do before	82	27	35	43	86	25	45	52
Got a job	80	26	40	50	80	23	30	38
Feel more able to help children with homework [a]	73	77	72	99	93	75	91	98
Helped my children more with their school work [a]	71	23	51	72	98	28	61	62
Got a better job or a promotion or pay increase	41	13	20	49	42	12	22	52

Source: GfK NOP survey. [a] was asked only to those with children (own, current or former spouse/partner, adoptive or foster children) aged 4-18 that are in school.

6.2.2. Changes in perceptions of self-reported skill levels between Waves 1 and 2

Learners were asked to rate their skills in daily life and their skills relating to their work (in terms of whether it had limited their job opportunities) during both Waves 1 and 2 of the survey. The results and changes between the Waves are set out in Table 26. The evidence is mixed, with fairly similar proportions of learners (15-20%) reporting either increases or decreases in relation to skills in daily life. There was a similar pattern in relation to the extent to which learners felt that their skills had limited their job opportunities. The data was analysed using Sign test for matched pairs (using ordinal data). The results suggest that the only statistically significant positive difference is with regards to reading skills as related to a job. However, this, in itself, does not provide hard evidence of skills gains. One potential reason for these findings, which the research did not test, is that the courses make learners more realistic as to their skill levels and alert them to the extent to which their low level skills may have hindered them, in the past, in the labour market.

Table 26: Change in self-reported skills (change between Wave 1 and Wave 2) SKILLS IN DAILY LIFE

	Increased	Stayed the same		Decreased	Total N
		High skill level	Low skills level		
Reading (literacy sample)	18	64	3	15	302
Writing (literacy sample)	17	56	8	19	302
Maths/Numbers (numeracy sample)	21	60	3	16	365

Source: GfK NOP survey. Notes: Table only includes data on learners taking part in both Waves of the survey. Question asked "how good are you at…?" with responses: very good, fairly good, below average, poor, cannot read/write in English – last option for literacy sample).

Table 27: Change in self-reported skills as related to job (change between Wave 1 and Wave 2) *SKILLS AS RELATED TO JOB – how much if at all have … skills limited your job opportunities? (A lot, a little, not at all)*

	Limit more	Stayed the same			Limit less	Total N
		a lot	a little	not at all		
Reading (literacy sample)	15	15	14	34	24	273
Writing (literacy sample)	17	13	18	33	19	269
Maths/Numbers (numeracy sample)	16	14	22	27	22	320

Source: GfK NOP survey. Notes: Table only includes data on learners taking part in both Waves of the survey. Question asked "how much if at all have … skills limited your job opportunities?" with responses: A lot, a little, not at all.

6.2.3. Changes in the use of skills

Table 28 and Table 29 set out the observed changes between Waves 1 and 2 in terms of how learners improve their skills through self-study and through using their skills in everyday life. The descriptive evidence here suggests a decrease in some of the techniques tested with respect to self-study (e.g. with tutor or friend or family member), which perhaps might reflect adopting other techniques. The evidence did not indicate strong increases (relative to the proportion of decreases) in how people use skills in their everyday life. There were a couple of exceptions, with regards to the use of numerical skills to check accounts and balances and literacy skills to write notes, letters or email at home with statistically significant positive differences found when using a Sign test for matched pairs. The separate qualitative research suggested more changes in the use of skills, which may be partly because the in-depth interviews provided the opportunity to find out about a range of practices[19]. For example, the qualitative research suggested that numeracy learners improved their skills by doing things like household budgeting, calculating the bill and shopping, items that were not asked specifically about in the

[19] SQW and NRDC (2013) *Investigating the Benefits of English and Maths Provision for Adult Learners: Part 2 Qualitative Assessment*, Report to BIS

survey, though which aligns with the survey findings associated with checking accounts and balances.

Table 28: Change in how learners improve skills through self-study

	Started using	Stayed the same		Stopped using	Total N
		Use	Do not use		
LITERACY SAMPLE TO IMPROVE READING/WRITING SKILLS					
by reading books, magazines or manuals	9	74	7	11	302
by watching educational TV, a video, by computer or the internet, or a correspondence course	12	57	17	15	298
with tutor or with a friend or family member	12	38	30	20	301
NUMERACY SAMPLE TO IMPROVE MATHS/NUMBER SKILLS					
by reading books, magazines or manuals	9	48	26	18	363
by watching educational TV, a video, by computer or the internet, or a correspondence course	13	50	22	18	363
with tutor or with a friend or family member	12	39	30	19	363

Source: GfK NOP survey. Note: Table only includes data on learners taking part in both Waves of the survey

Table 29: Change in the use of skills in everyday life

	Increase	Stayed the same			Decrease	Total N
		Never or rarely	Medium use (once a week or less)	Often (every day, a few times a week)		
LITERACY SAMPLE TO IMPROVE READING/WRITING SKILLS						
Read directions or instructions for medicines, recipes, or other products	29	5	5	28	34	301
Read the newspaper	27	10	8	30	26	302
Read fiction (stories, novels) and/or non-fiction (e.g.: histories, biographies, religious, science, self-help)	34	10	8	18	30	301
Read magazines or comic books	32	11	12	14	30	302
Write notes, letters or email at home	29	6	5	25	35	302
NUMERACY SAMPLE TO IMPROVE MATHS/NUMBER SKILLS						
Check bank accounts and balances, check credit card accounts	30	4	19	25	22	365

	Increase	Stayed the same			Decrease	Total N
		Never or rarely	Medium use (once a week or less)	Often (every day, a few times a week)		
Calculate interest rates	25	45	3	2	25	357
Calculate distances of journeys	34	23	7	8	27	363
Convert weights and measures (e.g. while cooking)	30	22	6	9	32	365

Source: GfK NOP survey. Note: Table only includes data on learners taking part in both Waves of the survey

6.2.4. Improvements in assessment scores between Waves 1 and 2

The multi-level modelling suggested that there was a small increase in numeracy attainment scores, by an average of 1.6 points. The evidence indicates that those students with self-reported learning difficulties did not make as much progress as those without such difficulties; the average score of a respondent with learning difficulties was a mean of 3.4 points below that of the average student at Wave 2, taking into account the time effect.

There was no evidence of overall gains in reading attainment over the time period, and, indeed, for those taking literacy test B (administered to learners on Entry Level 3 and above) there was a slight fall in scores. There were some positive effects for individual groups of learners, however. There was a greater than average change in reading skills amongst those for whom English was a second language; and, albeit based on a small sample of 19 learners, there was evidence that those on Entry Level 1 saw a greater than average change in their reading skills.

Summaries of the final models are included in Annex F.

The limited evidence on skills gain is likely to be due to the short period of time between the two assessments and the difficulty in picking up very small gains using existing research assessment instruments. Nevertheless, there were some positive results on skills gain, such as the increase in numeracy attainment, and the progress made by individual groups on literacy. Longitudinal research that BIS has recently commissioned can help in building on these initial findings. The researchers highlight three key points here, namely that:

- it is difficult to gauge progress using current assessment tools, in particular, as it can take at least a year to progress between Levels
- the second wave of the survey was undertaken in the holiday period (summer 2012), and so there may have been some skills atrophy for some learners

- informing future longitudinal studies that BIS commissions, research of this nature should, ideally, leave a longer period between assessments, and seek to be consistent in the timing in relation to learners' course start and end dates[20].

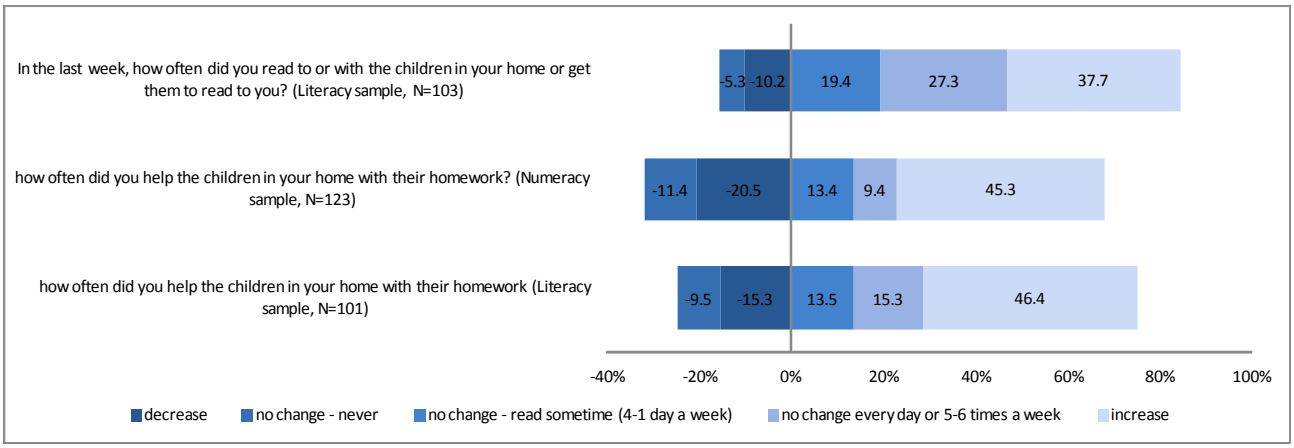
6.3. Parenting and Basic skills

Of those respondents with children aged 4-18 and in school, 82% of those on literacy courses and 72% of those on numeracy courses reported that helping their child with school work was one of the motivating factors behind their enrolment on the course.

In the second wave of the survey, 77% of literacy learners and 75% of numeracy learners with children aged 4-18 and in school reported that they felt more able to help their children with their homework and almost all attributed this to their participation in learning in their course. Additionally, 23% of literacy and 28% of numeracy learners said that they helped their children with homework more often and 75% thought that the course had helped them a lot with this change.

Figure 2 sets out the data on changes in parental activities for those learners with children. The evidence here is more conclusive, with over two-fifths of learners with children increasing the extent to which they have helped their children with homework (for both literacy and numeracy learners), and just under two-fifths increasing the frequency of reading to or with their children (from the literacy sample).

Figure 2: Change in parental activities



Source: GfK NOP survey. Note: Figure only includes data on learners taking part in both Waves of the survey

6.4. Attitudes towards learning

The data on attitudes towards learning follows a similar pattern to the evidence on self-reported skills gains. Table 30 indicates that, *ex post*, learners report improved attitudes towards learning, with other benefits associated with quality of life and life goals. However,

[20] Indeed, carrying out assessments at a third point in time may assist in assessing the extent to which skills development and progress is sustained.

the evidence based on changes in learners' own perceptions between Waves 1 and 2 (see Table 31 and Table 32) suggests relatively few changes in enjoyment and perspectives on learning across the sample as a whole. To some extent this reflects the baseline position at Wave 1 – see Annex B for the results from the Wave 1 survey. It is also important to note some relatively high levels of non-response to certain parts of questions, e.g. "I seldom see a book I want to read" (22 missing responses), and "It is difficult to find a good job unless you have passed your maths exams" (21 missing responses).

Table 30: Attitudes towards learning

	Literacy		Numeracy	
	N	%	N	%
Since you started your course you ...				
…have become more enthusiastic about learning	281	92	313	89
…have improved your quality of life	247	81	264	77
…have got a better idea about what you want to do in your life	252	85	289	84
…are more likely to undertake further learning and training	290	95	328	94
…are more likely to undertake further learning and training at a higher level	272	92	310	91

Source: GfK NOP survey

Table 31: % Change in attitudes towards reading (literacy sample) and maths (numeracy sample), change between Wave 1 and Wave 2

	From agree to disagree	Stayed the same	From disagree to agree	Total N
READING				
I enjoy reading	5	89	6	296
I seldom see a book I want to read	20	63	18	280
I only read what I have to	7	80	12	288
I prefer watching television to reading	12	78	11	301
MATHS/NUMBERS				
It is difficult to find a good job unless you have passed your maths exams	13	74	13	334
I only want to learn maths if it's going to be useful to me	21	68	10	358
I find learning maths quite easy	12	77	12	354
I find lots of areas of maths difficult to understand	15	71	14	359
I can use the maths I learn in class to help me solve everyday problems	7	84	9	359
Learning maths can make me feel that I'm a bit of a failure	7	87	7	352

Source: GfK NOP survey. Note: Table only includes data on learners taking part in both Waves of the survey

Table 32: % Change in attitudes towards learning both samples, change between Wave 1 and Wave 2

	From agree to disagree	Stayed the same	From disagree to agree	Total N
I don't see the point in learning or education	3	94	3	660
If you don't keep up through learning, it could hold you back at work	6	85	9	344
Learning is an investment in a better future for myself/my family	-	98	2	151
Learning is only worthwhile if there is a qualification at the end of it	19	71	10	552
Learning isn't for people like me	3	92	5	654

Source: GfK NOP survey. Note: Table only includes data on learners taking part in both Waves of the survey

Factor analysis was used to analyse attitudinal statements (see Annex D). Based on the results of this three attitudinal scales were created. The first '*attitudes towards learning in general*' was measured in the whole sample at two time points, the second *'attitudes towards reading'* was measured in the literacy sample in both waves and the third '*self-evaluation of maths skills*' was measured in the numeracy sample – again in both waves. Further analysis was carried out to investigate any changes in attitudes.

Table 33 reports descriptive statistics across all three attitudinal scales, and across the two time points (Wave 1 and Wave 2). Only relatively small positive changes in attitudes towards learning in general were significant. When the sample was split into literacy and numeracy learners, the change appeared to be significant only in the literacy sample.

Table E-1 in Annex E illustrates the full model and Table 34 the estimated effects for provision characteristics. Those learners in provision rated as 3 by Ofsted had a lower increase in positive attitudes towards learning compared to those in providers rated as 1 by Ofsted, though there was no significant finding when comparing provision rated as 1 to provision rated as 4. Therefore, it is not possible to be conclusive about the relationship between the quality of provision and attitudes towards learning; and it is important to note the constraints in how the study was able to assess quality of provision, using Ofsted ratings for colleges as a whole (not adult basic skills provision specifically).

Literacy learners on higher level courses (L1 and L2) had a greater positive change in their attitudes towards reading compared to those learners on Entry level courses. The effects were calculated while controlling for different learner characteristics and attitudes as well as their change in assessment scores.

Table 33: Changes in attitudes between Wave 1 and 2

	All				Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2		Wave 1		Wave 2	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Attitudes towards learning in general	15.9*	1.7	16.1*	1.7	16.1*	1.8	16.3*	1.7	15.8	1.7	15.9	1.7
Attitudes towards reading					11.0	2.4	11.0	2.4				
Self-evaluation of maths skills									11.0	2.0	11.2	1.9

*Source: GfK NOP survey. Note: Table only includes data on learners taking part in both Waves of the survey. * changes are statistically significant based on paired sample t-test. M = mean, SD = standard deviation*

Table 34: Estimated effects (standardised betas) of provision characteristics on changes in attitudes

	Model:	Attitudes towards learning in general (literacy sample)		Attitudes towards learning in general (numeracy sample)		Attitudes towards reading		Self-evaluation of maths skills	
Ofsted quality ratings (1-reference category)	2	-.01		-.11		.12		.08	
	3	-.11		-.20	*	.02		.05	
	4	-.02		-.08		.02		-.05	
Qualification level (Entry - reference category)	Level 1	-.05		.04		.16	†	-.03	
	Level 2	.06		.13		.20	*	-.00	
Guided learning hours (reference category - Low 2-60)	Medium (61-90)	-.06		.10		-.08		.02	
	High (91+)	-.08		.03		-.05		-.05	

*Source: GfK NOP survey. Note: The model includes individual controls, such as age, gender and some attitudes. Full models presented in Table E-1in Annex E. † p ≤ .1; * p ≤ .05; ** p ≤ .01; *** p ≤ .001*

The multi-level modelling undertaken on composite indicators showed a significant increase in attitudes to learning between the two Waves of the survey. There was also a positive relationship between provider quality and changes in attitudes to learning, with composite scores at Wave 2 0.2 points higher for each increase in provider rating (based on the Ofsted codes). Annex F includes full details of the model, as well as those for other composite indicators considered.

6.5. Health and well-being

The analysis of health and well-being used a set of indicators that were measured in the same in both Waves. These were as follows.

- *Life satisfaction* was measured as a single item rating 'satisfaction or dissatisfaction about the way life nowadays' and indicated by respondents on a scale of 0 to 10, with 0 representing completely dissatisfied and 10 completely satisfied.

- *General health* was measured using four items assessing general physical health on a scale from 1 (definitely false) to 4 (definitely true). The four items are summed to create an overall index in which a high score represents better self-reported general health.

- *Warwick-Edinburgh Mental Well-being Scale (WEMWBS)* was used to assess mental health and well-being. The survey used seven of the original 14 items in the Short version of the WEMWBS. Items include "whether the respondent feels relaxed"; "whether the respondent can think clearly"; and "whether the respondent deals with problems well". The items are measured on a scale from 1 (none of the time) to 5 (all of the time). The items are summed to create an overall index in which a high score indicates a greater level of mental well-being ranging from 7 to 35.

- *Self-esteem* was measured using six of the 10 items in Rosenberg's Self Esteem Scale (Rosenberg, 1965)[21] on a scale from 1 (strongly disagree) to 4 (strongly agree). The items are summed up to create an overall index in which higher score indicates higher self-esteem ranging from 6 to 24.

- *Locus of control/Self-efficacy* was measured by three items measuring locus of control (Lefcourt 1982[22]; Rotter 1966[23]) on a scale from 1 (strongly disagree) to 4 (strongly agree). Items include ' I don't have enough control over the direction my life is taking ' and ' Every time I try to get ahead, something or somebody stops me'. The items are summed to create an overall index in which a high score indicates a greater level of perceived locus of control. The range is from 3 to 12.

Table 35 reports the descriptive statistics across all five wellbeing and health indicators, and across the two time points (Wave 1 and Wave 2).

Life satisfaction, mental well-being, locus of control and self-esteem all show a **significant increase** between Wave 1 and Wave 2. The greatest increase is with regards to mental well-being and self-esteem. This presents evidence of health and well-being benefits associated with basic skills courses. Even when all known learner background variables were included in the multi-level modelling, these findings on well-being, self-esteem and self-efficacy (i.e. locus of control) persisted, with some additional indication of an

[21] Rosenberg M. (1965) *Society and the adolescent self-image.* Princeton, New Jersey: Princeton University Press
[22] Lefcourt H. M. (1982) *Locus of Control: Current Trends in Theory and Research*. Routledge
[23] Rotter J.B. (1966) "Generalized expectancies of internal versus external control of reinforcements". *Psychological Monographs* 80 (609)

association between improvements in self-esteem and the quality of provision. There is a strong fit here with the evidence from the qualitative part of the research. This found that a key part of the skills and confidence development from basic skills provision manifested itself in outcomes such as mental health and well-being (not simply qualifications and chances in the labour market). For example, learners spoke of the effect of courses in helping them to increase their own independence, and so enabling them to overcome social isolation[24].

Note that the Integrated Household Survey covered subjective measures of well-being for the first time between April 2011 and March 2012. The same question on life satisfaction was used in this study. Whilst not comparable precisely in terms of timing of the survey, the overall scores from the survey of 7.2 in Wave 1 and 8.0 in Wave 2 compare with an England average of 7.4.

Table 35: Changes in health and well-being between Wave 1 and 2 (see table note on statistical significant changes)

	All				Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2		Wave 1		Wave 2	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Life satisfaction	7.2	2.0	8.0	1.7	7.1	2.1	7.8	1.8	7.3	2.0	8.0	1.6
General health	13.0	2.7	113.2	2.6	12.8	2.9	13.3	2.6	13.1	2.5	13.2	2.6
Mental well-being	25.8	4.4	26.8	4.4	25.9	4.7	26.9	4.5	25.7	4.1	26.7	4.3
Self-esteem	18.6	2.8	19.1	2.7	18.6	2.9	19.0	2.7	18.6	2.6	19.2	2.8
Locus of control	8.5	1.6	8.7	1.7	8.4	1.6	8.7	1.7	8.5	1.6	8.7	1.7

Source: GfK NOP survey. Note: Table only includes data on learners taking part in both Waves of the survey. All changes are statistically significant based on paired sample t-test, except 'General health' for numeracy sample. M = mean, SD = standard deviation

Annex C sets out evidence on sub-groups using gender, age, Level of courses and hours bands. This shows workings on tests for significant changes between Waves 1 and 2. The key findings are as follows:

- similar patterns as the overall findings by gender, though females experienced a more significant increase in self-esteem compared to males.
- similar patterns by age group, though with more significant changes for those aged 25 and above

[24] SQW and NRDC (2013) *Investigating the Benefits of English and Maths Provision for Adult Learners: Part 2 Qualitative Assessment*, Report to BIS

- more significant changes on all measures for those taking Level 2 courses; for those taking Entry Level courses, the only outcome variable where there was a significant change was on life satisfaction

- no clear pattern by hours spent on learning, though those on high numbers of hours appear to have more significant increases across the outcome variables.

Table E-2 and E-3 in Annex E summarise the full models of multilevel linear regression analyses of change in health and well-being. Tables 6-13, 6-14 and 6-15 present the estimated effects of different types of provision on these outcomes.

The strongest effect on the health and well-being outcomes is associated with the level of the qualification learners are working towards. Thus, numeracy learners on higher level courses appear to experience a greater increase in their life-satisfaction, mental well-being and self-esteem than those on lower level courses. Literacy learners on higher level courses indicated greater increase in their self-esteem and locus of control than those on lower level courses.

Other observations from the modelling are as follows:

- For the literacy sample, the positive change in life satisfaction and self-evaluated general health was lower in learners in providers assessed at grade 4 than those who were enrolled with grade 1 providers.

- Increases in life satisfaction were smaller amongst literacy learners on longer courses and numeracy learners on medium length courses than amongst their peers on shorter courses. Some care is needed in interpreting these observations, in particular as in Chapter 5 it was found that longer courses tended to increase the enjoyment of learning.

Despite the fact that this analysis controls for various learners characteristics, there can still be some variables that are not included and that might explain these relationships and produce compositional effects. Therefore, these results need further research with a different sample and more detailed information about the provision.

Table 36: Estimated effects (standardised betas) of provision characteristics on changes in health and well-being measures. Literacy sample

	Model:	Change in life satisfaction		Change in mental well being		Change in general health	
Ofsted quality ratings (1- reference category)	2	-.07		-.01		-.15	
	3	-.13		-.03		-.14	
	4	-.17	*	-.00		-.17	†
Qualification level (Entry - reference category)	Level 1	.02		.04		-.06	
	Level 2	.07		.11		.01	
Guided learning hours (reference category - Low 2-60)	Medium (61-90)	-.10		-.05		-.10	
	High (91+)	-.16	*	-.04		-.03	

*Source: GfK NOP survey. Note: The model includes individual controls, such as age, gender and some attitudes. Full models presented in Table E-2 and E-3 in Annex E. † p ≤ .1; * p ≤ .05; ** p ≤ .01; *** p ≤ .001*

Table 37: Estimated effects (standardised betas) of provision characteristics on changes in health and well-being measures. Numeracy sample

	Model:	Change in life satisfaction		Change in mental well being		Change in general health	
Ofsted quality ratings (1- reference category)	2	-.01		-.04		.09	
	3	-.09		-.02		-.07	
	4	.02		-.05		.07	
Qualification level (Entry - reference category)	Level 1	.13	†	-.01		-.08	
	Level 2	.20	**	.18	*	.01	
Guided learning hours (reference category - Low 2-60)	Medium (61-90)	.02		-.15	*	.11	
	High (91+)	.08		.03		.14	

*Source: GfK NOP survey. Note: The model includes individual controls, such as age, gender and some attitudes. Full models presented in Table E-2 and E-3 in Annex E. † p ≤ .1; * p ≤ .05; ** p ≤ .01; *** p ≤ .001*

Table 38: Estimated effects (standardised betas) of provision characteristics on changes in health and well-being measures

	Model:	Self esteem (literacy sample)		Self esteem (numeracy sample)		Locus of control (literacy sample)		Locus of control (numeracy sample)	
Ofsted quality ratings (1- reference category)	2	-.00		-.08		-.05		.12	
	3	-.01		-.21	*	-.02		.08	
	4	-.06		-.09		-.01		.02	
Qualification level (Entry - reference category)	Level 1	.03		.21	*	.11		-.00	
	Level 2	.18	*	0.41	***	.19	*	.13	
Guided learning hours (reference category - Low 2-60)	Medium (61-90)	.02		-.02		-.05		-.10	
	High (91+)	.10		.08		-.03		.01	

*Source: GfK NOP survey. Note: The model includes individual controls, such as age, gender and some attitudes. Full models presented in Table E-2 and E-3 in Annex E. † p ≤ .1; * p ≤ .05; ** p ≤ .01; *** p ≤ .001*

6.6. Implications

Learners' motivations to join literacy and numeracy courses are varied; as are the benefits that accrue from such learning. These range from human capital outcomes such as skills, employment and earnings, to psychosocial or non-cognitive outcomes such as self-confidence and improved social capital. Learners also appear to benefit from positive mental and physical health related outcomes and other "wider benefits of learning", such as improved parenting.

Literacy and numeracy provision should not be framed solely in terms of increasing human capital. It may be that other outcomes, such as increased self-confidence and self-esteem, are more significant in encouraging and enabling learners to take the next step in their learning journey. This suggests that providers should not be made accountable for a narrow range of human capital outcomes such as qualifications and employability, because this may not be the most effective mechanism to ensure that literacy and numeracy provision supports learners onto the further learning that may be required.

More evidence is needed on outcomes from literacy and numeracy provision in addition to those on human capital; the relationship between learners' motivations to join literacy and numeracy and the benefits they gain from their participation; and the impact of course length, intensity and focus on outcomes for learners.

Summary of key points

The evidence suggests that there are some indications of positive progress in the labour market, although given the limited time since course participation, and the resulting small numbers of learners that have progressed, it is difficult to be conclusive about these.

A range of benefits were self-reported by learners, presenting some evidence (albeit "weak" evaluation evidence) that courses have had a positive effect. Key benefits were around confidence, self-esteem and abilities in reading/writing/using numbers. The modelling undertaken on assessment scores showed a small increase in attainment on numeracy tests, but not on reading tests, other than for those for whom English was not a first language.

The measures of learners' own views of their skills over time did not provide clear evidence of perceived skills gains. This might be because learners had become more realistic about their abilities in literacy and numeracy as a result of their courses.

Overall, there was limited evidence of changes in the use of skills, though there were some exceptions in the use of numeracy skills and in terms of the increasing prevalence of learners helping children with homework or reading.

Learners reported improved attitudes towards learning. However, the evidence based on changes in learners' own perceptions between Waves 1 and 2 suggests relatively limited changes in enjoyment and perspectives on learning.

There is evidence of outcomes in health and well-being, with statistically significant increases in life satisfaction, mental well-being, locus of control and self-esteem between Waves 1 and 2 of the survey. Whilst the overall pattern holds between genders, the study has found that females were more likely to experience an increase in self-esteem than males. The study also found evidence suggesting that higher levels of course may have a greater effect on these outcomes: numeracy learners on higher level courses experienced a greater increase in their life-satisfaction, mental well-being and self-esteem; literacy learners on higher level courses had a greater increase in their self-esteem and locus of control.

7. Conclusions

The study has shown that there is variation across the learner group in terms of their labour market status, levels of pre-existing qualifications and motivations and expectations of courses. This means that conclusions need to take account of the differing learner perspectives.

7.1. Learner experiences

On the whole, learner experiences of provision have been found to be favourable, with around 70% of learners extremely or very satisfied with courses (and a further 20% fairly satisfied), around 90% attending most or all of their classes and nearly 90% of learners enjoying their courses a fair amount or a great deal.

The evidence suggested that longer courses tend to increase enjoyment of learning. Interestingly, the study also found that learners on numeracy courses tended to be more satisfied with their learning experience, but enjoyed their learning less compared with literacy learners. This may be a reflection of how learners perceived maths as compared to reading/writing, with overcoming the challenges associated with the former given more a of a sense of satisfaction, whereas learners have actually found reading and writing more stimulating.

An issue that BIS may seek to consider going forward is that the analysis showed that provision may not be working as well for those learners with additional needs. The evidence suggested that learners for whom English was not their first language were, on average, less satisfied with their learning. In addition, the evidence suggested that learners with learning difficulties and/or disabilities were less satisfied with learning. For both of these groups, further research is needed to explore fully the reasons for lower levels of satisfaction.

There were strong employment-related motivations amongst learners. The majority of unemployed learners intended or expected to use the course to get into employment, and most of those in employment were motivated by getting a better job or promotion. However, motivations were found to be wide-ranging. In particular, the evidence indicated that amongst the most common motivations and objectives for learners were around self-improvement and self-fulfilment.

It is important to note that motivations can vary across learners, including depending on characteristics (such as age and gender), level of courses, and types of provision. Notably, learners on higher level courses were more likely to mention getting on another course and requirements of their work or professions as reasons why they had enrolled. In comparison, those on lower level courses (in particular Entry level) were more likely to report personal and social reasons, such as making friends, increases in self-esteem and improvement of everyday life skills, as their reasons for joining the course.

The breadth of motivations has been documented in previous research, and so this study re-iterates this evidence, and highlights the implications for providers. The key implication is that learners' motivations to succeed in their learning are powerful drivers and should be

acknowledged by providers in their course offer and in their work with individual learners. Courses with a narrow focus on employability or employment related outcomes, while superficially meeting learners' needs, may fail to adequately recognise, and harness, those broader motivations.

7.2. Evidence on learner benefits

Based on the evidence of this study, whilst labour market outcomes, in terms of getting a job (for unemployed learners) and getting a better job (for those learners already in work), are common motivations across the learner group, the extent to which learners achieve these within a short period of time of basic skills courses is relatively limited. Under one-fifth of learners attributed having got a job or an improvement in current job status to the course. This is perhaps unsurprising given a combination of factors: the courses were not specifically work-related; the fieldwork was carried out soon after the completion of courses; and the wider context of a slow economic recovery. More widely, and encouraging, was the evidence that just under three-fifths of learners had moved on to further training.

More generally, therefore, basic skills courses are likely to provide a stepping stone towards economic benefits, and also contribute to personal and social benefits (including health and well-being). These personal and social benefits relate back to key motivations of the learner group in relation to self-improvement and self-fulfilment. There was evidence that courses were contributing to this in different ways, in particular through:

- increases in learners' confidence and abilities in reading, writing and maths/numbers
- the ways in which some of the skills were being deployed, in particular to help with everyday tasks and notably in family settings, such as helping children with homework.

A major finding from the study, on which there is relatively little in the existing evidence base, was the accrued benefits to health and well-being amongst learners. Life satisfaction, mental well-being, locus of control and self-esteem all showed a significant increase between Wave 1 and Wave 2 of the survey. The greatest increase was in mental well-being and self-esteem. This presents evidence of health and well-being benefits associated with basic skills courses.

The key message that flows from the evidence, therefore, is that the value from basic skills courses can best be understood through consideration of the different types of economic, social and personal benefits (and through measuring benefits over a longer period of time). Indeed, the most commonly-cited self-reported benefit resulting from learning was in improvements to self-esteem, which was associated with perceived levels of attribution/additionality to the course of nearly 70%. This was followed by effects such as improved confidence and abilities with reading, writing and numbers and improved ability to help children with homework. The last of these had the highest levels of attribution/additionality to the course of over 90%.

The implication is that literacy and numeracy provision should not be framed solely in terms of increasing human capital. It may be that other outcomes, such as increased self-

confidence and self-esteem, are more significant for learners, and can help them to take the next step in their learning journey.

More evidence is needed on other outcomes from literacy and numeracy provision in addition to human capital, and also the relationship between learners' motivations to join literacy and numeracy and the benefits they gain from their participation.

7.3. Factors contributing to benefits

The study was not able to draw a link between measures of provision quality and outcomes. As the methodology chapter highlights, however, there are weaknesses in how the quality of basic skills provision can be assessed from existing administrative data. There have been other factors that have been related to outcomes, in particular those learners on higher level courses were more likely to have achieved health and well-being benefits. BIS can seek to build on the initial findings from this study in future work, to help develop further evidence on how factors such as course length, intensity, quality and mode of provision and focus on outcomes impact upon the benefits received by learners. Developing the evidence and understanding may require larger sample sizes in future studies, which incorporate both a longitudinal and two-group evaluation design, and also specific attempts to assess the quality of adult basic skills provision.

Annex A: Methods – addendum

This Annex provides further detail on the methods, as summarised in Chapter 2. In doing so, this Annex describes the technical detail of the analysis undertaken as part of the research methods, and sets out lessons from the fieldwork implementation process.

A.1. Analysis

A.1.1. Survey analysis

The survey analysis strategy included several statistical approaches:

- In the bivariate analysis between two categorical variables (e.g. gender and motivation statements), the chi-square statistic was used to test statistical significance, while in the analysis between two continuous variables (e.g. attitudes towards learning and change in mental well-being) Pearson correlation coefficients and p-values were used.

- To look at the relationship between satisfaction, attendance and enjoyment of learning and the characteristics of learners and those of provision three-level panel data regression models were used, allowing differences within and between individuals to be used to control for the impact of omitted variables that are constant over time. The third level, represented by providers, allows controlling for similarities between learners from the same providers. Finally, the use of pooled data increases the number of observations that can be used in the model.

- To test the statistical significance of the change in ordinal variables (e.g. frequency of reading) the Sign test was used for matched pairs and paired t-tests were used with the interval data (e.g. self-esteem).

- Finally, to investigate which factors were associated with change in attitudes and health and well-being, multilevel linear regression models were used. The multilevel models account for the clustering of data (learners nested within providers). The models used also include a value of change outcome variable measured at Wave 1 (the dependent variable lagged, for example, previous attitudes towards reading as a determinant of subsequent changes in these attitudes) to deal with regression to the mean[25].

[25] The regression to the mean is exhibited when unusually large or small measurements tend to be followed by measurements that are closer to the mean. Often it can make natural variation in repeated data look like real change.

Multi-level modelling

A multi-level modelling approach was used to explore the relationship between outcomes (such as skills gain, attitudes to learning and well-being), to reflect the hierarchical nature of the data (i.e. students within institutions at different time points). This analytical technique is an extension of the ordinary least squares (OLS) regression method and looks at the relationships between a range of independent variables and the outcome variable of interest. It is preferred to OLS when data is hierarchical, because the standard error for some coefficients can be underestimated when using OLS, leading to a potentially incorrect interpretation of the data.

A.1.2.1 Skills gain in literacy and numeracy

The multi-level models used on this data were repeated measure models, and resulted in the following hierarchy; college, learner, test time point. The testing process and collection of student attitude information resulted in the cohorts of assessment data as shown in Table 2-4.

Table 1: Cohorts of assessment data (using data for those completing assessments at both Waves 1 and 2)

Test	Number of cases
Literacy Test A	88
Literacy Test B	205
Numeracy Test	336

Source: NFER

In looking at skills gain, the main investigation was to identify whether there was any increase in test score between the two test points. Models were also constructed to identify whether any noted improvement (or fall) in test score was the same for all students, or whether there was a different outcome for students with particular characteristics. In order to ensure that as many of the variables already known (though previous research) to have an impact on attainment were included in the analysis, learner level background characteristics were used in the models. These were: gender, English not identified as the first language, age, highest prior qualification, work status, parental status (i.e. whether they had school aged children), known learning difficulties, level of course (Entry Level), number of hours devoted to study and a composite deprivation indicator. This last indicator was calculated by looking at the responses to four specific questions on whether their family was able to afford certain items. At institution level a factor on provider quality was included, based on the Ofsted rating for the college.

A.1.2.2 Composite scores

Repeated measure models were run to look at the other outcomes that might be anticipated as a result of taking part in the course (attitudes to learning, self-evaluation of skills and health and well-being measures) using the composite scores for each[26] as the outcome measures and a time variable to highlight any significant differences between

[26] These composites were arrived at though factor analysis or(as for example in the well-being score) through the use and analysis of known scaled items that formed part of the face-to-face surveys.

average scores at time point 1 and time point 2. Rather than running models separately on the three datasets used for the individual skills gain models (English A and English B – depending on the screening test used with literacy learners - and numeracy), all attainment data was combined to give a dataset of 1,290 observations, 645 at each time point. To maximise the size of the available dataset (and where appropriate) some missing background data was recoded to scale means.

A.2. Summative scales for health and well-being outcomes

Scales were used to capture evidence on:

- Life satisfaction, using a simple single question on satisfaction with 'life nowadays'
- General health, using four items assessing general physical health
- Mental health using seven of the original 14 items in the *Warwick-Edinburgh Mental Well-being Scale (WEMWBS)*
- *Self-esteem* using six of the 10 items in Rosenberg's Self Esteem Scale (Rosenberg, 1965)
- *Locus of control/Self-efficacy* using three items measuring locus of control (Lefcourt 1982; Rotter 1966).

The question on life satisfaction was recommended by BIS, drawing on questions that are being used across government. Other scales were selected on the basis of having been tried and tested in previous research. Items had to be prioritised to ensure that the lines of questioning could be asked in the limited time available for the questionnaire.

A.3. Lessons on survey implementation

The final part of this Annex sets out lessons from the implementation of the survey. The study experienced some difficulties in completing the surveys with some learners, in particular literacy learners (for whom a larger initial lead sample was needed), and there have been a number of lessons from the experience, notably in relation to the processes used for contacting learners and liaising with colleges.

A.3.1. Contacting learners

The research process sought to draw on our past experience and knowledge of good practice in recruiting basic skills learners. The key points in relation to good practice, and related lessons from this study are as follows:

- Introductory letters were sent to all learners in the sample, with an option to opt out if they wished. The letter was made as simple as possible, though inevitably there was a minimum amount of information that needed to be communicated. Whilst the letter was worded as clearly and simply as possible, the information that has to be conveyed may have confused some learners, especially those at Entry Level.

- It is important to allow adequate time for recruitment. Many learners are reticent about becoming involved in studies they know nothing about and which they may struggle to understand, and it can take more than one attempt to explain what is involved and to persuade learners to take part. However, the set-up and implementation of this study was time-dependent, and so the **lesson for the future is that more time needs to be allocated to planning and that realistic timetables ought to be set, in particular where there are harder-to-reach learners to survey**.

- Recruiting personnel with experience of working with low level literacy learners, or adults with a similar profile, including, where appropriate, personnel with the necessary language skills. As part of this work, the most appropriate fieldwork interviewers were identified.

Learners were called at different times of the day and week in order to seek to arrange times to complete the survey and assessment. Increasingly, telephone numbers provided for learners are mobile numbers. Some learners may have screened out calls made to mobiles, i.e. they see that the number is not recognised and so do not take the call. It is not possible to be certain about this, given the limited data available to substantiate the view. However, given the volume of mobile numbers now provided as the primary contact, and the ability for mobiles to inform a learner as to the nature of a caller (i.e. known or unknown), this is likely to be an issue for the future. **A lesson for similar studies may be to combine phone calls with SMS messages as means of contacting learners.** Mobile phone users may be more likely to open an SMS message from an unknown source, than take a call.

A.3.2. Liaising with Colleges

There was some protectiveness from Colleges, especially in relation to Entry Level learners, because these learners were viewed as being more vulnerable than others. For example, one College indicated that interviews with Entry Level learners should have been arranged through the College itself.

Some Colleges assumed that they would be aware of any *bona fide* research involving learners, and as such, they advised some learners not to take part in the study (Colleges were not notified in advance of the research). The assumption made by Colleges was interesting, because it is not routine for national surveys of learners to notify Colleges that these are taking place (e.g. learner destinations surveys, learner satisfaction surveys, and the Train to Gain evaluation survey). Learners themselves have already provided agreement that they may be contacted for research purposes through the ILR database. Indeed, whilst an advantage of sending letters to Colleges is that they can quickly inform learners that the research is *bona fide*, there is also a risk that Colleges request that their learners not be included in the sample (e.g. because it clashed with their own surveys, or because of the timing in examination season, or other College-specific reasons).

Previous experience recognises that any successful recruitment through Colleges often requires several attempts, both in respect of establishing good contact with a ‘gatekeeper’ (who provides consent to approach learners, and the names of any teachers whose consent may also be required), and with the learners themselves. As part of this, it is important to use research/interviewing personnel with experience of the FE sector on the

fieldwork team. Response rates suffer if personnel do not understand the FE sector – for example, who in a college it is most appropriate to speak to when seeking consent to approach learners, how to approach teachers (if their consent or participation is required), and demonstrating understanding and sensitivity to the pressures and schedules to which FE personnel are subject.

There are two main lessons that flow from this:

- Taking account of the vulnerability of some of the learners and the nature of the research (i.e. it was face-to-face, in people's homes and involved an assessment), **hindsight suggests that a letter should have been issued to Colleges, even though this is not common practice for surveys of adult learners**. In the future, **it may also be appropriate to adopt a more tailored approach with Entry Level learners** that seeks to engage 'gatekeepers', though this is likely to result in increased costs of undertaking survey work.

- If similar approaches (or fieldwork) are undertaken in the future, **BIS may wish to discuss with the Association of Colleges the most appropriate way of informing Colleges about such research**. In particular, BIS (and its research contractors) will want to minimise the extent to which Colleges indicate that their learners should not be contacted.

Annex B: Additional data tables and charts

This Annex section sets out further baseline Wave 1 data on characteristics of learners, motivation to study, self-perceptions of skill levels, use of skills and attitudes towards learning. It also presents data on hours of self-study. Missing data (MD) combines missing item response, 'unsure' and 'do not know' answers.

B.1. Characteristics of learners

Table B-1: Additional data on socio-demographic profile of Literacy and Numeracy learners by sweep (unweighted data)

	Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2	
	N	%	N	%	N	%	N	%
BORN IN THE UK								
Yes	275	54	195	63	328	65	238	67
No	234	46	115	37	179	35	117	33
AGE CAME TO THE UK								
0-4 years	10	4	7	6	6	3	6	5
5-10	8	4	4	4	12	7	9	8
11-15	12	5	6	5	21	12	12	10
16-20	70	30	34	30	46	26	26	22
21+	131	57	63	55	93	52	63	54
SPECIFIC LEARNING DIFFICULTY (self-reported)*								
dyslexia	82	16	59	19	62	12	48	14
dyscalculia	4	1	2	1	5	1	2	1
dyspraxia	10	2	6	2	8	2	6	2
Meares-Irlen syndrome	1	0			2	0	1	0
Attention Deficit (Hyperactivity) Disorder	8	2	5	2	5	1	2	1
some other condition	35	7	22	7	29	6	22	6
No	381	75	222	72	407	80	280	79
Do not know	5	1	3	1	5	1	4	1

	Literacy				Numeracy			
	Wave 1		Wave 2		Wave 1		Wave 2	
	N	%	N	%	N	%	N	%
HAVE BEEN FORMALLY ACCESSED AS HAVING								
dyslexia	49	88	33	89	48	89	35	95
dyscalculia	1	2	1	3	2	4	1	3
dyspraxia	7	13	5	14	6	11	4	11
Meares-Irlen syndrome	1	2			2	4	1	3
Attention Deficit (Hyperactivity) Disorder	5	9	3	8	4	7	1	3
FAMILY STATUS								
Lives alone	51	10	43	9	35	11	26	7
Household with no children	290	57	298	59	180	58	205	58
Household with school age children	168	33	166	33	95	31	124	35

*Source: GfK NOP survey. Note: *Multiple choice question, so values do not add to 100%*

B.2. Pre-course motivations

Table B-2: Why did you decide to enrol on this course? by gender (multiple choice)

	Literacy			Numeracy		
	N	% Female	% Male	N	% Female	% Male
I enjoy learning/ learning gives me pleasure	441	88.8	88.2	418	86.8	84.8
To increase my self-esteem and self-confidence	421	85.0	84.1	383	84.4	71.9
To get me on another course	399	82.5	78.3	393	79.7	81.9
To improve my skills for daily activities (household work, shopping etc.)	378	78.0	76.1	369	78.9	77.7
To meet new people	321	66.3	64.1	262	57.2	54.6
My family/friends encouraged me	195	39.4	37.5	201	42.5	44.0
A teacher on a previous course encouraged me	133	26.5	28.1	126	26.9	29.9
My friends are on the course	105	21.0	24.3	111	27.2	21.8
To improve and develop skills for my current job, or a new job or promotion [a]	140	78.0	72.1	146	75.4	69.5

	Literacy			Numeracy		
	N	% Female	% Male	N	% Female	% Male
My employer/manager encouraged me [a]	16	9.8	4.8	31	21.5	15.8
To help me get a job [b]	86	93.0	100.0	63	97.9	100.0
Not really my choice - requirement for benefits, work or my profession [ab]	49	13.5	12.1	61	22.9	23.1
To help my child with school work [c]	130	84.1	69.6	111	74.5	69.6

Note: [a] was asked only to those in paid employment; [b] was asked only to unemployed and looking for work; [c] was asked only to those with children (own, current or former spouse/partner, adoptive or foster children) aged 4-18 that are in school; Bold represents statistically significant differences measured using Chi-square.
Source: GfK NOP survey

Table B-3: Why did you decide to enrol on this course? by main language (multiple choice)

	Literacy			Numeracy		
	N	% Non-English	% English	N	% Non-English	% English
I enjoy learning/ learning gives me pleasure	441	95.2	84.3	418	90.5	83.7
To increase my self-esteem and self-confidence	421	92.1	79.9	383	89.1	75.4
To get me on another course	399	88.8	76.0	393	87.4	76.3
To improve my skills for daily activities (household work, shopping etc.)	378	89.9	69.3	369	89.1	72.4
To meet new people	321	73.9	60.1	262	64.3	51.8
My family/friends encouraged me	195	42.7	36.3	201	48.9	39.6
A teacher on a previous course encouraged me	133	33.5	22.8	126	40.5	20.5
My friends are on the course	105	29.1	17.6	111	33.9	20.6
To improve and develop skills for my current job, or a new job or promotion [a]	140	84.5	69.0	146	88.1	69.9
My employer/manager encouraged me [a]	16	13.1	4.0	31	20.0	19.2
To help me get a job [b]	86	100.0	93.8	63	100.0	95.7
Not really my choice - requirement for benefits, work or my profession [ab]	49	12.2	13.6	61	25.0	22.2

	Literacy			Numeracy		
	N	% Non-English	% English	N	% Non-English	% English
To help my child with school work [c]	130	89.2	74.7	111	82.4	63.7

Note: [a] was asked only to those in paid employment; [b] was asked only to unemployed and looking for work; [c] was asked only to those with children (own, current or former spouse/partner, adoptive or foster children) aged 4-18 that are in school; Bold represents statistically significant differences measured using Chi-square.
Source: GfK NOP survey

Table B-4: Why did you decide to enrol on this course? by age (multiple choice)

	Literacy				Numeracy			
	N	% 19-20	% 21-24	% 25-60	N	% 19-20	% 21-24	% 25-60
I enjoy learning/ learning gives me pleasure	441	84.4	80.8	91.5	418	74.3	86.7	90.4
To increase my self-esteem and self-confidence	421	72.5	80.5	89.4	383	71.7	78.7	84.4
To get me on another course	399	67.6	80.8	85.4	393	81.5	83.4	78.9
To improve my skills for daily activities (household work, shopping etc.)	378	75.2	76.4	78.3	369	71.6	78.7	81.1
To meet new people	321	66.7	58.9	66.5	262	56.2	57.1	56.2
My family/friends encouraged me	195	40.0	42.0	37.8	201	46.3	37.4	43.6
A teacher on a previous course encouraged me	133	37.8	24.5	24.1	126	33.6	18.3	28.8
My friends are on the course	105	32.2	19.9	19.3	111	26.4	24.3	25.6
To improve and develop skills for my current job, or a new job or promotion [a]	140	51.6	45.0	86.5	146	58.1	69.6	79.5
My employer/manager encouraged me [a]	16	6.2	0	9.8	31	10.0	8.7	26.4
To help me get a job [b]	86	95.8	88.2	98.2	63	100.0	100.0	94.7
Not really my choice - requirement for benefits, work or my profession [ab]	49	14.8	8.1	13.4	61	31.7	18.0	22.0
To help my child with school work [c]	130	-	40.0	83.4	111	-	80.0	71.8

Note: [a] was asked only to those in paid employment; [b] was asked only to unemployed and looking for work; [c] was asked only to those with children (own, current or former spouse/partner, adoptive or foster children)

aged 4-18 that are in school; Bold represents statistically significant differences measured using Chi-square.
Source: GfK NOP survey

Table B-5: Why did you decide to enrol on this course? by course level (multiple choice)

	Literacy				Numeracy			
	N	% Entry	% Level 1	% Level 2	N	% Entry	% Level 1	% Level 2
I enjoy learning/ learning gives me pleasure	441	90.0	89.8	86.8	418	93.4	86.0	81.9
To increase my self-esteem and self-confidence	421	91.8	87.0	78.8	383	91.5	84.2	71.5
To get me on another course	399	76.4	79.5	85.0	393	77.5	75.9	84.9
To improve my skills for daily activities (household work, shopping etc.)	378	90.6	81.9	66.4	369	94.4	83.3	66.1
To meet new people	321	80.2	71.3	52.7	262	71.2	58.9	45.9
My family/friends encouraged me	195	51.1	38.4	32.4	201	59.3	36.4	37.2
A teacher on a previous course encouraged me	133	31.5	27.8	23.9	126	36.1	31.3	20.7
My friends are on the course	105	36.2	23.5	13.3	111	39.8	23.6	18.2
To improve and develop skills for my current job, or a new job or promotion [a]	140	87.5	80.6	68.6	146	76.7	81.5	69.2
My employer/manager encouraged me [a]	16	18.8	4.4	7.0	31	16.7	20.4	19.6
To help me get a job [b]	86	92.3	100.0	94.7	63	95.2	100.0	96.3
Not really my choice - requirement for benefits, work or my profession [ab]	49	7.3	14.1	14.5	61	18.4	12.2	30.8
To help my child with school work [c]	130	87.0	82.4	78.5	111	76.6	82.9	64.5

Note: [a] was asked only to those in paid employment; [b] was asked only to unemployed and looking for work; [c] was asked only to those with children (own, current or former spouse/partner, adoptive or foster children) aged 4-18 that are in school; Bold represents statistically significant differences measured using Chi-square.
Source: GfK NOP survey

Table B-6: Why did you decide to enrol on this course? by type of qualification (multiple choice)

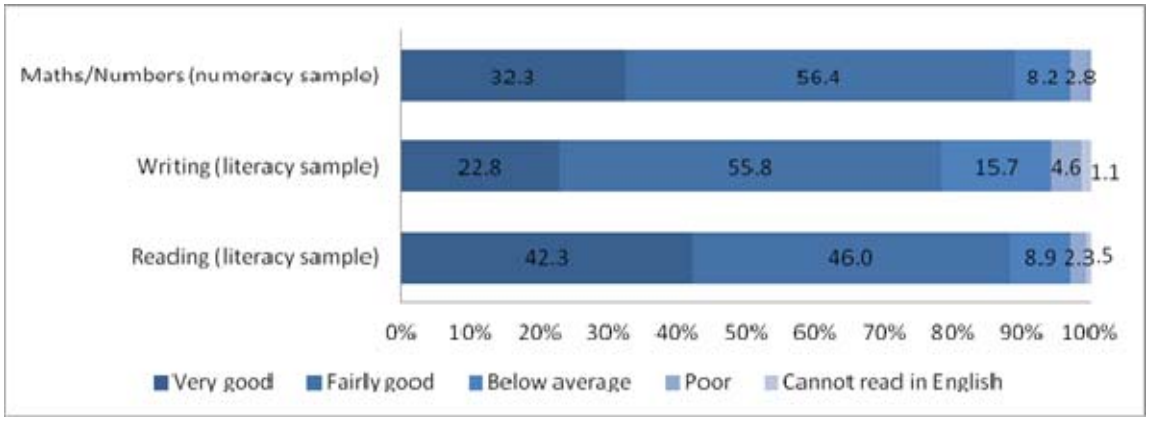
	Literacy				Numeracy			
	N	% Certificate in Adult Literacy	% GCSE in English	% Functional English	N	% Certificate in Adult Numeracy	% GCSE in Maths	% Functional Maths
I enjoy learning/ learning gives me pleasure	441	88.7	87.4	89.1	418	89.5	79.5	87.4
To increase my self-esteem and self-confidence	421	90.8	78.0	81.0	383	88.0	70.4	77.0
To get me on another course	399	82.6	86.6	75.7	393	77.4	90.4	74.1
To improve my skills for daily activities (household work, shopping etc.)	378	85.7	57.8	78.8	369	86.7	61.1	83.1
To meet new people	321	73.1	49.9	65.5	262	61.2	41.9	64.4
My family/friends encouraged me	195	42.2	33.0	38.0	201	45.7	34.6	47.8
A teacher on a previous course encouraged me	133	24.8	21.1	33.5	126	29.6	19.4	38.4
My friends are on the course	105	26.1	12.7	22.8	111	29.6	12.7	33.0
To improve and develop skills for my current job, or a new job or promotion [a]	140	82.0	71.4	69.8	146	80.0	70.4	65.6
My employer/manager encouraged me [a]	16	7.8	4.8	11.3	31	22.4	17.4	15.6
To help me get a job [b]	86	94.7	95.2	97.4	63	100.0	100.0	89.5
Not really my choice - requirement for benefits, work or my profession [ab]	49	11.8	17.5	11.5	61	17.9	32.6	19.6
To help my child with school work [c]	130	86.8	73.3	68.4	111	79.2	60.0	68.4

Note: [a] was asked only to those in paid employment; [b] was asked only to unemployed and looking for work; [c] was asked only to those with children (own, current or former spouse/partner, adoptive or foster children)

aged 4-18 that are in school; Bold represents statistically significant differences measured using Chi-square.
Source: GfK NOP survey

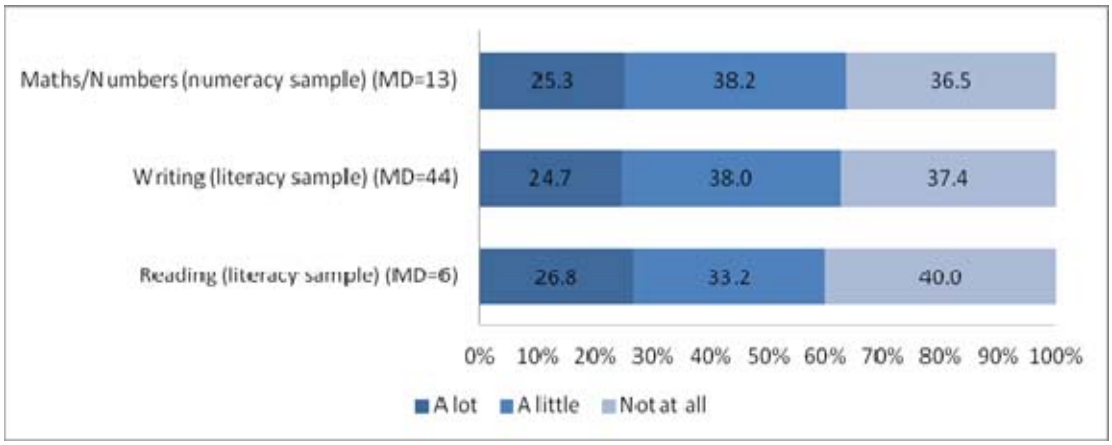
B.3. Self-perceptions of skill levels

Figure B-1: Skills in daily life: How good are you at ... when you need to in daily life?
Wave 1 data (Literacy sample, N=512; Numeracy sample, N=504)



Source: GfK NOP survey

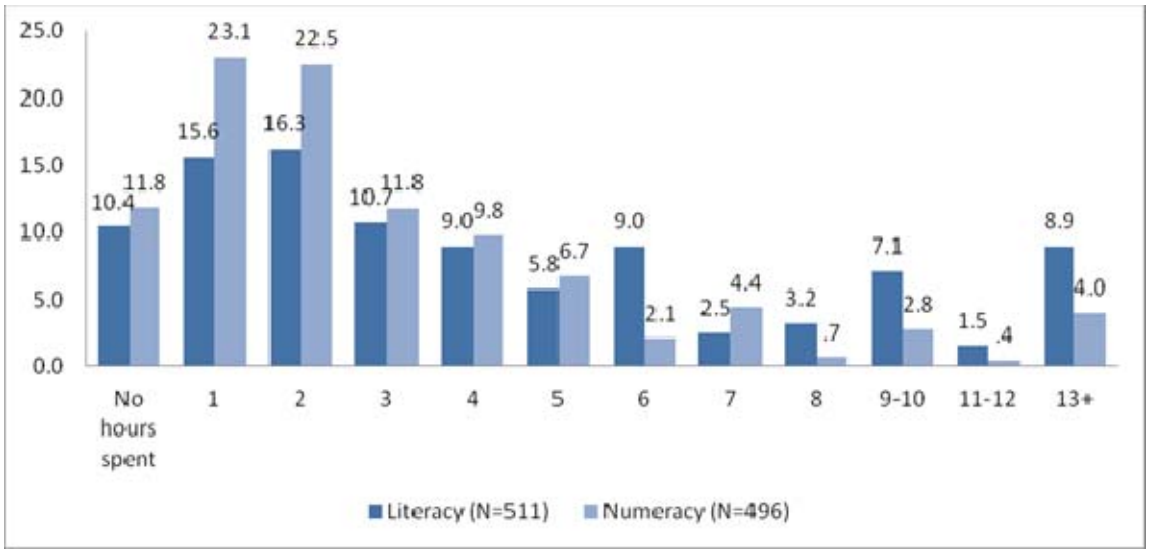
Figure B-2: Skills as related to work: How much, if at all, do you think your skills have limited your job opportunities - for example: getting a promotion or a job you want?



Source: GfK NOP survey. Notes: Wave 1 data (Literacy sample, N=470; Numeracy sample, N=452), those who never worked/never looked for work, different job or promotion are excluded

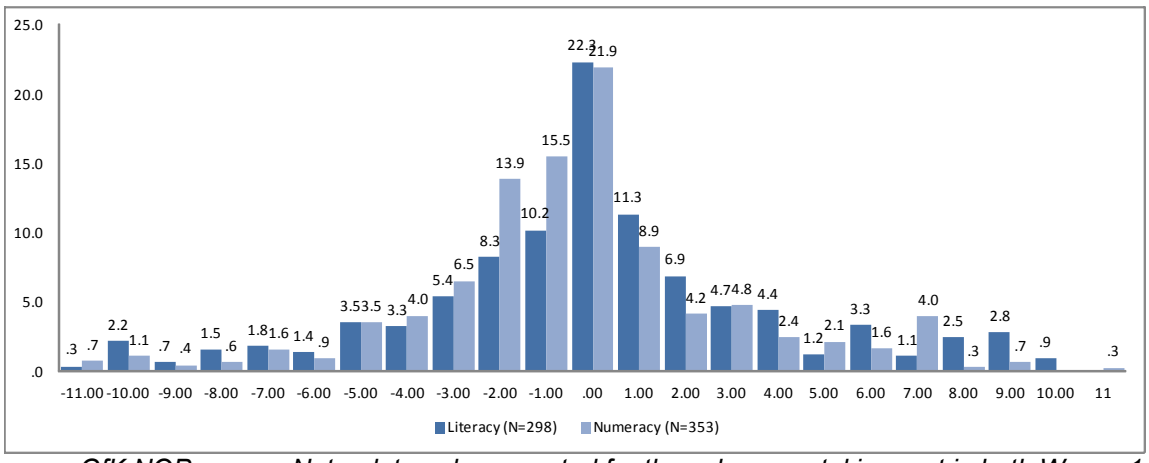
B.4. Learning at home and self-study

Figure B-3: Hours, spent on homework or self-study to do with courses to help with reading and writing skills/skills in maths and numbers, in a normal week, *Wave 1 data*



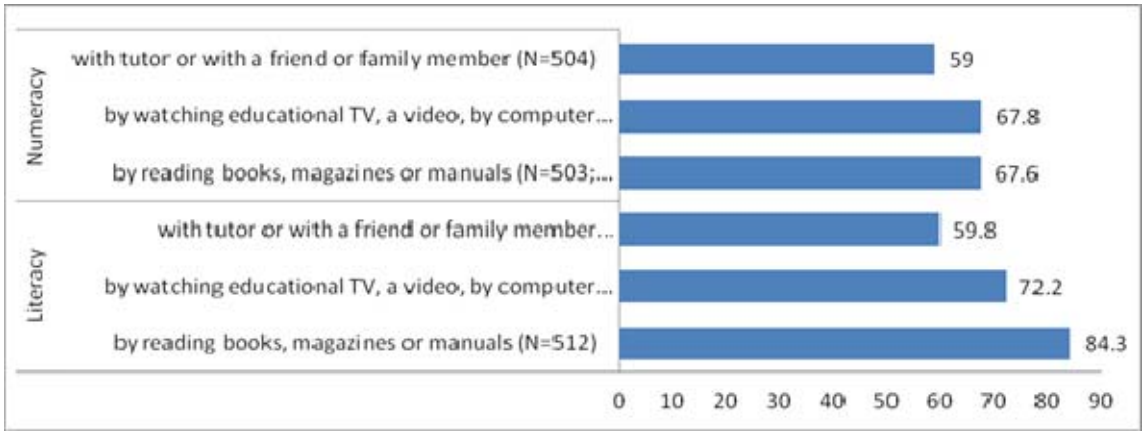
Source: GfK NOP survey

Figure B-4: Change in hours, spent on homework or self-study to do with courses to help with reading and writing skills/skills in maths and numbers, in a normal week



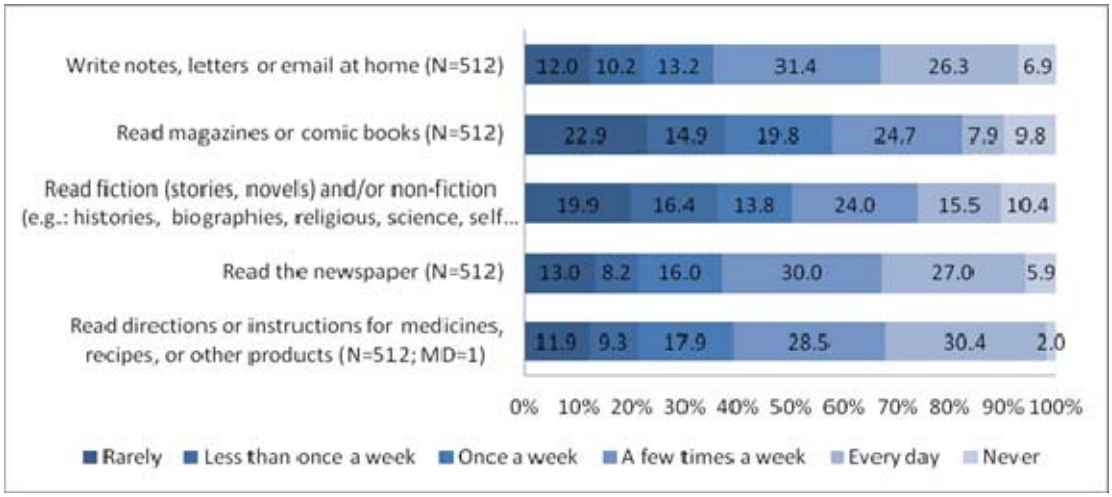
Source: GfK NOP survey. Note: data only presented for those learners taking part in both Waves 1 and 2

Figure B-5: % of those who set out to improve their skills, *Wave 1 data*



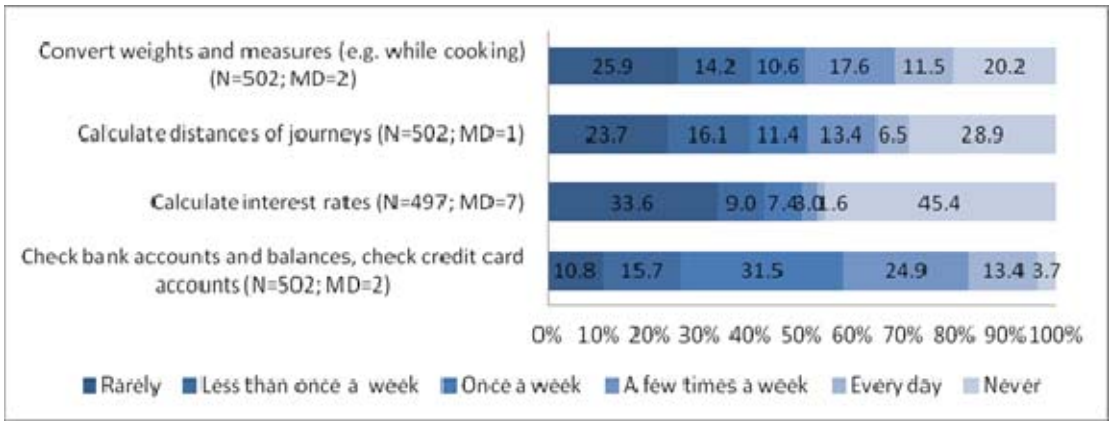
Source: GfK NOP survey

Figure B-6: Learning at home: frequency of practice, *Literacy sample, Wave 1*



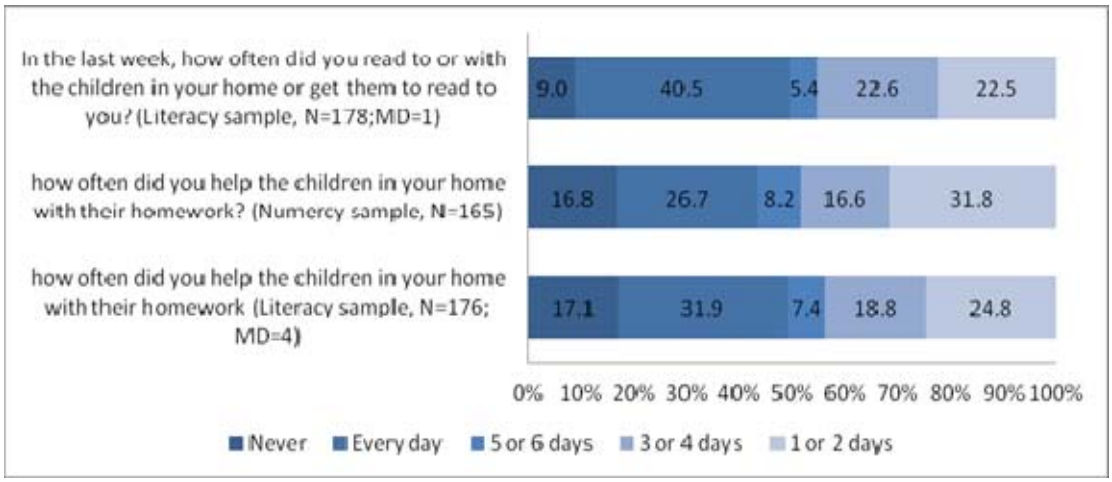
Source: GfK NOP survey

Figure B-7: Learning at home: frequency of practice, *Numeracy sample, Wave 1:*



Source: GfK NOP survey

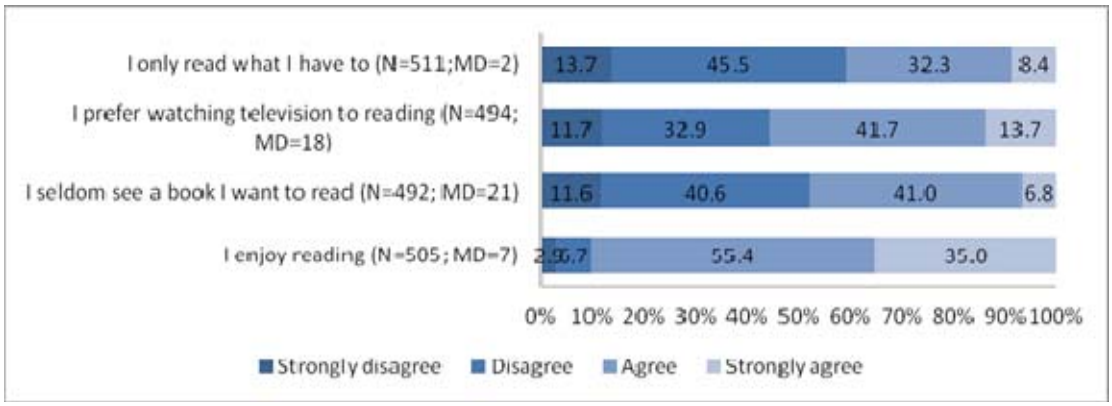
Figure B-8: Parental activities, Wave 1, those with school age children included



Source: GfK NOP survey

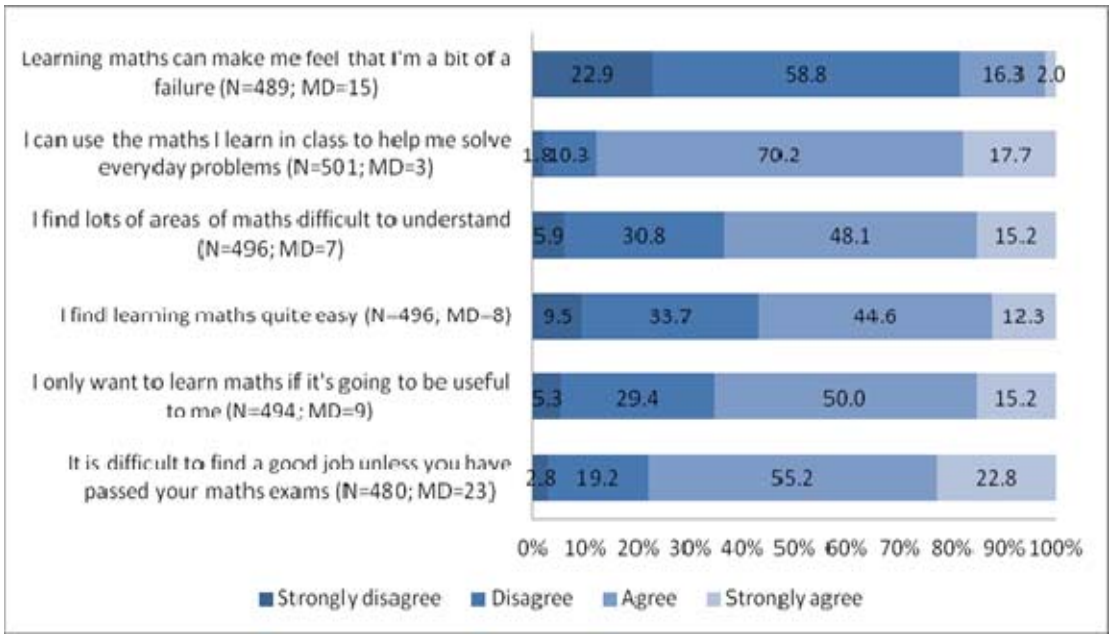
B.5. Attitudes towards learning

Figure B-9: Attitudes towards reading, Literacy sample, Wave 1 data



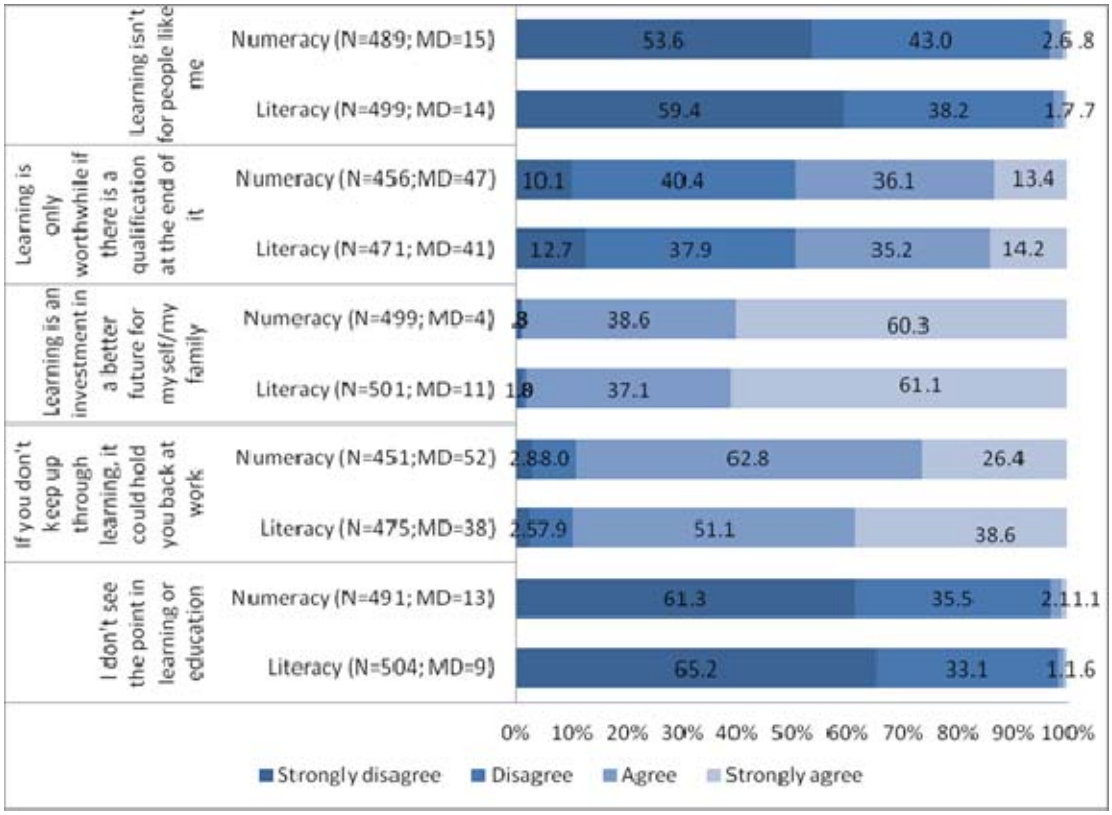
Source: GfK NOP survey

Figure B-10: Attitudes towards Maths and numbers, *Numeracy sample, Wave 1 data*



Source: GfK NOP survey

Figure B-11: Attitudes towards learning, *Wave 1 data*



Source: GfK NOP survey

Table B-7: Satisfaction with learning: three level panel data regression models

	Satisfaction with learning experience	Attendance of classes	Enjoyment of learning
Male	0.004 (0.883)	0.032 (0.290)	0.007 (0.777)
With LLDL (reference category)			
No LLDL	0.058* (0.033)	-0.079* (0.016)	-0.006 (0.828)
LLDL - not stated	-0.061* (0.016)	-0.007 (0.826)	0.018 (0.458)
English (main language)	0.101*** (0.000)	-0.025 (0.419)	-0.042 (0.105)
Parents in household with children in school (age 4-18)	-0.007 (0.806)	0.027 (0.425)	0.028 (0.307)
Employed W1 (reference category)			
Not in employment	-0.005 (0.867)	-0.025 (0.443)	0.002 (0.949)
Unemployed	-0.012 (0.648)	0.038 (0.222)	0.013 (0.618)
Can afford all 4 (reference category)			
Cannot afford 1	0.014 (0.615)	-0.030 (0.366)	0.022 (0.413)
Cannot afford 2-3	0.015 (0.608)	-0.093** (0.008)	0.027 (0.357)
Cannot afford all 4	0.007 (0.772)	-0.028 (0.349)	-0.008 (0.752)
Age 19-20 (reference category)			
21-24	-0.003 (0.914)	-0.067† (0.065)	0.100*** (0.001)
25-60	0.009 (0.814)	-0.031 (0.467)	0.175*** (0.000)
Age left full-time continuous education	-0.050* (0.050)	0.039 (0.199)	0.024 (0.346)
Ofsted grade 1 (reference category)			
2	0.027 (0.526)	-0.078 (0.127)	-0.015 (0.714)
3	0.052 (0.219)	-0.038 (0.456)	-0.044 (0.290)

	Satisfaction with learning experience	Attendance of classes	Enjoyment of learning
4	0.040 (0.173)	-0.061† (0.081)	-0.035 (0.222)
Numeracy (reference - Literacy)	0.056* (0.020)	-0.073* (0.012)	-0.060* (0.012)
Entry level course (reference category)			
Level 1	-0.044 (0.147)	-0.004 (0.910)	0.035 (0.235)
Level 2	-0.017 (0.600)	-0.006 (0.877)	0.023 (0.461)
Hours band Low (2-60)			
Medium (61-90)	-0.027 (0.383)	-0.021 (0.561)	0.069* (0.020)
High (91+)	-0.010 (0.730)	-0.015 (0.674)	0.133*** (0.000)
Satisfaction with learning		0.091** (0.002)	0.463*** (0.000)
Proportion of classes attended	0.074** (0.001)		0.138*** (0.000)
Enjoyment of learning	0.502*** (0.000)	0.194*** (0.000)	
Observations	1482	1482	1482

*Standardized beta coefficients; p-values in parentheses; † p ≤ 0.1; * p < 0.05, ** p < 0.01, *** p < 0.001*

Annex C: Health and well-being outcomes

This Annex section presents additional workings on health and well-being outcomes, by examining the data for different sub-groups. The Tables below set out the analysis by:

- gender (Table C-1)
- age group (Table C-2)
- Level of course (Table C-3)
- hours band (Table C-4).

Table C-1: Mean and standard deviations of wellbeing and health outcomes at Wave 1 and 2, by gender

	Female					Male				
	Wave 1			Wave 2		Wave 1			Wave 2	
	M	SD	t-test diff	M	SD	M	SD	t-test diff	M	SD
Life satisfaction	7.1	2.1	***	8.0	1.7	7.5	1.8	***	7.9	1.6
General health	12.8	2.7	†	13.1	2.6	13.5	2.5	n.s	13.7	2.5
Mental well-being	25.8	4.4	***	26.8	4.5	25.8	4.4	***	26.7	4.2
Self-esteem	18.5	2.7	***	19.2	2.8	18.7	2.8	†	19.1	2.6
Locus of control	8.5	1.6	*	8.7	1.8	8.5	1.5	***	8.8	1.5

*Source: GfK NOP survey. Note: Table only includes data on learners taking part in both Waves of the survey. † p ≤ .1; * p ≤ .05; ** p ≤ .01; *** p ≤ .001*

Table C-2: Mean and standard deviations of wellbeing and health outcomes at Wave 1 and 2, by age

	19-20			21-24			25 over		
	Wave 1		Wave 2	Wave 1		Wave 2	Wave 1		Wave 2
	M (SD)	ttest diff	M (SD)	M (SD)	ttest diff	M (SD)	M (SD)	ttest diff	M (SD)
Life satisfaction	7.6 (1.8)	***	8.1 (1.5)	7.4 (2.0)	***	8.1 (1.7)	7.0 (2.1)	***	7.9 (1.7)
General health	13.4 (2.8)	n.s	13.6 (2.7)	13.4 (1.9)	n.s	13.6 (2.2)	12.8 (2.8)	†	13.0 (2.7)
Mental well-being	25.6 (4.8)	*	26.3 (4.3)	25.7 (4.1)	***	26.9 (4.4)	25.9 (4.3)	***	26.9 (4.4)
Self-esteem	18.5 (2.8)	*	19.1 (4.3)	18.2 (2.8)	*	18.9 (2.7)	18.7 (2.7)	***	19.2 (2.8)
Locus of control	8.7 (1.4)	n.s	8.8 (1.4)	8.6 (1.4)	*	9.0 (1.5)	8.4 (1.7)	***	8.7 (1.8)

*Source: GfK NOP survey. Note: Table only includes data on learners taking part in both Waves of the survey. † p ≤ .1; * p ≤ .05; ** p ≤ .01; *** p ≤ .001*

Table C-3: Mean and standard deviations of wellbeing and health outcomes at Wave 1 and 2, by level

	Entry			Level 1			Level 2		
	Wave 1		Wave 2	Wave 1		Wave 2	Wave 1		Wave 2
	M (SD)	ttest diff	M (SD)	M (SD)	ttest diff	M (SD)	M (SD)	ttest diff	M (SD)
Life satisfaction	7.3 (2.0)	*	7.7 (1.8)	7.3 (2.1)	***	8.0 (1.7)	7.1 (2.0)	***	8.0 (1.6)
General health	12.4 (3.3)	n.s	12.1 (3.0)	13.3 (2.4)	n.s	13.5 (2.3)	13.1 (2.5)	***	13.6 (2.5)
Mental well-being	25.9 (4.4)	n.s	26.1 (4.5)	26.0 (4.2)	†	26.6 (3.9)	25.6 (4.4)	***	27.3 (4.6)
Self-esteem	18.1 (2.6)	n.s	18.1 (2.3)	18.7 (2.7)	†	19.0 (2.7)	18.7 (2.9)	***	19.7 (2.8)
Locus of control	8.1 (1.6)	n.s	8.1 (1.7)	8.4 (1.5)	n.s	8.6 (1.6)	8.7 (1.7)	***	9.1 (1.7)

*Source: GfK NOP survey. Note: Table only includes data on learners taking part in both Waves of the survey. † p ≤ .1; * p ≤ .05; ** p ≤ .01; *** p ≤ .001*

Table C-4: Mean and standard deviations of wellbeing and health outcomes at Wave 1 and 2, by hours band

	Low			Medium			High		
	Wave 1		Wave 2	Wave 1		Wave 2	Wave 1		Wave 2
	M (SD)	ttest diff	M (SD)	M (SD)	ttest diff	M (SD)	M (SD)	ttest diff	M (SD)
Life satisfaction	7.6 (1.8)	***	8.2 (1.5)	7.0 (2.1)	***	7.8 (1.8)	7.1 (2.1)	***	8.0 (1.6)
General health	13.6 (2.4)	n.s	13.6 (2.2)	13.0 (2.4)	n.s	13.2 (2.3)	12.6 (2.9)	**	13.1 (3.0)
Mental well-being	25.9 (4.0)	***	27.1 (3.8)	25.6 (4.5)	*	26.1 (4.5)	26.0 (4.5)	***	27.2 (4.6)
Self-esteem	18.9 (2.8)	†	19.3 (2.6)	18.4 (2.8)	*	18.9 (2.9)	18.5 (2.7)	***	19.2 (2.7)
Locus of control	8.5 (1.6)	*	8.9 (1.7)	6.6 (1.7)	n.s	6.5 (1.8)	8.5 (1.5)	*	8.8 (1.7)

*Source: GfK NOP survey. Note: Table only includes data on learners taking part in both Waves of the survey. † p ≤ .1; * p ≤ .05; ** p ≤ .01; *** p ≤ .001*

Annex D: Summative scales

Table D-1: Description of the summative scales

Scale name and description	Scale Items	Score range	Cronbach Alpha	Factor analysis results
Life satisfaction was measured as a single item rating 'satisfaction or dissatisfaction about the way life nowadays' and indicated by respondents on a scale of 0 to 10, with 0 representing completely dissatisfied and 10 completely satisfied.	-	0-10	-	-
General health was measured using four items accessing general physical health on a scale from 1 (definitely false) to 4 (definitely true). The four items are summed to create an overall index in which a high score represents better self-reported general health.	I seem to get ill more easily than other people (reverse) I am as healthy as anybody I know I expect my health to get worse (reverse) My health is excellent	4-16	0.789	61% variance explained, 1 factor.
Warwick-Edinburgh Mental Well-being Scale (WEMWBS) was used to assess mental health and well-being. The survey used seven of the original 14 as in the Short version of the WEMWBS. The items are measured on a scale from 1 (none of the time) to 5 (all of the time). The items are summed to create an overall index in which a high score indicates a greater level of mental well-being	I've been feeling optimistic about the future I've been feeling useful I've been feeling relaxed I've been dealing with problems well I've been thinking clearly I've been feeling close to other people I've been able to make up my own mind about things	7-35	0.753	40% variance explained, 1 factor.

Scale name and description	Scale Items	Score range	Cronbach Alpha	Factor analysis results
Self-esteem was measured using 6 of the 10 items in Rosenberg's Self Esteem Scale (Rosenberg, 1965) on a scale from 1 (strongly disagree) to 4 (strongly agree). The items are summed up to create an overall index in which higher score indicates higher self-esteem.	I feel good about myself I am able to do things as well as most other people On the whole, I am satisfied with myself I feel useless at times (reverse) I feel I do not have much to be proud of (reverse) I feel I am a person of worth, the equal of other people	6-24	0.773	48 % variance explained, 1 factor.
Locus of control/Self-efficacy was measured by three items measuring locus of control (Lefcourt 1982; Rotter 1966) on a scale from 1 (strongly disagree) to 4 (strongly agree). Items include ' I don't have enough control over the direction my life is taking ' and ' Every time I try to get ahead, something or somebody stops me'. The items are summed to create an overall index in which a high score indicates a greater level of perceived locus of control.	I don't have enough control over the direction my life is taking (reverse) In my life, good luck is more important than hard work for success (reverse) Every time I try to get ahead, something or somebody stops me (reverse)	3-12	0.557	45% variance explained, 1 factor.
Attitudes towards reading was measured using 4 items on a scale from 1 (strongly disagree) to 4 (strongly agree). The items are summed to create an overall index in which a high score indicates a more positive attitude to reading.	I enjoy reading I seldom see a book I want to read (reverse) I only read what I have to (reverse) I prefer watching television to reading (reverse)	4-16	0.654	50% variance explained, 1 factor.

Scale name and description	Scale Items	Score range	Cronbach Alpha	Factor analysis results
Self-evaluation of numerical skills was measured using 4 items on a scale from 1 (strongly disagree) to 4 (strongly agree). The items are summed to create an overall index in which a high score indicates a more positive evaluation of numerical skills.	I find learning maths quite easy I find lots of areas of maths difficult to understand (reverse) Learning maths can make me feel that I'm a bit of a failure (reverse) How good you are at working with numbers when you need to in daily life (different coding 1(poor) to 4 (very good))	4-16	0.603	46% variance explained, 1 factor.
Attitude to learning in general was measured using 4 items on a scale from 1 (strongly disagree) to 4 (strongly agree). The items are summed to create an overall index in which a high score indicates a more positive towards learning in general.	I don't see the point in learning or education (reverse) If you don't keep up through learning, it could hold you back at work Learning is an investment in a better future for myself/my family Learning isn't for people like me (reverse)	4-16	0.526	42% variance explained, 1 factor.
Number of areas with the increased use of literacy skills was measured looking at the change in the use of literacy across 5 areas. Each item in both waves received rating from 0 (never) to 5 (everyday) and the variables represents number of areas with the increase in use.	Read directions or instructions for medicines, recipes, or other products Read the newspaper Read fiction (stories, novels) and/or non-fiction (e.g.: histories, biographies, religious, science, self help) Read magazines or comic books Write notes, letters or email at home	0-5	-	-

Scale name and description	Scale Items	Score range	Cronbach Alpha	Factor analysis results
Number of areas with the increased use of numerical skills was measured looking at the change in the use of number skills across 4 areas. Each item in both waves received rating from 0 (never) to 5 (everyday) and the variables represents number of areas with the increase in use.	Check bank accounts and balances, check credit card accounts Calculate interest rates Calculate distances of journeys Convert weights and measures (e.g. while cooking)	0-4	-	-

Annex E: Multi-level regression models of change

Table E-1 summarises the results of multilevel linear regression of changes in attitudes, measured using three attitudinal scales: attitudes towards learning in general, attitudes towards reading and self-evaluation of maths skills. In this stage, the analysis attempts to estimate how different individual characteristics, behaviours and attitudes are related to the attitudinal change in three areas mentioned above. The models are multilevel models to account for the clustering of data (learners nested within providers). The models also include the value of the change outcome variable measured at wave 1 (the dependent variable lagged, for example, previous attitudes towards reading as a determinant of subsequent changes in these attitudes) to deal with regression to the mean.

Table E-1: Attitudinal changes: multilevel linear regression models.

	(1)	(2)	(3)	(4)
	Change in attitudes towards learning (literacy sample)	Change in attitudes towards learning (numeracy sample)	Change in attitudes towards reading	Change in self-evaluation of maths skills
Attitudes towards learning W1	-0.611*** (0.000)	-0.594*** (0.000)		
Attitudes towards reading W1			-0.458*** (0.000)	
Self-evaluation of maths skills W1				-0.490*** (0.000)
Male	0.055 (0.350)	0.067 (0.267)	-0.009 (0.891)	-0.016 (0.789)
With LLDL (reference category)				
No LLDL	-0.002 (0.976)	-0.001 (0.983)	0.078 (0.246)	-0.005 (0.943)
LLDL - not stated	-0.161** (0.006)	-0.014 (0.819)	0.021 (0.736)	0.043 (0.476)
English (main language)	-0.094 (0.133)	-0.059 (0.335)	-0.015 (0.828)	-0.057 (0.349)
Parents in household with children in school (age 4-18)	0.033 (0.595)	0.051 (0.454)	-0.115† (0.084)	-0.032 (0.619)
Employed W1 (reference category)				

	(1)	(2)	(3)	(4)
	Change in attitudes towards learning (literacy sample)	Change in attitudes towards learning (numeracy sample)	Change in attitudes towards reading	Change in self-evaluation of maths skills
Not in employment	-0.009 (0.881)	-0.044 (0.506)	0.083 (0.209)	-0.018 (0.778)
Unemployed	0.019 (0.756)	0.037 (0.553)	0.005 (0.942)	-0.097 (0.107)
Can afford all 4 (reference category)				
Cannot afford 1	-0.151* (0.019)	0.031 (0.630)	0.106 (0.123)	0.111† (0.078)
Cannot afford 2-3	0.009 (0.886)	-0.065 (0.352)	0.112 (0.110)	0.071 (0.301)
Cannot afford all 4	-0.040 (0.475)	0.016 (0.796)	-0.018 (0.770)	0.014 (0.816)
Age 19-20 (reference category)				
21-24	0.021 (0.761)	0.045 (0.527)	0.015 (0.834)	-0.037 (0.609)
25-60	-0.032 (0.697)	0.125 (0.150)	0.098 (0.278)	-0.131 (0.115)
Age left full-time continuous education	0.004 (0.950)	0.059 (0.322)	-0.005 (0.940)	0.007 (0.901)
Satisfaction with learning experience on course	0.091 (0.200)	-0.007 (0.919)	0.091 (0.226)	0.029 (0.656)
Proportion of classes attended	-0.004 (0.950)	-0.006 (0.915)	-0.017 (0.782)	0.012 (0.842)
Enjoyment of learning on course	0.042 (0.563)	0.041 (0.566)	0.003 (0.972)	0.086 (0.195)
Change in numeracy score (assessment results)		0.020 (0.721)		0.012 (0.828)
Change in self-evaluation of maths skills		0.150** (0.006)		
Change in literacy score (assessment results)	0.086 (0.119)		-0.019 (0.745)	
Change in attitudes towards reading	0.073 (0.175)			

	(1)	(2)	(3)	(4)
	Change in attitudes towards learning (literacy sample)	Change in attitudes towards learning (numeracy sample)	Change in attitudes towards reading	Change in self-evaluation of maths skills
Ofsted grade 1 (reference category)				
2	-0.010 (0.919)	-0.112 (0.241)	0.123 (0.294)	0.084 (0.380)
3	-0.105 (0.266)	-0.199* (0.038)	0.018 (0.875)	0.054 (0.567)
4	-0.023 (0.741)	-0.084 (0.237)	0.024 (0.768)	-0.046 (0.500)
Entry level course (reference category)				
Level 1	-0.051 (0.513)	0.041 (0.609)	0.155† (0.064)	-0.026 (0.723)
Level 2	0.062 (0.445)	0.134 (0.129)	0.195* (0.030)	-0.000 (0.998)
Hours band Low (2-60)				
Medium (61-90)	-0.064 (0.348)	0.104 (0.145)	-0.081 (0.284)	0.023 (0.745)
High (91+)	-0.082 (0.237)	0.032 (0.632)	-0.048 (0.530)	-0.045 (0.496)
Observations N	209	219	244	269

*Standardized beta coefficients; p-values in parentheses; † p ≤ .1; * p ≤ .05; ** p ≤ .01; *** p ≤ .001*

Table E-2: Change in life-satisfaction, mental well-being and general health: multilevel linear regression models.

	Change in life satisfaction (literacy sample)	Change in life satisfaction (numeracy sample)	Change in mental well-being (literacy sample)	Change in mental well-being (numeracy sample)	Change in general health (literacy sample)	Change in general health (numeracy sample)
Life satisfaction W1	-0.610*** (0.000)	-0.704*** (0.000)				
Mental well-being W1			-0.473*** (0.000)	-0.551*** (0.000)		
General health W1					-0.375*** (0.000)	-0.521*** (0.000)
Male	-0.035 (0.553)	-0.077 (0.128)	-0.054 (0.410)	-0.038 (0.539)	-0.245** (0.007)	0.068 (0.415)
With LLDL (reference category)						
No LLDL	0.023 (0.709)	-0.085 (0.155)	0.046 (0.505)	0.048 (0.503)	-0.104 (0.266)	0.144 (0.131)
LLDL - not stated	-0.039 (0.517)	0.095 (0.077)	-0.068 (0.305)	0.075 (0.246)	-0.111 (0.316)	-0.010 (0.910)
English (main language)	0.077 (0.231)	0.057 (0.274)	-0.002 (0.978)	-0.063 (0.320)	-0.085 (0.356)	-0.029 (0.726)
Parents in household with children in school (age 4-18)	-0.009 (0.890)	-0.033 (0.584)	0.067 (0.329)	-0.107 (0.130)	0.100 (0.269)	0.069 (0.479)
Employed W1 (reference category)						
Not in employment	-0.097 (0.126)	-0.055 (0.340)	-0.039 (0.570)	-0.058 (0.395)	-0.158 (0.115)	-0.132 (0.121)
Unemployed	-0.062 (0.325)	-0.130* (0.017)	0.003 (0.964)	-0.116 (0.075)	-0.240* (0.015)	0.033 (0.689)
Can afford all 4 (reference category)						
Cannot afford 1	0.076 (0.246)	0.065 (0.252)	-0.027 (0.711)	0.104 (0.123)	-0.036 (0.698)	0.201* (0.030)
Cannot afford 2-3	0.065 (0.318)	0.084 (0.169)	-0.018 (0.795)	0.109 (0.130)	-0.176† (0.079)	0.141 (0.145)
Cannot afford all 4	0.062 (0.288)	-0.010 (0.843)	0.046 (0.464)	-0.024 (0.701)	-0.129 (0.125)	0.019 (0.825)
Age 19-20 (reference category)						

	Change in life satisfaction (literacy sample)	Change in life satisfaction (numeracy sample)	Change in mental well-being (literacy sample)	Change in mental well-being (numeracy sample)	Change in general health (literacy sample)	Change in general health (numeracy sample)
21-24	-0.132† (0.059)	0.063 (0.296)	-0.059 (0.442)	0.137† (0.058)	-0.137 (0.277)	-0.217* (0.028)
25-60	-0.205* (0.015)	0.052 (0.480)	-0.108 (0.243)	0.175* (0.048)	-0.157 (0.305)	-0.302* (0.013)
Age left full-time continuous education	-0.005 (0.935)	0.013 (0.791)	-0.040 (0.559)	-0.051 (0.410)	-0.078 (0.435)	0.017 (0.838)
Change in literacy score (assessment results)	-0.002 (0.970)		-0.030 (0.617)		0.030 (0.709)	
Change in attitudes towards reading	-0.049 (0.369)		0.030 (0.615)		0.030 (0.728)	
Change in numeracy score (assessment results)		0.010 (0.829)		0.038 (0.507)		0.171* (0.029)
Change in self-evaluation of maths skills		-0.037 (0.426)		0.039 (0.493)		-0.045 (0.551)
Satisfaction with learning experience on course	0.027 (0.711)	0.047 (0.425)	0.188* (0.016)	0.110 (0.123)	0.445*** (0.000)	0.124 (0.190)
Proportion of classes attended	0.026 (0.652)	0.084† (0.097)	-0.090 (0.157)	0.054 (0.380)	0.063 (0.495)	0.070 (0.378)
Change in attitudes towards learning	0.027 (0.633)	0.018 (0.713)	0.037 (0.547)	0.084 (0.143)	0.021 (0.809)	0.087 (0.265)
Enjoyment of learning on course	0.174* (0.017)	-0.063 (0.310)	-0.044 (0.580)	0.001 (0.991)	-0.410*** (0.000)	-0.037 (0.699)
Ofsted grade 1 (reference category)						
2	-0.073 (0.461)	-0.011 (0.892)	-0.011 (0.920)	-0.040 (0.687)	-0.147 (0.309)	0.098 (0.459)
3	-0.125 (0.190)	-0.086 (0.310)	-0.033 (0.749)	-0.017 (0.868)	-0.135 (0.344)	-0.071 (0.585)

	Change in life satisfaction (literacy sample)	Change in life satisfaction (numeracy sample)	Change in mental well-being (literacy sample)	Change in mental well-being (numeracy sample)	Change in general health (literacy sample)	Change in general health (numeracy sample)
4	-0.168* (0.019)	0.019 (0.760)	-0.004 (0.962)	-0.053 (0.474)	-0.168 (0.113)	0.066 (0.482)
Entry level course (reference category)						
Level 1	0.023 (0.772)	0.132† (0.062)	0.036 (0.674)	-0.013 (0.876)	-0.060 (0.570)	-0.083 (0.507)
Level 2	0.072 (0.376)	0.196** (0.009)	0.113 (0.207)	0.179* (0.046)	0.012 (0.916)	0.005 (0.970)
Hours band Low (2-60)						
Medium (61-90)	-0.098 (0.159)	0.019 (0.752)	-0.054 (0.474)	-0.149* (0.048)	-0.095 (0.386)	0.114 (0.267)
High (91+)	-0.160* (0.025)	0.076 (0.194)	-0.036 (0.642)	0.031 (0.667)	-0.028 (0.792)	0.136 (0.162)
Observations	208	218	206	216	209	219

*Standardized beta coefficients; p-values in parentheses; † p ≤ .1; * p ≤ .05; ** p ≤ .01; *** p ≤ .001*

Table E-3: Change in self-esteem and locus of control: multilevel linear regression models.

	Change in self-esteem (literacy sample)	Change in self-esteem (numeracy sample)	Change in locus of control (literacy sample)	Change in locus of control (numeracy sample)
Self-esteem W1	-0.491*** (0.000)	-0.456*** (0.000)		
Locus of control W1			-0.475*** (0.000)	-0.434*** (0.000)
Male	-0.052 (0.421)	-0.018 (0.780)	-0.029 (0.681)	0.060 (0.362)
With LLDL (reference category)				
No LLDL	0.081 (0.250)	-0.126 (0.091)	-0.008 (0.909)	0.131 (0.095)
LLDL - not stated	-0.026 (0.698)	0.056 (0.403)	-0.050 (0.485)	0.064 (0.346)
English (main language)	0.136† (0.052)	-0.113† (0.089)	-0.099 (0.181)	-0.036 (0.606)
Parents in household with children in school (age 4-18)	0.022 (0.751)	-0.025 (0.730)	-0.072 (0.328)	-0.064 (0.409)
Employed W1 (reference category)				
Not in employment	0.023 (0.740)	-0.089 (0.217)	-0.062 (0.409)	-0.116 (0.122)
Unemployed	-0.024 (0.729)	-0.018 (0.790)	-0.118 (0.115)	0.009 (0.902)
Can afford all 4 (reference category)				
Cannot afford 1	0.016 (0.824)	0.112 (0.104)	0.015 (0.847)	0.081 (0.251)
Cannot afford 2-3	0.055 (0.443)	0.141† (0.057)	-0.016 (0.830)	0.052 (0.496)
Cannot afford all 4	0.079 (0.214)	-0.003 (0.959)	-0.128† (0.059)	0.042 (0.533)
Age 19-20 (reference category)				
21-24	0.007 (0.928)	0.117 (0.113)	-0.037 (0.635)	0.215** (0.005)
25-60	-0.104 (0.261)	0.048 (0.600)	-0.054 (0.576)	0.179† (0.060)

	Change in self-esteem (literacy sample)	Change in self-esteem (numeracy sample)	Change in locus of control (literacy sample)	Change in locus of control (numeracy sample)
Age left full-time continuous education	-0.006 (0.932)	-0.031 (0.622)	-0.116 (0.119)	-0.078 (0.245)
Change in literacy score (assessment results)	-0.021 (0.727)		-0.063 (0.325)	
Change in attitudes towards reading	0.026 (0.665)		-0.013 (0.834)	
Change in numeracy score (assessment results)		0.022 (0.708)		0.067 (0.274)
Change in self-evaluation of maths skills		0.078 (0.189)		0.117† (0.055)
Satisfaction with learning experience on course	0.026 (0.739)	0.120 (0.106)	0.048 (0.558)	0.242** (0.002)
Proportion of classes attended	-0.079 (0.206)	-0.009 (0.883)	0.042 (0.527)	0.018 (0.785)
Change in attitudes towards learning	0.146* (0.019)	0.042 (0.476)	0.074 (0.258)	0.033 (0.587)
Enjoyment of learning on course	0.004 (0.955)	0.022 (0.780)	-0.034 (0.689)	-0.259** (0.002)
Ofsted grade 1 (reference category)				
2	-0.004 (0.974)	-0.082 (0.407)	-0.052 (0.639)	0.115 (0.292)
3	-0.013 (0.909)	-0.214* (0.032)	-0.021 (0.847)	0.081 (0.453)
4	-0.064 (0.472)	-0.094 (0.215)	-0.014 (0.865)	0.024 (0.768)
Entry level course (reference category)				
Level 1	0.031 (0.724)	0.205* (0.015)	0.112 (0.244)	-0.001 (0.991)
Level 2	0.184* (0.048)	0.411*** (0.000)	0.194* (0.048)	0.126 (0.195)
Hours band Low (2-60)				
Medium (61-90)	0.021 (0.793)	-0.017 (0.823)	-0.050 (0.534)	-0.104 (0.179)

	Change in self-esteem (literacy sample)	Change in self-esteem (numeracy sample)	Change in locus of control (literacy sample)	Change in locus of control (numeracy sample)
High (91+)	0.100 (0.208)	0.076 (0.297)	0.031 (0.701)	0.012 (0.875)
Observations	196	203	190	192

*Standardized beta coefficients; p-values in parentheses; † p ≤ .1; * p ≤ .05; ** p ≤ .01; *** p ≤ .001*

Annex F: Multi-level models

F.1. Attainment models

F.1.1. Numeracy model

$$\text{score}_{ijk} \sim \text{N}(XB,\ \Omega)$$

$$\text{score}_{ijk} = \beta_{0ijk}\text{cons} + 1.572(0.494)\text{time}_{ijk} + \text{-}3.435(1.448)\text{tp2learndiff}_{ijk}$$

$$\beta_{0ijk} = 33.565(0.863) + v_{0k} + u_{0jk} + e_{0ijk}$$

$$\begin{bmatrix} v_{0k} \end{bmatrix} \sim \text{N}(0,\ \Omega_v) \ :\ \Omega_v = \begin{bmatrix} 12.672(6.911) \end{bmatrix}$$

$$\begin{bmatrix} u_{0jk} \end{bmatrix} \sim \text{N}(0,\ \Omega_u) \ :\ \Omega_u = \begin{bmatrix} 117.535(11.419) \end{bmatrix}$$

$$\begin{bmatrix} e_{0ijk} \end{bmatrix} \sim \text{N}(0,\ \Omega_e) \ :\ \Omega_e = \begin{bmatrix} 36.967(2.860) \end{bmatrix}$$

*-2*loglikelihood(IGLS Deviance)* = 5037.768(673 of 680 cases in use)

F.1.2. Literacy version A

$$\text{score}_{ijk} \sim \text{N}(XB,\ \Omega)$$

$$\text{score}_{ijk} = \beta_{0ijk}\text{cons} + 0.375(0.460)\text{time}_{ijk}$$

$$\beta_{0ijk} = 31.545(1.572) + v_{0k} + u_{0jk} + e_{0ijk}$$

$$\begin{bmatrix} v_{0k} \end{bmatrix} \sim \text{N}(0,\ \Omega_v) \ :\ \Omega_v = \begin{bmatrix} 8.729(24.078) \end{bmatrix}$$

$$\begin{bmatrix} u_{0jk} \end{bmatrix} \sim \text{N}(0,\ \Omega_u) \ :\ \Omega_u = \begin{bmatrix} 184.687(36.217) \end{bmatrix}$$

$$\begin{bmatrix} e_{0ijk} \end{bmatrix} \sim \text{N}(0,\ \Omega_e) \ :\ \Omega_e = \begin{bmatrix} 9.322(1.405) \end{bmatrix}$$

*-2*loglikelihood(IGLS Deviance)* = 1222.168(176 of 198 cases in use)

F.1.3. Literacy version B

$$\text{score}_{ijk} \sim N(XB,\ \Omega)$$

$$\text{score}_{ijk} = \beta_{0ijk}\text{cons} + -1.559(0.289)\text{time}_{ijk} + 2.318(0.742)\text{tp2entlev1}_{ijk} + 2.267(0.471)\text{tp2eal}_{ijk}$$

$$\beta_{0ijk} = 55.271(1.581) + v_{0k} + u_{0jk} + e_{0ijk}$$

$$\begin{bmatrix} v_{0k} \end{bmatrix} \sim N(0,\ \Omega_v) \ :\ \Omega_v = \begin{bmatrix} 36.706(25.367) \end{bmatrix}$$

$$\begin{bmatrix} u_{0jk} \end{bmatrix} \sim N(0,\ \Omega_u) \ :\ \Omega_u = \begin{bmatrix} 336.554(37.991) \end{bmatrix}$$

$$\begin{bmatrix} e_{0ijk} \end{bmatrix} \sim N(0,\ \Omega_e) \ :\ \Omega_e = \begin{bmatrix} 4.615(0.456) \end{bmatrix}$$

*-2*loglikelihood(IGLS Deviance)* = 2831.293(410 of 412 cases in use)

F.2. Composite models

F.2.1. General Health

$$\text{gh\_1}_{ijk} \sim N(XB,\ \Omega)$$

$$\text{gh\_1}_{ijk} = \beta_{0ijk}\text{cons} + -0.518(0.116)\text{time}_{ijk} + 1.895(0.432)\text{tp2statussick}_{ijk}$$

$$\beta_{0ijk} = 8.893(0.154) + v_{0k} + u_{0jk} + e_{0ijk}$$

$$\begin{bmatrix} v_{0k} \end{bmatrix} \sim N(0,\ \Omega_v) \ :\ \Omega_v = \begin{bmatrix} 0.457(0.291) \end{bmatrix}$$

$$\begin{bmatrix} u_{0jk} \end{bmatrix} \sim N(0,\ \Omega_u) \ :\ \Omega_u = \begin{bmatrix} 7.876(0.607) \end{bmatrix}$$

$$\begin{bmatrix} e_{0ijk} \end{bmatrix} \sim N(0,\ \Omega_e) \ :\ \Omega_e = \begin{bmatrix} 4.099(0.228) \end{bmatrix}$$

*-2*loglikelihood(IGLS Deviance)* = 6523.746(1290 of 1290 cases in use)

F.2.2. Well Being

$$\text{wb\_1}_{ijk} \sim \text{N}(XB,\ \Omega)$$
$$\text{wb\_1}_{ijk} = \beta_{0ijk}\text{cons} + 0.917(0.163)\text{time}_{ijk}$$
$$\beta_{0ijk} = 25.744(0.204) + v_{0k} + u_{0jk} + e_{0ijk}$$

$$\begin{bmatrix} v_{0k} \end{bmatrix} \sim \text{N}(0,\ \Omega_v)\ :\ \Omega_v = \begin{bmatrix} 1.221(0.495) \end{bmatrix}$$

$$\begin{bmatrix} u_{0jk} \end{bmatrix} \sim \text{N}(0,\ \Omega_u)\ :\ \Omega_u = \begin{bmatrix} 9.455(0.861) \end{bmatrix}$$

$$\begin{bmatrix} e_{0ijk} \end{bmatrix} \sim \text{N}(0,\ \Omega_e)\ :\ \Omega_e = \begin{bmatrix} 8.520(0.474) \end{bmatrix}$$

*-2*loglikelihood(IGLS Deviance)* = 7222.889(1290 of 1290 cases in use)

F.2.3. Self Esteem

$$\text{sc\_1}_{ijk} \sim \text{N}(XB,\ \Omega)$$
$$\text{sc\_1}_{ijk} = \beta_{0ijk}\text{cons} + 1.019(0.321)\text{time}_{ijk} + -0.258(0.125)\text{tp2ofsted}_{ijk}$$
$$\beta_{0ijk} = 18.466(0.115) + v_{0k} + u_{0jk} + e_{0ijk}$$

$$\begin{bmatrix} v_{0k} \end{bmatrix} \sim \text{N}(0,\ \Omega_v)\ :\ \Omega_v = \begin{bmatrix} 0.162(0.147) \end{bmatrix}$$

$$\begin{bmatrix} u_{0jk} \end{bmatrix} \sim \text{N}(0,\ \Omega_u)\ :\ \Omega_u = \begin{bmatrix} 3.738(0.346) \end{bmatrix}$$

$$\begin{bmatrix} e_{0ijk} \end{bmatrix} \sim \text{N}(0,\ \Omega_e)\ :\ \Omega_e = \begin{bmatrix} 3.565(0.199) \end{bmatrix}$$

*-2*loglikelihood(IGLS Deviance)* = 6046.938(1290 of 1290 cases in use)

F.2.4. Locus of Control/Self efficacy

$$\text{lc\_1}_{ijk} \sim \text{N}(XB,\ \Omega)$$
$$\text{lc\_1}_{ijk} = \beta_{0ijk}\text{cons} + 0.246(0.067)\text{time}_{ijk} + -0.537(0.189)\text{tp2candg}_{ijk}$$
$$\beta_{0ijk} = 8.491(0.070) + v_{0k} + u_{0jk} + e_{0ijk}$$

$$\begin{bmatrix} v_{0k} \end{bmatrix} \sim \text{N}(0,\ \Omega_v)\ :\ \Omega_v = \begin{bmatrix} 0.102(0.054) \end{bmatrix}$$

$$\begin{bmatrix} u_{0jk} \end{bmatrix} \sim \text{N}(0,\ \Omega_u)\ :\ \Omega_u = \begin{bmatrix} 1.017(0.109) \end{bmatrix}$$

$$\begin{bmatrix} e_{0ijk} \end{bmatrix} \sim \text{N}(0,\ \Omega_e)\ :\ \Omega_e = \begin{bmatrix} 1.361(0.076) \end{bmatrix}$$

*-2*loglikelihood(IGLS Deviance)* = 4680.113(1290 of 1290 cases in use)

F.2.5. Attitude to Learning

$$\text{attlng\_1}_{ijk} \sim N(XB, \Omega)$$

$$\text{attlng\_1}_{ijk} = \beta_{0ijk}\text{cons} + 0.562(0.228)\text{time}_{ijk} + -0.403(0.194)\text{tp2learndiff}_{ijk} + 0.298(0.144)\text{tp2otherent}_{ijk} + -0.212(0.087)\text{tp2ofsted}_{ijk}$$

$$\beta_{0ijk} = 15.821(0.079) + v_{0k} + u_{0jk} + e_{0ijk}$$

$$\begin{bmatrix} v_{0k} \end{bmatrix} \sim N(0, \Omega_v) : \Omega_v = \begin{bmatrix} 0.201(0.070) \end{bmatrix}$$

$$\begin{bmatrix} u_{0jk} \end{bmatrix} \sim N(0, \Omega_u) : \Omega_u = \begin{bmatrix} 0.829(0.115) \end{bmatrix}$$

$$\begin{bmatrix} e_{0ijk} \end{bmatrix} \sim N(0, \Omega_e) : \Omega_e = \begin{bmatrix} 1.769(0.099) \end{bmatrix}$$

*-2*loglikelihood(IGLS Deviance)* = 4878.006(1290 of 1290 cases in use)

F.2.6. Self Evaluation of Maths Skills

$$\text{mathskill\_1}_{ijk} \sim N(XB, \Omega)$$

$$\text{mathskill\_1}_{ijk} = \beta_{0ijk}\text{cons} + 0.091(0.091)\text{time}_{ijk}$$

$$\beta_{0ijk} = 10.948(0.111) + v_{0k} + u_{0jk} + e_{0ijk}$$

$$\begin{bmatrix} v_{0k} \end{bmatrix} \sim N(0, \Omega_v) : \Omega_v = \begin{bmatrix} 0.038(0.098) \end{bmatrix}$$

$$\begin{bmatrix} u_{0jk} \end{bmatrix} \sim N(0, \Omega_u) : \Omega_u = \begin{bmatrix} 2.437(0.263) \end{bmatrix}$$

$$\begin{bmatrix} e_{0ijk} \end{bmatrix} \sim N(0, \Omega_e) : \Omega_e = \begin{bmatrix} 1.412(0.108) \end{bmatrix}$$

*-2*loglikelihood(IGLS Deviance)* = 2676.044(680 of 1290 cases in use)

F.2.7. Attitudes towards Reading

$$\text{readatt}_{ijk} \sim N(XB, \Omega)$$

$$\text{readatt}_{ijk} = \beta_{0ijk}\text{cons} + -0.148(0.123)\text{time}_{ijk} + 0.573(0.274)\text{tp2lev2}_{ijk}$$

$$\beta_{0ijk} = 10.925(0.163) + v_{0k} + u_{0jk} + e_{0ijk}$$

$$\begin{bmatrix} v_{0k} \end{bmatrix} \sim N(0, \Omega_v) : \Omega_v = \begin{bmatrix} 0.345(0.236) \end{bmatrix}$$

$$\begin{bmatrix} u_{0jk} \end{bmatrix} \sim N(0, \Omega_u) : \Omega_u = \begin{bmatrix} 3.755(0.427) \end{bmatrix}$$

$$\begin{bmatrix} e_{0ijk} \end{bmatrix} \sim N(0, \Omega_e) : \Omega_e = \begin{bmatrix} 1.749(0.151) \end{bmatrix}$$

*-2*loglikelihood(IGLS Deviance)* = 2430.739(568 of 1290 cases in use)

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