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# The 2011 Skills for Life Survey: A Survey of Literacy, Numeracy and ICT Levels in England

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Department for Business, Innovation and Skills

1 Victoria Street

London, SW1H 0ET

www.BIS.gov.uk

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# Glossary of Terms

**BCS70** *1970 British Cohort Study*
A continuing, multi-disciplinary longitudinal study which takes as its subjects all those living in England, Scotland and Wales who were born in one particular week in April 1970.

**BIS** *Department for Business, Innovation and Skills*
The current ministerial department of the United Kingdom Government responsible for enterprise, business relations, regional development and fair markets, along with responsibility for science and innovation, further and higher education and skills.

**BME** *Black and Minority Ethnic Groups*
A summarised descriptor used to distinguish non-white and culturally distinct minority groups and individuals within British society. In this report it is used to categorise people who describe their cultural background as anything other than 'White British', 'White Irish' and 'White other'.

**CBI** *Confederation of British Industry*
A third sector organisation representing UK businesses of all sizes and sectors.

**CDELL** *Centre for Developing and Evaluating Lifelong Learning*
An agency which undertakes research programmes in lifelong learning, based in the School of Education at the University of Nottingham.

**CHAID** *Chi-squared Automatic Interaction Detector*
An exploratory data analysis method used to study the relationships between a dependent measure and a large series of possible predictor variables that themselves may interact.

**CLS** *Centre for Longitudinal Studies*
An ESRC resource centre based at the Institute of Education. It houses three internationally renowned birth cohort studies.

**CPU** *Central Processing Unit*
The portion of a computer system that carries out the instructions of a computer program, to perform the basic arithmetical, logical, and input/output operations of the system.

**DfES** *Department for Education and Skills*
The UK government department responsible for the education system and children's services in England between 2001 and 2007.

**DIUS** *Department for Innovation, Universities and Skills*
The UK government department responsible for adult learning, some parts of further education, higher education, skills, science and innovation from June 2007 to June 2009, (It was created in June 2007 to take over some of the functions of the Department of Education and Skills and of the Department of Trade and Industry. In June 2009 it was merged into the newly formed Department for Business, Innovation and Skills.

**EFL** *People for whom English is the First spoken Language*

**ENFL** *People for whom English is Not the First spoken Language*

**ESOL** *English for Speakers of Other Languages*
English spoken as a 'second' language (rather than as a 'first' language).

**HE** *Higher Education*
Education provision at a higher level than Level 3 qualifications. HE takes place primarily in universities and colleges, and can include degree courses, postgraduate courses and Higher National Diplomas.

**HRP** *Household Reference Person*
The person within the household who is chosen to characterise the household's social position. This must be a householder (i.e. a person in whose name the accommodation is owned or rented). Where there are joint householders, the person with the *highest income* is selected. If two or more householders have exactly the same income the *oldest* is selected.

**IA** *Initial Assessments*
Part of a suite of assessment tools commissioned by the Department for Education and Skills to support organisations with identifying adults with skills shortages.

**IALS** *The International Adult Literacy Survey*
An international survey of adult literacy carried out in the 1990s. One of the first ever comparative surveys of adults designed to profile and explore literacy distributions amongst participating countries.

**ICT** *Information and Communication Technology*

**IEA** *International Association for the Evaluation of Educational Achievement*
An independent, international cooperative of national research institutions and governmental research agencies. It conducts large-scale comparative studies of educational achievement and other aspects of education.

**IMD** *Indices of Multiple Deprivation*
IMD identifies the most deprived areas across the country by combining a number of indicators covering a range of economic, social and housing issues, into a single deprivation score for each small area in England. The 2010 version of IMD uses 38 separate indicators, organised across seven distinct domains (income, employment, health and disability, education skills and training, barriers to housing and other services, and crime and living environment) which are combined using appropriate weights.

**IRT** *Items Response Theory*
A statistical method for considering assessment performance and supporting assessment design, which is used extensively in the USA for assessment evaluation.

**ITQ** *Information Technology Qualification*
A nationally-recognised programme designed by employers to meet the needs of businesses. It aims to develop computer skills that will help people do their job more effectively and productively.

**LSOA** *Lower Layer Super Output Area*
Geographic areas built from groups of contiguous Output Areas. LSOAs typically contain from four to six Output Areas with a minimum population of 1000 (the mean is 1500) and are automatically generated to be as consistent in population size as possible. LSOAs form a hierarchy designed to improve the reporting of small area statistics in England and Wales.

**NCDS** *National Child Development Study*
A continuing, multi-disciplinary longitudinal study which takes as its subjects all the people born in one week in England, Scotland and Wales in one week in March 1958.

**NFER** *The National Foundation for Educational Research*
A foundation for educational research which aims to improve education nationally and internationally by undertaking research and dissemination activities.

**NOS** *The National Occupation Standards for IT users*
Statements of the standards of performance that individuals must achieve when carrying out functions in the workplace.

**NRDC** *National Research and Development Centre*
A consortium of partners, dedicated to conducting research and development projects into adult literacy, numeracy, ESOL and ICT.

**NSSEC** *National Statistics Socio-economic Classification*
An occupationally based classification which aims to differentiate positions within labour markets and production units in terms of their typical 'employment relations'. The eight NS-SEC categories distinguish different positions (not people) as defined by social relationships in the workplace, i.e. by how employees are regulated by employers through employment contracts.

**NQF** *National Qualifications Framework*
A framework which sets out the level at which a qualification can be recognised in England, Northern Ireland and Wales. The framework included Skills for Life qualifications. For vocational qualifications the NQF began to be superseded by the Qualifications and Credit Framework from 2011.

**OA** *Output Area*
The smallest geographic entities for which detailed 2001 Census results are available. OAs are built from clusters of adjacent unit postcodes. They are designed to have similar population sizes and be as socially homogenous as possible (based on tenure of household and dwelling type). OAs have an average population size of 125 households and around 300 residents, each clustered around a single mode. There are a total of 175,434 OAs in England and Wales (165,665 and 9,769, respectively).

**OAC** *Output Area Classification*
A geo-demographic and social classification tool which categorises geographic entities (Output Areas) according to key characteristics that are common to the population in that grouping.

**OECD** *Organisation for Economic Co-operation and Development*
An international organisation which helps governments tackle economic, social and governances challenges of a globalised economy.

**ONS** *Office of National Statistics*
An executive office of the UK Statistics Authority.

**PIAAC** *The Programme for International Assessment of Adult Competences*
An international survey of adult skills, undertaken as a collaboration between governments, an international consortium of organisations and the OECD. The survey is taking place across OECD and partner countries in 2011, with results being published in 2013. It aims to measure the skills and competencies needed for individuals to participate in society and for economies to prosper.

**PIRLS** *The Progress in International Reading Literacy Study*
An international study which aims to examine the trends in reading achievement of children aged 10 from different counties.

**PISA** *The Programme for International Student Assessment*
An internationally standardised assessment that was jointly developed by participating economies that is administered to 15 year olds in schools. It has been conducted every three years to assess the extent to which students near the end of compulsory education have acquired some of the knowledge and skills essential for full participation in society. The PISA targets are however no longer extant.

**PSA** *Public Service Agreements*
Previous targets and objectives set for Government departments (which are no longer extant) which aimed at delivering modern responsive public services. Departmental budgets were linked to how departments perform in relation to PSAs.

**PSU** *Primary Sample Unit*
A Primary Sampling Unit is the first sample entity drawn in a multi-stage sample.

**QCA** *Qualifications and Curriculum Authority*
An organisation responsible for developing both the National Curriculum for children and young people and the National Qualifications Framework for learners and employers.

**QCDA** *Qualifications and Curriculum Development Agency*
An organisation responsible for developing both the National Curriculum for children and young people and the National Qualifications Framework for learners and employers. Previously known as QCA (see above). QCDA closes in March 2012 with responsibilities transferring to the Department for Education.

**QCF** *Qualifications and Credit Framework*
A system for recognising skills and qualifications. It allows achievements to be recognised and recorded through the award of credits and qualifications.

**RATE** *Real Applications Test Environment*
A technology which employs real applications that are typical of modern office type applications in appearance, facilities and capability.

**SfL2003** *2003 Skills for Life Survey*

**SfL2011** *2011 Skills for Life Survey*

**SIC** *UK Standard Industrial Classification*
SIC is used to classify business establishments, individuals and other statistical units by the type of economic activity in which they are engaged. The 2007 version of SIC is a hierarchical five digit system divided into 21 sections, each denoted by a single letter from A to U.

**SMS** *Short Message Service*
Text messaging service component of a phone, web or mobile communication system.

**SSAL** *The Scottish Survey of Adult Literacies*
A study of adult literacy in Scotland carried out in 2009, commissioned by the Scottish Government.

**TIMSS** *The Trends in International Mathematics and Science Study*
An international study which measures tends in mathematics and science achievement in schools in 52 countries around the world.

**UKCES** *The UK Commission for Employment and Skills*
A social partnership, led by Commissioners from large and small employers, trade unions and the voluntary sector. Their mission is to raise skill levels to help drive enterprise, create more and better jobs and economic growth.

*Adaptive algorithm*
The literacy and numeracy assessments used in the Skills for Life surveys based on an 'adaptive algorithm'. They are adaptive by selecting and presenting questions based on the scoring of candidates' responses to previous questions.

*Age groups and generations*
Age groups – The term used in this report which compares respondents of the same age between the 2003 and 2011 surveys e.g. 16-24 year-olds in 2003 and 16-24 year-olds in 2011.

*Generations* – The term used in this report which compares groups of respondents as they have aged over time between the 2003 and 2011 surveys e.g. 16-19 year-olds in 2003 and 24-27 year-olds in 2011.

*Leitch Thresholds*
Levels referred to in the Leitch Review. The Leitch review set minimum standards for literacy and numeracy to allow the UK to meet its economic targets, and described these as 'functional' literacy (defined as Level 1 or above) and 'functional' numeracy (Entry Level 3 or above)

*NQF Skill Levels*
The skill Levels set out in the NQF. This report includes breakdowns of literacy, numeracy and ICT across five lowest NQF Levels:

**Entry Level 1** is the national school curriculum equivalent for attainment at age 5-7. Adults below Entry Level 1 may not be able to write short messages to family or select floor numbers in lifts. Adults with ICT Entry Level 1 skills are able to get information from an ICT-based source and follow recommended safe practices.

**Entry Level 2** is the national school curriculum equivalent for attainment at age 7-9. Adults with below Entry Level 2 may not be able to describe a child's symptoms to a doctor or use a cash point to withdraw cash. Adults with ICT Entry Level 2 skills are able to use ICT to communicate, as well as enter and edit small amounts of information

in ways that are fit for purpose and audience.

**Entry Level 3** is the national school curriculum equivalent for attainment at age 9-11. Adults with skills below Entry Level 3 may not be able to understand price labels on pre-packaged food or pay household bills. Adults with ICT Entry Level 3 skills are able to interact with and use an ICT system to meet needs, as well as present information in ways that are fit for purpose and audience.

**Level 1** is equivalent to GCSE grades D-G. Adults with skills below Level 1 may not be able to read bus or train timetables or check the pay and deductions on a wage slip. Adults with ICT Level 1 skills are able to select and use a variety of appropriate sources of information, as well as enter, organise, develop format and bring together information to suit content and purpose.

**Level 2** is equivalent to GCSE grades A*-C. Adults with skills below Level 2 may not be able to compare products and services for the best buy, or work out a household budget. Adults with ICT Level 2 skills are able to use a variety of appropriate sources of information and evaluate its fitness for purpose, as well as evaluate and use different methods of organising and presenting information, taking into account fitness for purpose and audience.

# Report Authors and Acknowledgements

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TNS-BMRB authors: Carrie Harding, Eleni Romanou, Joel Williams and Mark Peters.

AlphaPlus Consultancy Ltd authors: John Winkley, Peter Burke, John Hamer, Keith Jeram, Nick Nelson, Bob Rainbow, Bruce Bond and Malcolm Shay.

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# 1 Summary of Findings

## 1.1 The Skills for Life 2011 Survey

The Skills for Life 2011 Survey (SfL2011) was commissioned by the Department for Business, Innovation and Skills and designed to measure basic skills amongst people aged between 16 and 65 (inclusive) in England. In a large part, the survey replicated the Skills for Life 2003 Survey (SfL2003), using the same literacy and numeracy tools to assess people's skills.

The aim of SfL2011 was to provide an evidence base upon which the government could judge what progress has been made on literacy and numeracy amongst adults of working age in England since 2003, while providing robust evidence on the standard of ICT skills in the population. This was achieved by administering 25-minute-long, computerised assessments in literacy, numeracy and ICT topics to respondents during their interviews. Additional information was collected from respondents during the face-to-face interviews to help understand the demographic, social and motivational factors related to basic skills.

In all, 7,230 interviews were conducted between May 2010 and February 2011. Literacy Levels were established for 5,824 individuals, and Numeracy Levels for 5,823 individuals. Over 2,220 people were rated on one or more of their ICT skills: specifically, 2253 on their word processing abilities, 2247 on their email skills, 2228 on their skills in using spreadsheets, and 2274 on their general ICT knowledge (based on answers given to a multiple choice questionnaire).

This report presents the main findings from SfL2011.

## 1.2 Profile of the population of 16-65 year-olds in 2011

SfL2011 was designed to provide an accurate reflection of the skills, behaviours, and views of people aged between 16 and 65 in England during 2010/11. Consequently, the proportion of respondents in each age band and ethnic group, the relative numbers of each gender, and the proportion who were disabled, employed, or outside the labour market, was representative of the broader population of 16-65 year-olds currently living in England.

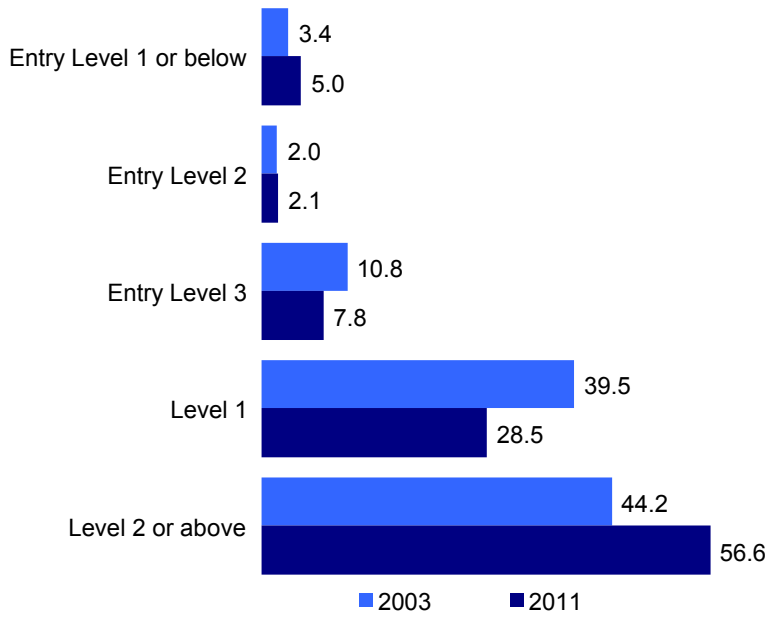
Before looking at the SfL2011 findings, it is important to point out that the eight-year gap between SfL2003 and SfL2011 has seen two major changes in the demographic makeup of 16-65 year-olds. There are now more people who identify themselves as belonging to Black and Minority ethnic groups(14 per cent, up from nine per cent in 2003); and a greater proportion of people whose first language is not English (11 per cent, up from seven per cent in 2003). The increase of these groups in the population should be taken into consideration when interpreting the findings from SfL2003 and SfL2011.This aside, what can loosely be referred to as 'the working age population' has retained the same characteristics, consisting of a fairly even distribution of people across ten-year age bands and equal proportions of men and women.

## 1.3 Distribution of skills

This report examines the breakdowns of literacy, numeracy and ICT skills across the five lowest levels of the National Qualifications Framework (from Entry Level 1 and below to Level 2 and above), and the Glossary offers a brief definition of these Levels.

Performance in the literacy, numeracy and ICT assessments reveals a mixed picture for 2011. Literacy standards amongst 16-65 year-olds have not only been maintained, but have surpassed the benchmark set in 2003, with more achieving Level 2 or above than had previously been the case. The growth in high performers, however, reflects an upward shift from Level 1 rather than a reduction in the number of poor performers: the proportions achieving Entry Level 3 or below remains unchanged. The data are illustrated on Figure 1.1.

**Figure 1.1 Literacy Levels in 2003 and 2011 (%)**

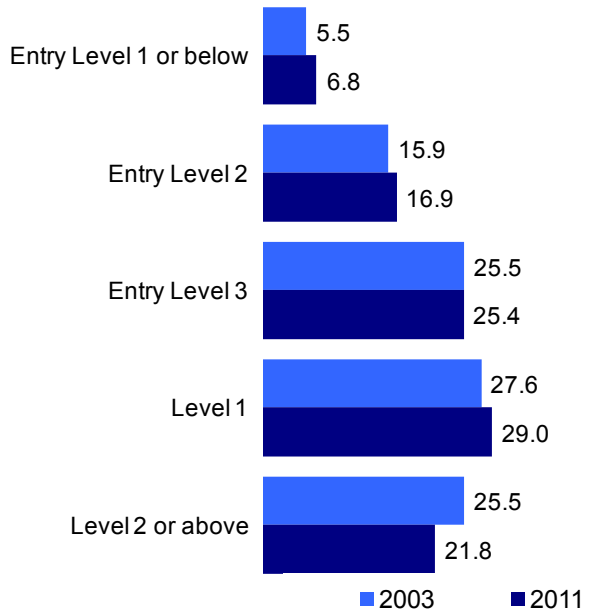



Base: SfL2003 All aged 16-65 with literacy score (7874) / SfL2011 All aged 16-65 with literacy score ( 5824)

Note: this is a repeat of Figure 4.1.

While performance in the literacy and numeracy assessments is correlated, literacy is still the stronger of the two skill areas, with most respondents performing better in the former than the latter. The gap between the two skills is accentuated by the slight downward shift that has taken place over the past eight years in the population's numeracy skills. Minor (but statistically significant) declines were noted at both ends of the performance scale, with fewer people in 2011 managing to exceed Level 1, and slightly more falling below Entry Level 2. The data are illustrated in Figure 1.2.

**Figure 1.2 Numeracy Levels in 2003 and 2011 (%)**

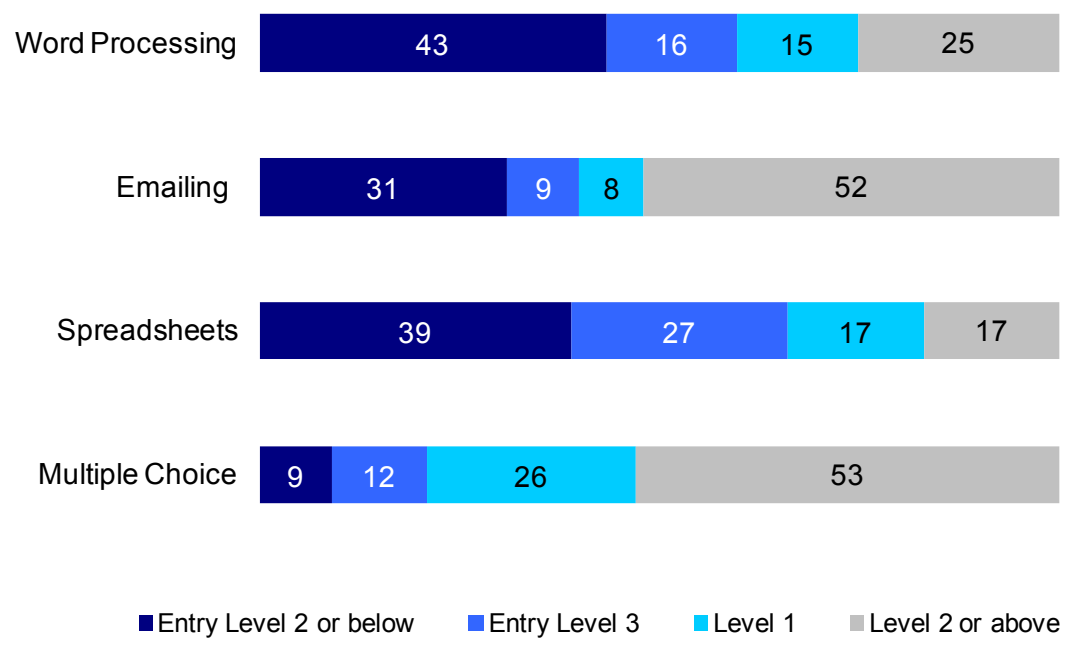



Base:SfL2003 All aged 16-65 with numeracy score (8040) / SfL2011 All aged 16-65 with numeracy score (5823)

Note: this is a repeat of figure 4.4

Respondents' performance in the ICT assessment demonstrates how widespread knowledge of computers has now become. In terms of practical know-how, a high proportion of the population was found to be proficient in the use of email, but despite the correlations between emailing skills and the skills required for the other components of the assessment, it is clear that many still struggle with word processing and the use of spreadsheets. The data are illustrated in Figure 1.3.

**Figure 1.3 ICT Levels (%)**




SfL2011 All aged 16-65 with word processing score (2253) / email score (2247) / spreadsheet score (2228) / multiple choice score (2274)

Note: this is a repeat of Figure 4.5.

## 1.4 Skills levels by demographic characteristics

Skill levels varied according to several of the respondents' characteristics. Key amongst these was first language – and, partly linked to this, the respondents' cultural background – with native English-speakers achieving higher scores across the board. When controlling for first language spoken, the North East tended to have the weakest performance in numeracy and ICT. It also had the poorest literacy performance along with London. It is also interesting to note that London was the only region to see a sizeable decline in numeracy performance since 2003.

First language issues aside, some differences in performance Levels were apparent for some ethnic groups. Gender, too, was linked to different Levels of performance. Whereas women demonstrated a somewhat higher capacity to reach Level 2 in the literacy assessment, they were outperformed by men in the numeracy assessment (albeit to a lesser extent than that noted in the SfL2003). Age, on the other hand, was only salient when it came to performance in the ICT assessment, with older respondents showing considerably weaker skills in all dimensions of the assessment.

## 1.5 Personal characteristics associated with weak skills

The demographic characteristics of respondents go only part of the way in explaining variation in the population's skills levels. Further insight may be gained by considering the influence on skills levels of what respondents have done or thought – for example, the training and education they have undertaken, and the occupation or sector they have chosen to engage in, which are here referred to as the respondents' 'acquired' characteristics.

A range of demographic factors can help predict whether a SfL2011 respondent are more likely to have weak literacy (a score below Level 1): above all, having a first language other than English, having parents who did not continue their education past the age of 16, having a learning difficulty, or being aged 45 or older. Adding a "blue collar" occupation, infrequent or no use of computers, low qualifications and a lack of a Level 2 English qualification to the mix almost doubles the chances of a poor score. The extent to which these 'acquired' characteristics can sway respondents' performance in the literacy assessment depends on how many of the 'predictive' demographic attributes each respondent holds, and the interaction between them.

For numeracy, very similar demographic factors predict a weak skill Level. However, an important difference is the impact of gender, with being female predicting a weak score (below Entry Level 3). Similarly to literacy, the addition of certain 'acquired' characteristics almost doubles the explanatory power on the model, particularly by the inclusion of a lack of a Level 2 Maths qualification, low qualifications, infrequent computer use and working in particular industry sectors.

Whilst attending a basic skills course does not appear to be associated with performance in either the literacy or the numeracy assessment, it is not possible to draw conclusions around the impact of training. A cross-sectional survey like this one is not an appropriate tool for judging what effects training might have had on skills Levels. SfL2011 does not measure the skills of individuals immediately before and after they attended a course: hence, it is not possible to track the progress that learners may have made as a result of their training.

The absence of computer training, on the other hand, is one of several factors affecting ICT performance. The most significant influence on ICT Levels by far is age: this had more explanatory power than any other of the respondents' demographic or 'acquired' characteristics. Having parents who did not continue in education beyond the age of 16, having a first language other than English, having a learning difficulty, lacking any qualifications, or being employed in a non-professional or managerial occupation were also significant predictors of weak ICT skills (below Entry Level 3 in all three practical components of the assessment).

## 1.6 Changes in literacy and numeracy performance over time

The use of the same assessment tools in the 2003 and 2011 surveys allows between cohort differences to be examined as well as passage of time differences.

Little change in the literacy performance of each of the age groups is evident since 2003. However, the exception to this is amongst the oldest age group where an increase in skills is apparent. This may be a generational effect possibly due to the educational circumstances of this oldest group in the 2003 survey, who were raised during WII and may have lost out educationally.[1] For numeracy, however, the emergent trend is different. The youngest age group in 2011 have far poorer numeracy skills than their equivalent counterparts in 2003. This cannot wholly be accounted for by the increase non-native English speakers in this age group as the trend is still apparent amongst native English speakers.

Few passage of time effects are apparent for literacy, with the exception of the youngest generation reaching the standard of their slightly older peers, suggesting that for most people literacy reaches a 'steady state' by the mid twenties. For numeracy most generations display a small decline in skills between 2003 and 2011. This is most noticeable in the oldest generation,

[1] The school leaving age was raised to 15 in 1947.

however, even there it is not dramatic. It seems unlikely that retirement is the causal variable, as retirees performed at a similar standard to their working counterparts. The language profile of some of the younger respondents has changed substantially between 2003 and 2011, and this obscures some of the emergent trends. This change in composition must be borne in mind when interpreting the generational analysis.

## 1.7 Basic skills and education

The impact of educational attainment on literacy, numeracy and ICT performance was relatively clear-cut: scores in all three assessments were higher amongst people who continued their education for longer or achieved higher qualifications, and low amongst those who terminated their education when they were young or did not pursue any qualifications. As might be expected, the relevance of the qualification held also made a difference to performance, with holders of an English GCSE (Grade C or above) having higher literacy skills than those without, and those with a Maths GCSE (Grade C or above) also performing better in the numeracy assessment than those without. However, it should be noted that not all who had achieved a grade C in GCSE English or maths in the past, demonstrated Level 2 in skills in literacy or numeracy (respectively) in SfL2011.

Whereas the respondent's own education clearly had a bearing on how they performed, parental education was an important factor for some, and less so for others. When respondents held no qualifications or only very low ones, their parents' education made a substantial difference to their literacy and numeracy scores; for the rest of the population, parents' achievements barely mattered.

The last eight years have seen an increase in the proportion of 16-65 year-olds (particularly those in younger age bands) staying on in education for longer, holding qualifications, and gaining degrees. Set against this background, the stability in the overall proportion of respondents achieving Level 1 or above in literacy, or Entry Level 3 or above in numeracy, is worth remarking on. Level 2 or above literacy scores, on the other hand, have become more common since 2003 across the educational spectrum, from those who held a degree right through to those who held no qualifications at all.

## 1.8 Literacy and numeracy in everyday life

On the whole, people tended to be aware of their weaknesses and strengths in literacy and numeracy, with relatively few making over-claims about their abilities. Those who rated one of their abilities highly had a tendency to do the same regarding their other abilities; these were the same people most likely to perform well in the assessments.

Perceived – and actual – strengths in literacy and numeracy were reflected, to some extent, in how often people chose to read, write and use calculations in their everyday lives. The respondents who professed themselves to have good reading skills were the most likely to own an extensive book collection (25 books or more) and were also the most regular readers of books, magazines or newspapers; all of these things, in turn, were linked to high literacy scores. In the same way, people who felt confident about their writing tended to write on paper more frequently (though less so in emails and texts, which require a level of comfort with technology), and performed well in the literacy assessment. Meanwhile, those who felt their numeracy was weak tended to avoid checking their bills and bank statements altogether.

Many of the respondents who believed they had weak skills were concerned that their perceived shortcomings had impacted on their job opportunities, with the most poorly-skilled (as measured

by the assessments) most likely to report that they had felt some sort of impact. People who judged themselves to have weaknesses in reading were more inclined to believe that this posed a hindrance to their job prospects in 2011 than their counterparts had been in 2003 (though the same was not true of perceived deficiencies in either writing or maths, where no differences were apparent between 2003 and 2011).

The escalation in anxiety concerning reading is perhaps best understood against the backdrop of an overall population whose confidence in literacy and numeracy has grown, with more 16-65 year-olds now willing to describe their abilities in reading, writing, and using numbers as 'very good'. It is worth noting that this growth in confidence was not accompanied by unequivocal improvements in the population's skills. While 2011 saw a rise in the numbers achieving Literacy Level 2 or above, there was no equivalent improvement in numeracy – instead, SfL2011 respondents seemed more inclined than their SfL2003 counterparts to misjudge or misrepresent their true abilities in working with numbers.

## 1.9 Basic skills in work

A good performance in the assessments was contingent, amongst other things, on the type of employment respondents were engaged in, and the very fact of being employed. People who were economically active, and particularly those working in the higher occupation categories (as defined by the NS-SEC classification) achieved higher scores than the rest of the population in all three assessments. Above-average performance was also noted amongst those employed in the Education, Information and Communication, and Public Administration sectors.

Amongst the employed, full-time workers had better numeracy than respondents who worked on a part-time basis, but Literacy Levels did not vary between the two groups. In general, skills Levels appeared to be directly related to gross earnings.

Respondents who were outside the labour market did not perform as well as those who were economically active. Those in receipt of working age benefits were especially likely to score poorly in the assessments; however, their scores were not out-of-step with those of other respondents who shared their demographic characteristics. The skills of the minority of respondents who were actively seeking work were no better than the skills of the remainder of unemployed 16-65 year-olds.

## 1.10 Basic skills and computer use

One of the most remarkable changes to have occurred over the last eight years is the dramatic rise in access to, and use of, computers. By 2011, the prevalence of computer activities such as searching the internet and emailing had risen greatly; there was a substantial expansion in weekly and daily usage of computers; computer users felt more self-assured about their ICT skills; and only a minority remained – mostly older members of the population – who had never used a computer or lacked an internet connection in their home.

It is against this backdrop that the ICT skills levels of the 2011 respondents should be viewed. Simply put, performance in the assessment was positively correlated with experience of computers. Thus, the higher the frequency of computer usage or online activity, the higher respondents tended to score in the four components of the ICT assessment. Moreover, the more types of tasks a user performed on a computer or on the internet, the more likely they were to exhibit sound ICT skills. By contrast, respondents who lacked ready access to a computer in their home or workplace or who did not have internet access in their home tended to perform poorly, not only in the ICT assessments but also in the literacy and numeracy assessments.

## 1.11 Training in basic skills

The prevalence of training in literacy, numeracy and computer skills amongst 16-65 year-olds has remained unchanged since 2003, with ICT training by far the most common of the three types of training. While the demographic characteristics of those who attended a literacy or ICT course are the same as in SfL2003, the profile of numeracy learners has changed. The respondents now most likely to report having taken a course in basic maths were those in search of employment or aged below 25.

SfL2011 does not measure the skills of individuals immediately before and after they attended a course: hence, it is not possible to track the progress that learners may have made as a result of their training. This, and the fact that little detail was collected about the nature of the training received, means it is not possible to discern from the survey what influence training might have on the skill Levels of those who receive it.

Instead, it is possible to infer from the data that respondents who sought out training, either in literacy or in numeracy, were generally those who felt the least confident about their abilities. Their literacy and numeracy were also weaker compared with the skills of respondents who never undertook training – a result, almost certainly, of having started off with lower skills than the general population. Current learners, who may not yet have felt the full benefit of the instruction they were receiving, performed less well than those who had already completed a course, but once a course was behind them there are indications that people tend to retain the skills they had gained. This is evidenced by the fact that people who trained more than three years ago performed no worse in the assessments that people who finished their training more recently (though not enough is known about skills levels prior to, and immediately subsequent to, training to be able to confirm this). People who attended a literacy course further in the past were also more likely than those who attended within the last three years to rate their literacy positively, suggesting that confidence in this skill may rise over time.

Having weak skills did not always prompt people to seek out training. The vast majority of those who scored below Level 1 Literacy or Entry Level 3 Numeracy – and could therefore be described as having a substantial training need – did not enrol on any courses. Misplaced confidence may have played a part in hindering access, at least with regards to literacy courses: people who did not access a literacy course were more inclined than others with a training need to describe their reading and writing abilities as ‘very good’. Amongst those with a training need, those who had not yet attended a course were the least likely to have any plans for future learning.

The picture regarding ICT training was slightly different. In this case, it was respondents who felt most confident about their abilities, and who possessed better ICT skills than the general population, who were most inclined to seek out training. The ICT scores of current learners were no different to the scores of past learners: an indication, perhaps, that learners already possess a degree of competence before they enrol, and can pick up additional skills fairly quickly once they begin their training.

## 1.12 Attitudes towards learning

The performance of respondents in the assessments owes to a host of practical and social factors and life circumstances but, to some degree, it also owes to their attitudes regarding learning, education and qualifications. People who had a positive outlook on learning – indicated by confidence in the learning process, a belief that ‘learning is fun’, and objections to notions

such as 'learning isn't for people like me' – tended to be high performers across all three assessments. Likewise for those who believed qualifications were worth paying for, and those who felt that learning should be a lifelong process of personal development.

Other attitudes were linked to poor scores. Respondents who felt they had got nothing useful out of school, for example, tended to have weak skills; though, encouragingly, they were the most likely to report that they wished they had continued further with their education. More generally, half of 16-65 year-olds had definite plans to undertake further learning in the next two to three years, mostly in job-related subjects, and more than half again were considering doing the same. Those who reported no such intentions had the most room to improve their skills.

## 1.13 A focus on policy sub-groups

The abilities of several socio-demographic groups were looked at more closely, as they are generally thought to require special support to improve their basic skills. In most regards, the picture surrounding these groups remains unchanged from that seen in 2003. As in the SfL2003, performance in the three assessments was poorer than average for respondents who were unemployed and in receipt of benefits; those not in education, employment or training ('NEET') respondents; those at risk of social and digital exclusion; individuals whose first language was not English; and respondents with limiting disabilities or self-reported learning difficulties. The two latter groups were the only ones to have shown any improvement, though this was limited to their literacy skills, with more now achieving Level 1 or above than had been the case eight years ago.

Respondents under the age of 25 were also examined separately. The literacy of this group was of an equal standard to that of older respondents, while their ICT skills were stronger than average. Numeracy, however, was a particular weak point for this group. Their performance in the numeracy assessment was poor compared to other age groups, and scores were significantly worse than those of their counterparts from SfL2003. Young lone parents were even less likely to achieve Entry Level 3 or above in numeracy but did not otherwise stand out from the rest of the group.

## 1.14 A focus on sub-skills

Each of the skills measured by the assessments involve a range of sub-skills. It is possible for respondents to achieve broadly similar scores in one of the skills, say literacy, but at the same time vary in the strength of their individual sub-skills (e.g. spelling or grammar). Allowing for a range of caveats in the methodology used, it is possible to discern where respondents' individual strengths and weaknesses lie. In general, profiles of sub-skills were very similar in 2003 and 2011.

In literacy, reading and word recognition was the strongest skill area for both SfL2003 and SfL2011 respondents at all Literacy Levels. The 2011 population was strong in Comprehension, but generally weaker in most of the skills areas concerned with writing. In this respect, performance was similar to 2003. The biggest gap between the literacy skills of 2003 and 2011 respondents was in elements of Composition; the improvement in the latter skills area (as well as in Grammar and Punctuation) may lie behind the higher likelihood of SfL2011 respondents to reach Literacy Level 2 or above.

There were parallels between SfL2003 and SfL2011 respondents in respect of the numeracy sub-skills which they performed well. However, whilst the population at the two points in time

shared the same strengths and weaknesses, SfL2011 respondents never managed to outperform their SfL2003 counterparts.

In the ICT assessment, respondents tended to perform better in the multiple-choice knowledge component that in the practical components. Far fewer did well on the spreadsheet task, but success in this area was a good predictor of sound ICT knowledge and practical skills in other areas.

## 1.15 Comparison of assessments

The literacy and numeracy assessments used in 2003 and 2011 were identical, allowing scores to be compared across the two surveys. The assessments and standards that were selected for use in the Skills for Life Survey(s) included paper-based items borrowed from nationally-developed tests, such as those commissioned and owned by the three regulatory authorities for England, Wales and Northern Ireland (QCA, DELLS and CCEA), which were already 'tried and tested' in live assessments. In addition, new items were developed in 2003 to assess adults operating below Level 1, as testing at these levels did not exist at that time.

The comparability of the assessments used in the survey(s) with those employed in the tests used by awarding organisations accredited to offer qualifications, as well as in other similar surveys, (including the International Adult Literacy Survey (IALS), the National Surveys of Adult Skills in Wales, The Scottish Survey of Adult Literacies (SSAL) and the Programme for the International Assessment of Adult Competences (PIAAC) are discussed in some detail in Chapter 14.

## 1.16 Conclusions

Following the substantial investment in adult skills provision since the Moser report there has been a large improvement in Level 2 and above literacy skills, but a lack of improvement in low level literacy and numeracy. Although the scope of this report is largely descriptive, the concluding section reflects on initial investigation of possible explanations for these findings. It demonstrates why the survey comparisons are reliable and then considers factors among the surveyed populations which might offer explanations, including the possibilities of skills loss, the effect of interventions and migration.

# 2 Introduction

## General introduction

The first Skills for Life Survey (sometimes known as the National Baseline Survey of Adult Basic Skills) was commissioned by the then Department for Education and Skills (DfES) in 2002. The survey aimed to produce a national profile of adult literacy, numeracy, and information and communication technology (ICT) skills, and to assess the impact different skills had on people's lives. The official report on the survey was published in October 2003.[2]

In 2010, the Department for Business, Innovation and Skills (BIS) commissioned a follow up to the 2003 survey, with the key purpose of identifying the change in Literacy and Numeracy Levels over time amongst the population of 16-65 year-olds in England to inform future policy. A major consideration was comparability in order to analyse changes in literacy and numeracy skills amongst the population between 2003 and 2011. For ICT however, there was a need to establish a new baseline as advances in technology since 2003 required a new and more valid assessment to be used in the survey (and as a result comparisons between the ICT results from the surveys in 2003 and 2011 are not drawn in this report).

## Policy background and standards

The development of literacy and numeracy skills amongst lower-level employees is deemed to be a vital means of enhancing the UK's global economic competitiveness. In 1999, the Moser Report estimated that there were 7 million people with skills below Level 1 in the UK, and it was claimed that people with poor literacy, language or numeracy skills are less productive at work, earn lower wages, are more likely to suffer from ill health and experience social exclusion. [3] Tackling this skills problem was given a high priority and in 2001 the Government launched its Skills for Life Strategy for improving the nation's skills in literacy, language and numeracy.[4]

A number of priority groups were identified, including:

1. the unemployed and those on benefits,

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[2] Williams, J., S. Clemens, S. Oleinikova, and K. Tarvin (2003) *The Skills for Life Survey: a National Needs and Impact Survey of Literacy, Numeracy and ICT skills*. Department for Education and Skills Research Report 490, available online at: https://www.education.gov.uk/publications/standard/publicationDetail/Page1/RR490, accessed on 28/03/12.

[3] Moser, C. et al. (1999) *Improving literacy and numeracy: a fresh start*. The report of the working group chaired by Sir Claus Moser on behalf of the Department for Education and Skills, available online at: http://www.lifelonglearning.co.uk/mosergroup/index, accessed on 28/03/12: Annex A paragraphs 17-19.

[4] Department for Education and Skills (2002) *Skills for Life: The National Strategy for Improving Adult Literacy and Numeracy Skills. 'What Works' Early Findings from the Pathfinder Projects.* Department for Education and Skills Research Report RR342, available online at https://www.education.gov.uk/publications/eOrderingDownload/RR342.pdf, accessed on 28/03/12.

2. prisoners and those supervised in the community,

3. low skilled employees,

4. public sector employees, and

5. other groups at risk of social exclusion.

National standards for literacy and numeracy were published in 2001 with an accompanying curriculum framework, and a number of regional pathfinder projects were set up to pilot new approaches to improving basic skills. Initiatives such as Move On also set out to encourage adults to engage in skills development programmes. Considerable investment was made for adult skills development and Public Service Agreement (PSA) targets were set to improve the literacy and numeracy skills of 2.25 million adults by 2010, with an interim target of improving the skills of 1.5 million adults by 2007.[5]

In October 2003, the publication of 'The Skills for Life Survey: A national needs and impact survey of literacy, numeracy and ICT skills' emphasised the need for the Government not to ease up on its drive to improve skills.[6] Although the number of adults with literacy skills below Level 1 (equivalent to grade D-G GCSE) had fallen since the introduction of the Skills for Life Strategy, the survey revealed that 5.2 million adults still had literacy skills below this Level compared to the Moser estimate of 7 million in 1999. The number of adults with numeracy skills below Entry Level 3 had fallen only slightly to 6.8 million.

Further policy initiatives, such as the Skills White Paper[7] and the 14-19 Education and Skills White Paper[8] both published in 2005, were to follow. The Skills White Paper included Skills for Life as a main objective. The policy on 14-19 education stressed the importance of functional skills in English and mathematics, and established the place of ICT as an essential skill for the modern world and one of the skills that all young people are now expected to acquire as part of their education.

Further details about government policy regarding adult ICT skills can be found in the following sources:

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[5] HM Treasury (1998) *Public Services for the Future: Modernisation, Reform, Accountability. Comprehensive Spending Review: Public Service Agreements 1999–2002*, available online at: http://archive.treasury.gov.uk/pub/html/psa/csrpsa.pdf, accessed on 28/03/12.

[6] Williams, J., S. Clemens, S. Oleinikova, and K. Tarvin (2003) T*he Skills for Life Survey: a National Needs and Impact Survey of Literacy, Numeracy and ICT skills*. Department for Education and Skills Research Report 490, available online at: https://www.education.gov.uk/publications/standard/publicationDetail/Page1/RR490, accessed on 28/03/12.

[7] Department for Innovation, Universities and Skills (2005) *Skills: Getting on in Business, Getting on at Work.* Government White Paper, available online at: https://www.education.gov.uk/publications/standard/publicationDetail/Page1/CM%206483, accessed on 28/03/12.

[8] Department for Education and Skills (2005) *14-19 Education and Skills.* Government White Paper, available online at: https://www.education.gov.uk/publications/eOrderingDownload/CM%206476.pdf, accessed on 28/03/12.

- Government White Paper '21st Century Skills, Realising Our Potential';[9]
- 'Independent Review of ICT User Skills' by Baroness Morris;[10]
- 'Manifesto for a Networked Nation' by Race Online 2012;[11] and
- Strategy document 'Skills for Sustainable Growth'.[12]

- The next important policy development was the Leitch Review of Skills.[13] In his report, published in December 2006, Leitch proposed that by 2020, 95 per cent of adults should be able to achieve the basic skills of functional literacy and numeracy.

In March 2009, the Department for Innovation, Universities and Skills (DIUS) confirmed that over 5.7 million learners had taken training courses and 2.8 million had achieved nationally recognised qualifications, exceeding the 2010 Public Service Agreement target to improve the literacy, language and numeracy skills of 2.25 million adults more than two years early.[14]

- Following the election in May 2010 the Coalition Government published its skills strategy for England, *Skills for Sustainable Growth* in which it set out the continuation of funding for adults to improve their literacy and numeracy skills.[15] To improve the economic and personal returns to this investment, the Government announced that it would review how provision is delivered and take steps to make this training more effective, moving away from targets to focus on fully equipping individuals with the skills and qualifications they need to get a job, progress in work and play a full part in society. Following its review, in December 2011 the Government

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[9] Department for Education and Skills (2003) *21st Century Skills, Realising Our Potential. Individual, Employers, Nation.* Government White Paper, available online at: http://www.bis.gov.uk/assets/biscore/corporate/migratedd/publications/2/21st%20century%20skills.pdf, accessed on 28/03/12.

[10] Morris, E. (2009) *Independent Review of ICT User Skills,* available online at: http://www.dius.gov.uk/~/media/3F79A51589404CFDB62F3DA0DEBA69A1.ashx, accessed on 28/03/12.

[11] Race Online 2012 (2010) *Manifesto for a Networked Nation*, available online at: http://raceonline2012.org/sites/default/files/resources/manifesto_for_a_networked_nation_-_race_online_2012.pdf, accessed on 28/03/12.

[12] Department for Business, Innovation and Skills (2010) *Skills for Sustainable Growth – Consultation on the Future Direction of Skills Policy.* Strategy Document, available online at: http://www.bis.gov.uk/assets/biscore/further-education-skills/docs/s/10-1274-skills-for-sustainable-growth-strategy.pdf, accessed on 28/03/12.

[13] HM Treasury (2006) *Leitch Review of Skills. Prosperity for All in the Global Economy - World Class Skills. Final Report,* available online at: http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/media/6/4/leitch_finalreport051206.pdf, accessed on 28/03/12: p62.

[14] Department for Innovation, Universities and Skills (2009) *Skills for Life: Changing Lives*, available online at: http://www.bis.gov.uk/assets/biscore/corporate/migratedD/publications/S/SkillsforLifeChangingLives, accessed on 28/03/12.

[15] Department for Business, Innovation and Skills (2010) *Skills for Sustainable Growth – Consultation on the Future Direction of Skills Policy.* Strategy Document, available online at: http://www.bis.gov.uk/assets/biscore/further-education-skills/docs/s/10-1274-skills-for-sustainable-growth-strategy.pdf, accessed on 28/03/12.

published the actions it is taking in *New Challenges, New Chances - Further Education and Skills System Reform Plan: Building A World Class Skills System*.[16]

## Research aims and objectives

The Skills for Life 2011 Survey (SfL2011) was commissioned in order to update the baseline information collected about adult literacy and numeracy in the Skills for Life 2003 Survey (SfL2003), and to set a more functional baseline than was possible in 2003 for the present ICT skills among adults aged between 16 and 65 (inclusive) by using a more task-based assessment of ICT skills. The aims were to provide an evidence base upon which the government could judge what progress has been made on literacy and numeracy amongst the adult population (aged 16 to 65) of England, and to inform policy development while also providing more robust evidence on ICT skills among this population (focusing on practical abilities in word processing, emailing and spreadsheet usage as well as awareness of ICT issues).

The purpose of the survey was also to understand the demographic, social and motivational factors related to skills using information elicited from a background questionnaire administered to all respondents.

## The Skills for Life 2003 Survey

SfL2003 was commissioned by the then DfES, and fieldwork was carried out between June 2002 and May 2003. Interviews were conducted with 8,730 adults aged between 16 and 65, and 4,656 of these respondents completed a second interview. The first interview comprised a 'background' questionnaire, collecting behavioural and demographic data, and two assessments, one for literacy and one for numeracy. The second interview comprised two ICT assessments, the first an assessment of awareness, and the second an assessment of practical skills.

The aims of SfL2003 were to produce a national profile of adult basic skills over five broad levels of competence corresponding with the National Standards for adult literacy and numeracy and to assess the impact different skills had on people's lives.

The results of the literacy assessment indicated that almost half the respondents (44 per cent) achieved Level 2 or above, whilst 16 per cent were classified as Entry Level 3 or below. Respondents tended to perform at a lower standard in the numeracy assessment, with only a quarter achieving Level 2 or above, and 47 per cent were classified as Entry Level 3 or below. In the ICT assessment, 50 per cent were recorded at Level 2 or above in awareness terms, with 25 per cent at Entry Level or below, but only nine per cent demonstrated Level 2 practical skills with

[16] Department for Business, Innovation and Skills (2011) *New Challenges, New Chances – Further Education and Skills System Reform Plan: Building a World Class Skills System*. Strategy Document, available online at: http://www.bis.gov.uk/assets/biscore/further-education-skills/docs/f/11-1380-further-education-skills-system-reform-plan.pdf, accessed on 28/03/12.

53 per cent at Entry Level or below. The full survey report was published in 2003 and is available online.[17]

## Development and piloting of the Skills for Life 2011 Survey

For literacy and numeracy the decision was taken to use the same tools used in 2003 to ensure absolute comparability between the 2003 and 2011 surveys. For ICT the decision was taken to include the new RATE ICT assessment in the 2011 survey (but not to attempt to draw comparisons with results from the ICT assessment made in 2003).

A detailed description of how the assessments used in SfL2011were developed and piloted, and the background to the decision taken to reuse the 2003 tools for the purposes of comparability are contained in Annex 2.

In 2009, BIS commissioned a research development and piloting project to consider the best design options for the new Skills for Life survey which was planned to be conducted in 2010/11. The research development and piloting project was conducted by the AlphaPlus Consultancy and TNS-BMRB and carried out in three phases:

**Phase 1** – a review of the tools used in the 2003 survey and provisional recommendations on tools for the 2011 survey,

**Phase 2** – the conduct of a Pilot Survey,

**Phase 3** – final recommendations on the tools for the 2011 survey.

The main activities in **Phase 1** were to:

- review the literacy and numeracy assessment tools used in the 2003 survey to judge their suitability for use in the 2011 survey;
- review the ICT tool used in the 2003 survey to judge its suitability for use in the 2011 survey;
- consider alternative assessment tools that might be suitable for the planned SfL2011 survey;
- make recommendations for the assessment tools to be used in the 2011 survey; and
- develop for potential use in the 2011 survey: new literacy and numeracy assessment tools (based primarily on the existing Skills for Life Initial Assessment tools) and an ICT assessment tool using the Real Applications Test Environment (RATE) technology.

**Phase 2** of the research development and piloting project was the conduct a Pilot Survey with a sample group of around 1000 interviewees. The purpose of the pilot survey was to:

[17] Williams, J., S. Clemens, S. Oleinikova, and K. Tarvin (2003) T*he Skills for Life Survey: a National Needs and Impact Survey of Literacy, Numeracy and ICT skills*. Department for Education and Skills Research Report 490, available online at: https://www.education.gov.uk/publications/standard/publicationDetail/Page1/RR490, accessed on 28/03/12.

- examine the feasibility of generating a conversion function for use in the 2011 survey which would allow results from the alternative Skills for Life literacy and numeracy assessments to be calibrated against results for the 2003 assessments and hence the survey results from 2003;
- review the functioning of the alternative literacy and numeracy assessments as survey tools; and
- assess the suitability of the proposed RATE ICT assessment tool for use in the 2011 survey.

In **Phase 3**, the research development and piloting project team analysed the outcomes of the Phase 2 pilot together with the evidence from the Phase 1 review and recommended that the alternative Skills for Life literacy and numeracy tools, and the RATE ICT tool should be used for SfL2011. However, the decision was taken to use the 2003 literacy and numeracy tools to ensure absolute comparability between the 2003 and 2011 Skills for Life surveys which is a key objective of the research. The new ICT assessment tool was, however, adopted for the 2011 survey.

## The Skills for Life 2011 Survey

Fieldwork for SfL2011 was carried out between May 2010 and February 2011, with 7,230 interviews being conducted. The survey population was all adults aged between 16 and 65 (inclusive), normally resident in England. Residents of institutions were excluded for practical reasons.

The interview comprised the background questionnaire followed by a pre-assigned random combination of two of the three skills assessments: literacy, numeracy and ICT. The assessments were presented in a randomised order. In total, 6,049 respondents were assigned to the literacy assessment, 6,053 respondents were assigned to the numeracy assessment and 2,358 respondents were assigned to the ICT assessment. The interview lasted on average 70 minutes. Prior to the interview, all households which were selected to take part in the survey were sent an advance letter and information leaflet about the survey and informed consent was sought and obtained from all respondents.

In line with the 2003 survey, in some rare cases respondents were excused from the literacy and numeracy assessments. These included:

1. Anyone who said they could not read English when asked in the background questionnaire.
2. Respondents who said their reading of English was ‘poor’ and required a full translation of the background questionnaire. These respondents were given the option of continuing or not.
3. Those who required help with the background questionnaire due to poor eyesight. These respondents were given the option of continuing or not.

In addition, respondents who said they had never used a computer before were excluded from the ICT assessment.

### The background questionnaire

The background questionnaire was designed to collect a broad set of relevant demographic and behavioural data. A refined and updated version of the SfL2003 background questionnaire was used; redundant items were removed and some new questions were added. The development

and piloting of the questionnaire took place in the 2009 development project. The questionnaire took 20-25 minutes to complete and covered the following topics:

- Household structure
- Languages and ethnicity
- Use of computers and any training received
- Internet use
- Education and qualifications
- Self-assessment of skills in speaking, reading and writing English
- Self-assessment of working with numbers
- Any training taken to improve such skills
- Attitudes towards learning
- Current / most recent employment
- Other social, economic and demographic data (including health, housing tenure, income etc.)

The full questionnaire is included in Annex 3. In the questionnaire respondents pre-selected to complete the ICT assessment were asked a small number of additional questions predominately regarding their use of computers. Further details of these are documented in the questionnaire.

## The skills assessments

The literacy, numeracy and ICT survey tools were designed to take a maximum of 25 minutes each to complete. The literacy and numeracy assessments are adaptive, selecting and presenting questions based on the scoring of respondents' responses to previous questions. This approach reduces the overall assessment time, and helps to maximise the number of questions that challenge respondents (without being too easy or difficult), hence improving completion rates.

Respondents typically answer 25 literacy questions out of 70, depending on the route they take through the assessment. The assessment starts with screening questions which make an assessment of level at Entry Level, Level 1 or Level 2, and then proceeds through two blocks of approximately eight questions covering a mixture of topics at a standard of difficulty determined on the basis of the assessment of Level in the preceding block. The judgement of a respondent's final Level is based on a combination of the standard of difficulty of the final block attempted and a series of cut scores (that define the borderlines between the different skill Levels) for the score achieved on the final block.

Respondents answer 19 numeracy questions from a bank of 48 questions. Following a screening phase of nine items, respondents are routed according to a provisional judgement of

level, and then 10 further questions at suitable standards are presented with each subsequent question selected based on performance on the previous question. The respondent's score is totalled and weighted according to the Level of the question (Entry Level 1 questions count for 1 mark, Level 2 questions count for 5 marks), and the respondent's total score is compared against a set of cut scores to determine final Level.

The use of partly compensatory approaches to assess a person's Level (allowing strength in one area to compensate for weakness in another) is counter to most practice in competency assessment. However, the design constraints of the assessment made it essential: the assessments had to make a judgement about Level for a very wide range of skills in just 25 minutes. For example, in numeracy an Entry Level 1 task involves calculating how many coins are left from a pile of ten after four have been removed, whereas at Level 2 candidates are expected to assess (in fractions and percentages) the price reduction if a customer receives nine free bars in a packet of 27. In terms of school age this represents the assessment of skills from the lower end of Key Stage 1 (age 5-6) through to average performance at GCSE (Key Stage 4 age 14-16). Similar challenges apply to the literacy assessment. With such a broad range of ability to assess in such a short time, an adaptive approach with a degree of compensation was deemed essential to producing a reliable assessment measure.

The ICT assessment does not function adaptively. It is presented in four separate sections: word processing, email and spreadsheet skills, and a set of 15 multiple choice questions assessing other ICT skills such as internet use. All items in the ICT assessment were written from scratch with consideration of the nature of assessment activities included in contemporary ICT skills assessments such as Functional Skills. The assessment requires respondents to undertake real ICT tasks such as entering formulae into cells on a spreadsheet, creating, addressing and sending an email, creating and editing a document including tables and embedded images. Respondents' scores for each task are totalled and compared against cut scores to produce an outcome Level for each assessment area individually. No attempt is made to aggregate skills into a single outcome level for ICT because the skill Levels on each of the applications can vary widely.

## The research team

SfL2011 was conducted by a partnership of two complementary agencies: TNS-BMRB, a research agency, and AlphaPlus Consultancy Ltd.

TNS-BMRB was responsible for all data collection and primary data processing, whilst AlphaPlus provided advice on Skills for Life policy and related issues throughout the survey. Both agencies were responsible for the analysis presented in this report.

## Comparison between the 2003 and 2011 surveys

Complete comparability between SfL2003 and SfL2011, in terms of methods and tools used, was regarded as key to the 2011 survey. The sampling strategy, while interviewing fewer respondents (6,049 respondents allocated to literacy assessments, 6,053 to numeracy assessments and 2,358 to ICT assessments), was designed to achieve a similar effective sample size to that achieved in 2003, and uses 2003 statistical wards as the Primary Sampling Units to ensure comparability. The weighting and imputation strategy used were similarly in line with those used in 2003. Full details can be found in Annex 1.

As discussed in Section 2.6.1, the SfL2011 background questionnaire was largely identical to the SfL2003 version. As a result of the development stage, some redundant items were removed, and additional questions around attitudes and behavioural motivations towards learning and skill development were included. Further details about the development of the questionnaire are provided about this in Annex 3. As detailed at the start of Section 2.6, in some rare cases respondents were excluded from the literacy and numeracy assessments, and the rules for this were identical to those implemented in SfL2003.

The same literacy and numeracy skills assessments were used in both SfL2003 and SfL2011 to ensure the results of the two surveys were comparable. To further ensure comparability with SfL2003, none of the items in the literacy and numeracy assessment used in the research development and piloting project (prior to the main stage) were altered.

A small number of data collection errors had occurred in 2003 (this is discussed in more detail in Annex 4). To safeguard against the possibility of a repeat of this data non-capture in SfL2011, a 'security wrapper' was used to surround the software and report on any errors in its operation or errors involving modification of the core software from 2003. No data non-capture issues were reported in SfL2011.[18]

An entirely new ICT assessment was developed for SfL2011, so the issue of comparability did not arise.

## Scope and structure of the report

This report presents the findings from SfL2011 in relation to the research aims and objectives stated in Section 2.3. The report is largely descriptive; however, it does include some small elements of regression modelling and simple generational analysis.

Whilst analysis of literacy and numeracy skills was conducted across the full five Level distribution (from Entry Level 1 and below to Level 2 and above),[19] the majority of the analysis presented in the report is focused around the threshold Levels referred to in the Leitch Review,[20] which, for literacy was Level 1 or above; and for numeracy was Entry Level 3 or above. It should be noted that these are now historical in terms of Public Service Agreement targets, which currently focus more on outcomes at Level 2 and above.

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[18] Follow-up work was conducted to quantify the potential impact of the data non-capture detailed in Annex 6.

[19] The Skills for Life Levels are described in Chapter 14, and published in the Skills for Life core curricula. For literacy, see: Department for Education and Skills (2001*) Adult Literacy Core Curriculum including Spoken Communication*, available online at: http://rwp.excellencegateway.org.uk/resource/Adult+literacy+core+curriculum/pdf/, accessed on 28/03/12. For numeracy, see: Department for Education and Skills (2001) *Adult Numeracy Core Curriculum*, available online at: http://rwp.excellencegateway.org.uk/resource/Adult+numeracy+core+curriculum/pdf/, accessed on 28/03/12.

[20] HM Treasury (2006) *Leitch Review of Skills. Prosperity for All in the Global Economy - World Class Skills. Final Report,* available online at: http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/media/6/4/leitch_finalreport051206.pdf, accessed on 28/03/12, p62.

For the ICT assessment the issue of threshold skills[21] is less clear cut, and therefore analysis focuses on the full distribution of Levels. However, the majority of tables in the report body display Email Levels, Word Processing Levels, Spreadsheet Levels and Multiple Choice Levels (reflecting ICT and internet awareness) using the aggregated categories: 'Entry Level 2 and below' and 'Entry Level 3 and above'. These categories are used as a proxy for 'adequate' ICT skills. Where tables with the full distribution of Levels are not included in the main report chapters, these can be found in the Appendix of tables.

This report is divided into the following sections:[22]

Chapter 1 Summary of Findings

Chapter 2 Introduction

Chapter 3 Profile of the population of 16-65 years olds in 2011

Chapter 4 Distribution of literacy, numeracy and ICT skills

Chapter 5 Skill Levels and demographic subgroups

Chapter 6 Understanding the relationship between skills and personal characteristics

Chapter 7 Education

Chapter 8 Literacy, numeracy and ICT skills in everyday life and work

Chapter 9 Computer use

Chapter 10 Training in basic skills

Chapter 11 Attitudes towards learning

Chapter 12 Analysis of policy subgroups

Chapter 13 Spiky Profiles

Chapter 14 Comparison of survey results against other surveys and standards

Chapter 15 Summary of findings and conclusions

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[21] Note that the Leitch threshold Levels as defined in the Leitch and Moser reports refers to adequate levels of skills (based on the Basic Skills levels in place in 1999 in the case of Moser, and their successor standards, the Skills for Life core curricula for literacy and numeracy). The term does not relate to Functional Skills, a new set of qualifications, introduced in pilot in 2007 which cover Entry Levels 1 to 3 and Levels 1 and 2, and which are described in more detail in Chapter 14.

[22] Note that the Appendix of Tables and Annexes are in two separate documents.

The following appendix and annexes are also included as part of the report:

Appendix of Tables

Annex 1 Research design and conduct

Annex 2 Development and piloting of the Skills for Life survey tools

Annex 3 Development of the background questionnaire

Annex 4 Performance analysis of the assessment tools

Annex 5 The use of correlation coefficients in the 2011 Skills for Life survey

Annex 6 Quantification of the 'data-non capture' issue affecting the 2003 Skills for Life survey

Annex 7 Regression model coefficients

Annex 8 Tree diagrams based on the regression model variables

## Notes on the report

- Significance testing has been carried out at the five per cent confidence level unless otherwise stated. All comparative data described in the report text are statistically significant unless otherwise stated.

- The figures presented in this report have been weighted to take account of the sample design and non-response. Details of the weighting applied are provided in Annex 1. All bases given in the tables or charts are, however, unweighted.

- When interpreting the analysis presented in this report, issues around the correspondence of variables should be borne in mind. There is a key distinction between a correlation relationship and a causal relationship; a correlation between two variables does not imply that one causes the other, and therefore assumptions should not be made about causality.

- Any data referred to in the report that is not included in a table or chart as part of the relevant chapter can be found in the Appendix tables.

- The majority of percentages are rounded to the nearest whole number. However, there are a small number of exceptions where it was felt that data presented to the nearest single decimal place was more appropriate and useful (for example the comparative analysis of the SfL2003 and SfL2011 headline findings presented in Chapter 4).

- All tables unless otherwise stated show column percentages.

- The percentage in the table columns do not always add to 100 per cent due to rounding. Where percentages in the text differ to the sum of percentages in the tables this too will be due to rounding.

- A * symbol in a table signifies a value between 0 and 0.49, while a – symbol signifies a zero.

- Where a table or figure displays data where multiple responses were permitted, this is indicated at the bottom on the table.

- Some tables and figures display data based on a very small number of respondents. Where the base size is 50 or less this is indicated, and such data must be treated with caution.

# 3 Population profile

## 3.1 Key findings

This chapter provides a descriptive overview of the population which took part in the Skills for Life 2011 Survey. The survey population was all adults aged between 16 and 65 (inclusive), normally resident in England.

- In 2011, England's population of 16-65 year-olds was evenly split between men and women and across ten-year age-bands. One in seven belonged to Black and Minority Ethnic groups, and a similar proportion had a limiting disability. Two thirds were in paid work. Home ownership was reported by three fifths of the population, and 14 per cent earned £30,000 or more per annum in gross earnings.
- Five of the respondents' demographic characteristics form the core analytical variables used in this study: gender, age, ethnicity, limiting disability, and working status. Where appropriate, additional variables have also been used to categorise respondents and analyse their responses.
- Certain demographic subgroups overlap in their compositions and, for this reason, frequently appear together in the report in association with a specific behaviour, level of ability, or attitude. The most common instances of this concern people aged 45-65, people who finished their education before the age of 17, and people who were not in work. Two more groups which often appear together because their compositions overlap are those which consist of people from Black and Minority Ethnic backgrounds and people whose first language is not English.
- Since 2003, the population has seen an increase in the proportion of people from Black and Minority Ethnic backgrounds and people whose first language is not English. This may lie behind some of the differences between the findings from the two surveys.

## 3.2 Introduction

This chapter provides a descriptive overview of the population which took part in the Skills for Life 2011 Survey. Its aim is to familiarise readers with the basic demographic characteristics of the SFL2011 respondents. Since much of the analysis in the present report is based on these demographic attributes, another aim of the chapter is to introduce the core analytical variables used in this study and discuss their inter-relationships.

The SFL2011 data has been 'weighted' in order to compensate for the fact that individuals did not have a completely even chance of being selected for an interview, or of being willing to

participate in the survey.[23] The demographic profile of the weighted SFL2011 sample approximates that of the current population of 16 to 65 year-olds in England.

The final section of this chapter provides a comparison between the demographic profiles of the 2003 and 2011 Skills for Life Survey populations, and alerts readers to the potential implications of differences in the two profiles for the interpretation of the data in this report.

## 3.3 Profile of population aged 16 to 65 in 2011

The population of 16 to 65 year-olds consisted of even proportions of men and women (50 per cent each), the majority of whom categorised themselves as White British (80 per cent). One in seven (14 per cent) were from Black and Minority Ethnic (BME) backgrounds (Table 3.1).

**Table 3.1 Ethnic distribution**

| | 2011 |
|---|---|
| | % |
| **WHITE** | **86.1** |
| White: British | 80.4 |
| White: Irish | 0.8 |
| White: other background | 4.9 |
| **BME** | **13.8** |
| Mixed: White and Black Caribbean | 0.4 |
| Mixed: While and Black African | 0.3 |
| Mixed: White and Asian | 0.4 |
| Mixed: other background | 0.3 |
| Asian or Asian British: Indian | 3.4 |
| Asian or Asian British: Pakistani | 2.0 |
| Asian or Asian British: Bangladeshi | 1.2 |
| Asian or Asian British: other background | 1.0 |
| Black or Black British: Caribbean | 1.0 |
| Black or Black British: African | 1.9 |
| Black or Black British: other background | 0.1 |
| Chinese | 0.3 |
| Other | 1.5 |
| Unweighted | 7230 |
| Base: SfL2011 All aged 16-65 | |

Fifteen per cent of the population was born outside of the UK, with almost a quarter (23 per cent) amongst them born either in India, Pakistan or Bangladesh.[24] English was nevertheless the first language for 89 per cent of 16 to 65 year-olds. The majority of those whose cultural background

[23] For a full description of the procedures used to weight the SfL2011 data, see Annex 1.

[24] See Appendix Table 3.A1.

was Other White, Black or Black British African, Asian or Asian British, Chinese, or Other did not have English as their first language (ENFL).[25]

People with ENFL made up just 11 per cent of the overall population, but constituted over one in six of the population of 25-34 year-olds (17 per cent) and around one in seven 35-44 year-olds (13 per cent).[26] Further information about people with English as a first language (EFL) and people with ENFL – such as their distribution across Regions – is presented in Chapter 5.

The population was unevenly distributed across England, with over three in ten living in London and the South East (Table 3.2). The population in most Regions was White, but London accommodated a disproportionately large number of people from BME backgrounds (40 per cent, compared with an average of 14 per cent nationwide).[27] Londoners were also disproportionately more likely than people from other Regions not to have English as their first language.[28]

**Table 3.2 Distribution across Regions**

| | **2011** |
|---|---|
| | % |
| South East | 16.1 |
| London | 15.8 |
| North West | 13.2 |
| East | 10.9 |
| West Midlands | 10.3 |
| Yorkshire and the Humber | 10.2 |
| South West | 9.8 |
| East Midlands | 8.6 |
| North East | 5.0 |
| Unweighted | 7230 |
| Base: SfL2011 All aged 16-65 | |

The population was distributed in roughly equal proportions across ten-year age bands (Table 3.3).

[25] This was also the case in SFL2003, although the proportion of people from Other White backgrounds with ENFL has risen since 2003 by 13 percentage points. See Appendix Tables 3.A2 and 3.A3.

[26] In 2003, people with ENFL were over-represented only amongst the 25-34 age bracket. See Appendix Tables 3.A4 and 3.A5.

[27] See Appendix Table 3.A6.

[28] See Appendix Table 3.A7.

**Table 3.3 Age distribution**

| | 2011 |
|---|---|
| | % |
| 16-19 | 7.8 |
| 20-24 | 10.4 |
| 25-34 | 19.9 |
| 35-44 | 22.3 |
| 45-54 | 20.4 |
| 55-65 | 19.2 |
| Unweighted | 7230 |
| Base: SfL2011 All aged 16-65 | |

Age was associated with a variety of other demographic and socio-economic characteristics. For example, marital status and having children in the household are both linked to the life-course. Hence the likelihood of having children aged 15 or under in the household was highest for 35- to 44-year-old respondents (68 per cent),[29] whilst living with a spouse was more common for those aged 35 and above (65 per cent, compared with 22 per cent of under-35s).[30]

The age at which respondents left education was also correlated with the respondents' age at interview, with 55-65 year-olds the most likely to have finished their education when they were 16 or younger (54 per cent, compared with 32 per cent overall).[31] This suggests that leaving education before the age of 17 is, at least in part, a cohort-related phenomenon.

[29] See Appendix Table 3.A8.

[30] See Appendix Table 3.A9.

[31] See Appendix Table 3.A10.

**Table 3.4 Distribution of limiting disabilities**

| | 2011 |
|---|---|
| | % |
| Problem(s) with arms, legs, hands or feet (inc. arthritis or rheumatism) | 6.1 |
| Problem(s) with back or neck | 4.5 |
| Chest or breathing problems (inc. asthma and bronchitis) | 3.8 |
| Heart problems, high blood pressure or blood circulation problems | 3.4 |
| Stomach, liver, kidney or digestive problems | 2.5 |
| Diabetes | 2.5 |
| Depression or bad nerves | 2.4 |
| Mental illness or phobias, panics or other nervous disorders | 1.5 |
| Skin conditions / allergies | 1.0 |
| Difficulty in seeing | 1.0 |
| Difficulty in hearing | 0.7 |
| Cancer | 0.7 |
| Thyroid problems | 0.5 |
| Epilepsy | 0.5 |
| Migraine/headache | 0.1 |
| Gynaecological | 0.1 |
| Effects from a stroke | 0.1 |
| Multiple Sclerosis | 0.1 |
| Osteoporosis | 0.0 |
| M.E. | 0.0 |
| Other | 1.2 |
| Unweighted | 7230 |
| Base: SfL2011 All aged 16-65 | |

Note: multiple responses were permitted

Thirteen per cent of 16 to 65 year-olds had an illness or disability which constrained them in some way. For almost half, this was a problem with their arms, legs, hands or feet (six per cent of all respondents), though problems with the back or neck, with the chest or breathing, or with the heart or blood pressure, were also relatively frequent (Table 3.4). The probability of having a limiting disability rose with age, reaching over a fifth of 55-65 year-olds.[32]

Two thirds (67 per cent) were in paid work (Table 3.5). Paid work was far more common among 25 to 54 year-olds than among people in the highest and lowest age bands,[33] demonstrating that work status, too, is linked to the age of respondents. Employment status additionally varied by gender, with particularly marked differences apparent between men and women in the 25 to 44

[32] See Appendix Table 3.A11.

[33] See Appendix Table 3.A12.

age range, (with men more likely than women to be in paid work, and women more likely than men not to be (actively) be looking for paid work).[34]

**Table 3.5 Working status distribution**

| | 2011 % |
|---|---|
| In paid work | 67.1 |
| Not (actively) looking for work | 24.6 |
| Actively looking for work | 5.4 |
| Own business | 2.5 |
| Unpaid work for relative's business | 0.2 |
| On a government scheme for employment training | 0.2 |
| Unweighted | 7230 |
| Base: SfL2011 All aged 16-65 | |

While one in seven were earning less than £10,000 per year before tax or other deductions, a quarter of the population earned £20,000 or more a year in gross earnings (Table 3.6). Forty-two per cent reported receiving income from state benefits or tax credits.

**Table 3.6 Distribution of gross earnings (per annum)**

| | 2011 % |
|---|---|
| Under £5,000 | 6.9 |
| £5,000 to £9,999 | 6.9 |
| £10,000 to £14,999 | 8.1 |
| £15,000 to £19,999 | 7.5 |
| £20,000 to £29,999 | 10.4 |
| £30,000 or more | 14.2 |
| Irregular income | 0.1 |
| Has not been working long enough to earn | 1.8 |
| Not working (neither in work, in government scheme or temporarily away from a job) | 28.6 |
| Does not know or Refused | 15.4 |
| Unweighted | 7230 |
| Base: SfL2011 All aged 16-65 | |

The most common types of tenure was home ownership (58 per cent) followed by rented accommodation (32 per cent), with very small proportions in any other categories of tenure (Table 3.7).

[34] See Appendix Table 3.A13.

| Table 3.7 Distribution of tenures | |
|---|---|
| | **2011** |
| | % |
| Own home outright or with a mortgage or loan | 58.1 |
| Pay part rent and part mortgage (shared ownership) | 3.6 |
| Rent | 31.8 |
| Live in home rent free | 5.3 |
| Squat | 0.0 |
| Unweighted | 7230 |
| Base: SfL2011 All aged 16-65 | |

## 3.4 The relevance of population profile to findings in the Skills for Life 2011 Survey

The demographic sub-group analysis presented in this report focuses mainly on the characteristics described above. Five of these characteristics form the core analytical variables used in this study: gender, age, ethnicity, limiting disability, and working status.

Since some of the characteristics discussed above can only be found amongst very small numbers of respondents, it is necessary to band together people with similar characteristics to increase the statistical reliability of findings. Relatively few 16-65 year-olds in England are not from either 'White British', 'White Irish' or 'White other' backgrounds. To enable statistically robust analysis of the SFL2011 data by ethnicity, these minorities have been grouped together, resulting in two broader ethnic categories: one made up of respondents from various Black and Minority Ethnic (BME) backgrounds and another made up of respondents from the three White backgrounds.

Similarly, few people suffer from one of the illnesses or disabilities listed in Table 3.4[35] and believe that their condition limits their activities. Respondents with any self-defined limiting condition have consequently been grouped together for analytical purposes, resulting in a single category: respondents with a 'limiting disability'.

In many cases within the report, additional attributes such as the administrative Region respondents live in, their first language and their terminal education age have been used to analyse their responses. Where appropriate, their skills, attitudes and behaviours have been analysed against more specific economic, educational or behavioural characteristics.

[35] The list consists of the following conditions: problem(s) with arms, legs, hands or feet (including arthritis or rheumatism); problems with the back or neck, chest or breathing (including asthma and bronchitis); heart, high blood pressure or blood circulation problems; problems with the stomach, liver, kidney or digestion; thyroid problems; gynaecological problems; diabetes; depression or bad nerves; mental illness or phobias; panics or other nervous disorders; skin conditions or allergies; difficulty in seeing; difficulty in hearing; cancer; epilepsy; migraines or headaches; effects from a stroke; multiple sclerosis; osteoporosis; M.E.; and 'other' self-defined conditions.

As it has already been noted, several attributes are correlated with age and are therefore not completely independent of each other. It is not uncommon for a sub-group defined by age to give similar responses as sub-groups defined by other characteristics: this is often because of the overlap in their composition. In particular, there is considerable overlap between respondents in the 45 to 65 age range and those who are not in work (particularly people not actively in search of work),[36] since both groups are largely made up of people who finished their education when they were 16 or younger (48 per cent of people aged 45 or above, and 42 per cent of people who were out of work and not actively looking for a job had left education aged 16 or below).[37] The report therefore contains several instances where all three of these categories are associated with a specific behaviour, level of ability, or attitude.

In addition, there is a substantial degree of overlap between people whose first language is not English, those belonging to British and Minority ethnic groups, and people who live in London. Two thirds (67 per cent) of people with ENFL were from BME backgrounds.[38] Since London is the residence of a large proportion of the population with ENFL (50 per cent)[39] – and hence also of the population from BME backgrounds (46 per cent)[40] – it is not surprising to find respondents with ENFL, those from BME backgrounds, and those resident in London sharing a variety of characteristics.

The relationship between first language, ethnicity and Region should be borne in mind throughout the report, as respondents' ability to comprehend English could (theoretically) have a bearing on how well they perform in the literacy, numeracy and ICT assessments. The Levels attained by respondents from BME backgrounds and Londoners should therefore be understood in light of the fact that these two sub-groups are heavily composed of people with ENFL (52% of respondents from BME backgrounds and 34% of Londoners do not have English as their first language).[41]

## 3.5 Profile of population in 2003 and 2011

It is worth comparing the profile of 16 to 65 year-olds in 2011 with its equivalent in 2003 when the survey was last undertaken, as differences in survey responses between the two years may not have resulted from transformations in behaviours, attitudes and abilities, but may instead be linked to differences in the population makeup.

As Table 3.8 shows, there were minimal differences in the profiles at the two points in time apart from the proportion of people from BME backgrounds and people with ENFL. The last eight

[36] See Appendix Table 3.A14 (and Appendix Table 3.A12 for a full distribution of working status broken down by age).

[37] See Appendix Tables 3.A15 and 3.A16 (and Appendix Table 3.A10 for a full distribution of terminal education age broken down by age).

[38] See Appendix Table 3.A17 (and Appendix Table 3.A20 for a full distribution of ethnicity broken down by first language).

[39] See Appendix Table 3.A18.

[40] See Appendix Table 3.A19.

[41] See Appendix Tables 3.A21 and 3.A22.

years since 2003 have seen a rise in the prevalence of all BME subgroups apart from Black or Black British, and the overall proportion of people with ENFL.

The increase of these groups in the population should be taken into consideration as a possible reason behind some of the differences between the findings from SFL2003 and SFL2011. The possible impact of these demographic changes on the population's literacy and numeracy standards is discussed further in Chapters 5, 6 and 15.

**Table 3.8 Population profile in 2003 and 2011**

| | 2003<br>% | 2011<br>% |
|---|---|---|
| **GENDER** | | |
| Male | 49.6 | 50.0 |
| Female | 50.4 | 50.0 |
| **AGE** | | |
| 16-19 | 7.5 | 7.8 |
| 20-24 | 9.3 | 10.4 |
| 25-34 | 22.1 | 19.9 |
| 35-44 | 23.0 | 22.3 |
| 45-54 | 20.4 | 20.4 |
| 55-65 | 17.7 | 19.2 |
| **ETHNICITY** | | |
| White | 90.6 | 86.1 |
| Mixed | 0.9 | 1.4 |
| Asian or Asian British | 4.9 | 7.6 |
| Black or Black British | 2.5 | 3.0 |
| Chinese or other | 1.2 | 1.8 |
| **FIRST LANGUAGE** | | |
| English | 93.3 | 89.2 |
| Not English | 6.7 | 10.8 |
| **WORKING STATUS** | | |
| In paid work | 68.0 | 67.1 |
| On a government scheme for employment training | 0.3 | 0.2 |
| Own business | 2.7 | 2.5 |
| Unpaid work for relative's business | 0.1 | 0.2 |
| Actively looking for work | 3.3 | 5.4 |
| Not (actively) looking for work | 25.7 | 24.6 |
| Unweighted | 8730 | 7230 |

Base: SfL2003 All aged 16-65 / SFL2011 All aged 16-65

# 4 Distributions of literacy, numeracy and ICT skills

## 4.1 Key Findings

**Literacy skills**

- Eighty five per cent of respondents achieved Level 1 or above in literacy, with 15 per cent performing at Entry Level 3 or below. This represents no significant change since 2003.
- Overall 57 per cent of respondents achieved a Level 2 or above score in literacy, which is a large increase from 44 per cent in 2003. Amongst 16-18 year-olds there has been a 13 percentage point rise in the proportion achieving a Level 2 or above score since 2003, and amongst 19-65 year-olds there has been a 12 percentage point rise.

**Numeracy skills**

- Three quarters (76 per cent) of respondents achieved Entry Level 3 or above in numeracy, with one quarter (24 per cent) scoring below this. This represents a small decline in numeracy skills, as 79 per cent achieved Entry Level 3 or above in 2003.

**ICT skills**

- The following proportions of respondents achieved Entry Level 3 or above in the various components of the ICT assessment: 57 per cent on the word processing component, 69 per cent on the email component, 61 per cent on the spreadsheet component and 91 per cent on the multiple choice component

**Relationship between skills**

- In line with 2003, the numeracy assessment performance correlated with the literacy assessment performance.
- Just over six in ten respondents (62 per cent) performed at a higher standard on the literacy assessment than the numeracy assessment. Only one in ten (10 per cent) had stronger performance on the numeracy assessment.
- Seven in ten respondents (72 per cent) achieved Level 1 or above in literacy and Entry Level 3 or above in numeracy. One in ten (10 per cent) performed below both of these Levels.
- The literacy and numeracy assessments both correlated positively with the ICT assessment.
- Whilst the four ICT components measure different skills sets, correlations were found between all four components.

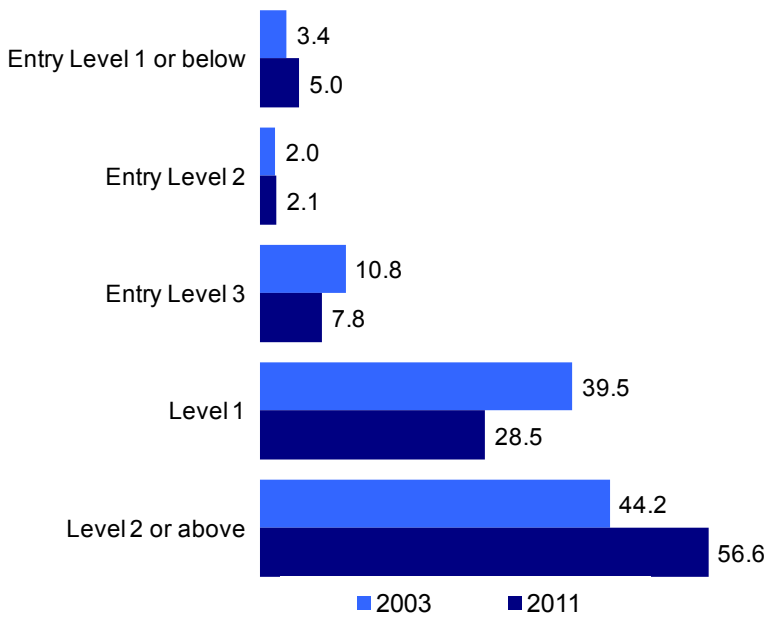
## 4.2 Introduction

This chapter presents the population's skills Levels in literacy, numeracy and ICT, as recorded by the Skills for Life 2011 Survey (SfL2011). The first part of the chapter describes these, along with population estimates (for the proportion of 16-65 year-olds in England at each of the skill Levels) and a breakdown in performance between 16-18 year-olds and 19-65 year-olds. For literacy and numeracy, comparisons to the overall distributions recorded in the Skills for Life 2003 Survey (SfL2003) are also made.[42] The second part of the chapter explores the relationship between each of the three assessments.

## 4.3 Overall distribution of Literacy Levels

Just under six in ten respondents (56.6 per cent) achieved a Level 2 or above score in literacy. This represents a substantial increase from 44.2 per cent in 2003. The proportion of respondents achieving Literacy Level 1 has decreased from 39.5 per cent in 2003, to 28.5 per cent in 2011. The distributions of Literacy Levels in 2011 and 2003 are illustrated in Figure 4.1 and 4.2.

**Figure 4.1 Literacy Levels in 2003 and 2011 (%)**

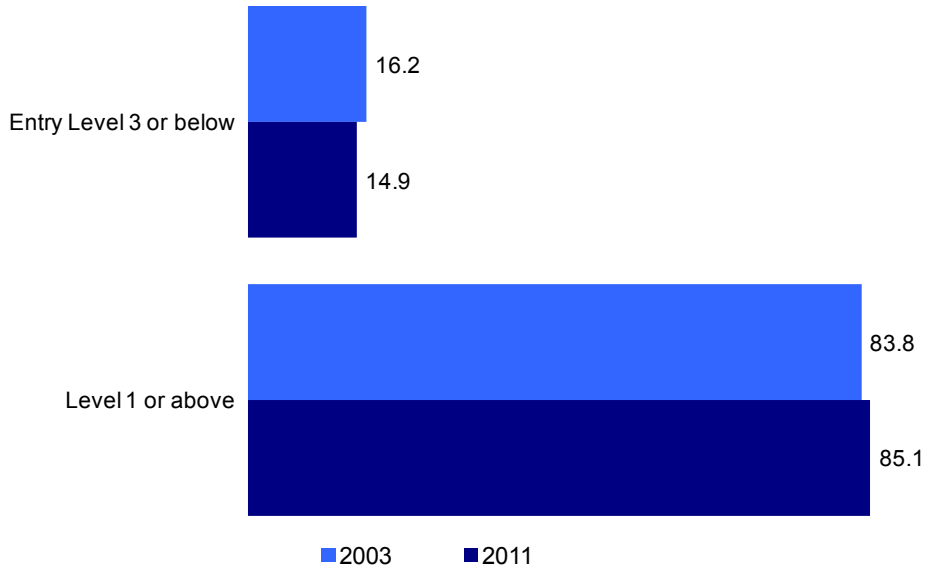



Base: SfL2003 All aged 16-65 with literacy score (7874) / SfL2011 All aged 16-65 with literacy score (5824)

[42] The majority of findings in this chapter have been published previously in: Harding, C, et al (2011) *2011 Skills for Life Survey: Headline findings*. Department for Business, Innovation and Skills Research Paper Number 57, available online at: http://www.bis.gov.uk/assets/biscore/further-education-skills/docs/0-9/11-1367-2011-skills-for-life-survey-findings.pdf, accessed on 28/03/12.

Eighty five per cent of respondents achieved a Level 1 or above score in literacy, and 15 per cent of respondents performed at Entry Level 3 or below. Consequently, it is estimated that 29 million adults aged 16-65 in England had Level 1 or above literacy skills, and 5.1 million adults had Entry Level 3 or below literacy skills.[43] In 2003 the equivalent figures were 84 per cent and 16 per cent. Whilst this is a difference of 1.3 per cent (14.9 per cent compared with 16.2 per cent when rounded to one decimal place), it is not statistically significant (at the 5 per cent confidence interval level).[44]

**Figure 4.2 Literacy Levels in 2003 and 2011 (%)**




Base: SfL2003 All aged 16-65 with literacy score (7874) / SfL2011 All aged 16-65 with literacy score (5824)

The population estimates of all adults aged 16-65 in England are shown in Table 4.1.

[43] The ONS 2009 mid-year population figures show that there are 34.1 million adults aged 16-65 in England. Available online at http://www.statistics.gov.uk/statbase/product.asp?vlnk=15106, accessed on 28/03/12.

[44] Improvements in survey delivery meant that there were no whole cases of failing to capture data in 2011 (see Annex 4, and for full details of the data non-capture issue see Annex 6), whilst this affected around 10 per cent of cases in 2003. If this is taken into account (using a revised weight of the 2003 data), this decreases the proportion achieving Level 1 or above from 83.8 to 83.3. Using this re-weighted 2003 figure, the small rise in the proportion of respondents achieving Level 1 or above in 2011 (85.1 per cent) becomes statistically significant at the 95 per cent confidence level.

**Table 4.1 Literacy Levels in 2003 and 2011 including population estimates**

| | 2003 | | | 2011 | | |
|---|---|---|---|---|---|---|
| | % | Margins of Error | Population estimate (million)[45] | % | Margins of Error | Population estimate (million) |
| Entry Level 1 or below | 3.4 | (2.9 - 4.0) | 1.1 | 5.0 | (4.3 – 5.8) | 1.7 |
| Entry Level 2 | 2.0 | (1.7 - 2.4) | 0.6 | 2.1 | (1.7 – 2.6) | 0.7 |
| Entry Level 3 | 10.8 | (10.0 – 11.7) | 3.5 | 7.8 | (7.0 – 8.8) | 2.7 |
| Level 1 | 39.5 | (38.2 – 40.9) | 12.6 | 28.5 | (27.0 – 29.9) | 9.7 |
| Level 2 or above | 44.2 | (42.7 – 45.7) | 14.1 | 56.6 | (55.0 – 58.2) | 19.3 |
| | | | | | | |
| Entry Level 3 or below | 16.2 | (15 .1– 17.4) | 5.2 | 14.9 | (13.7 – 16.2) | 5.1 |
| Level 1 or above | 83.8 | (82.6 – 84.9) | 26.7 | 85.1 | (83.8 – 86.3) | 29.0 |
| Unweighted | | 7874 | (31.9 million) | | 5824 | (34.1 million) |

Base: SfL2003 All aged 16-65 with literacy scores / SfL2011 All aged 16-65 with literacy scores

Although there has been no statistically significant change (at the five per cent confidence level) in the proportion of respondents achieving Entry Level 3 or below, there has been a change to the number of respondents achieving Entry Level 1 and Entry Level 3. As displayed in Table 4.1, the number of respondents achieving Entry Level 3 has decreased since 2003, and conversely the proportion of respondents achieving Entry Level 1 and below has increased.

An alternative way of looking at the changes between 2003 and 2011 is to not just look at the point estimates and whether a change is 'statistically significant', but to consider the likelihood of various magnitudes of change.

Tables 4.2 and 4.3 show a range of possible values for this magnitude of change (Table 4.2 for the proportion at Level 1 or above, and Table 4.3 for the proportion at Level 2 or above). Each possible value for this magnitude of change is given a likelihood score.

For example, in Table 4.2 we can see that the likelihood that the change in the proportion reaching Level 1 or above is less than or equal to 2 per cent is 79 per cent. The second row breaks down these cumulative values to show the likelihood of change between two values. For example, the likelihood that the increase is between 1.5 percentage points and 2.0 percentage points is 20 per cent.

From Table 4.2, there is a six percent likelihood of a negative change since 2003 in the proportion of respondents achieving Literacy Level 1 or above. The most likely level of change is between +1.0 and +1.5 percentage points. When examining the increase in the proportion at

[45] In line with the 2003 report this is based on the 2001 Census figures. This showed that there were 31.9 million adults aged 16-65 in England.

**Table 4.2 Percentage achieving Level 1 or above Literacy – likelihood of different magnitudes of change**

| | Magnitude of change | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | -1% | -0.5% | 0% | +0.5% | +1% | +1.5% | +2% | +2.5% | +3% | +3.5% | +4% |
| Cumulative probability distribution | 0% | 2% | 6% | 17% | 36% | 59% | 79% | 92% | 97% | 99% | 100% |
| Interval probability distribution | 0% | 1% | 5% | 11% | 19% | 23% | 20% | 13% | 6% | 2% | 0% |

Base: SfL2003 All aged 16-65 with Level 1 or above literacy score and SfL2011 All aged 16-65 with Level 1 or above literacy score

**Table 4.3 Percentage achieving Level 2 or above Literacy – likelihood of different magnitudes of change**

| | Magnitude of change | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | +9% | +9.5% | +10% | +10.5% | +11% | +11.5% | +12% | +12.5% | +13% | +13.5% | +14% | +14.5% | +15% | +15.5% |
| Cumulative probability distribution | 0% | 1% | 2% | 5% | 11% | 22% | 37% | 54% | 71% | 84% | 92% | 97% | 99% | 100% |
| Interval probability distribution | 0% | 0% | 1% | 3% | 6% | 11% | 15% | 17% | 17% | 13% | 9% | 5% | 2% | 1% |

Base: SfL2003 All aged 16-65 with Level 2 or above literacy score and SfL2003 All aged 16-65 achieving Level 2 or above literacy score

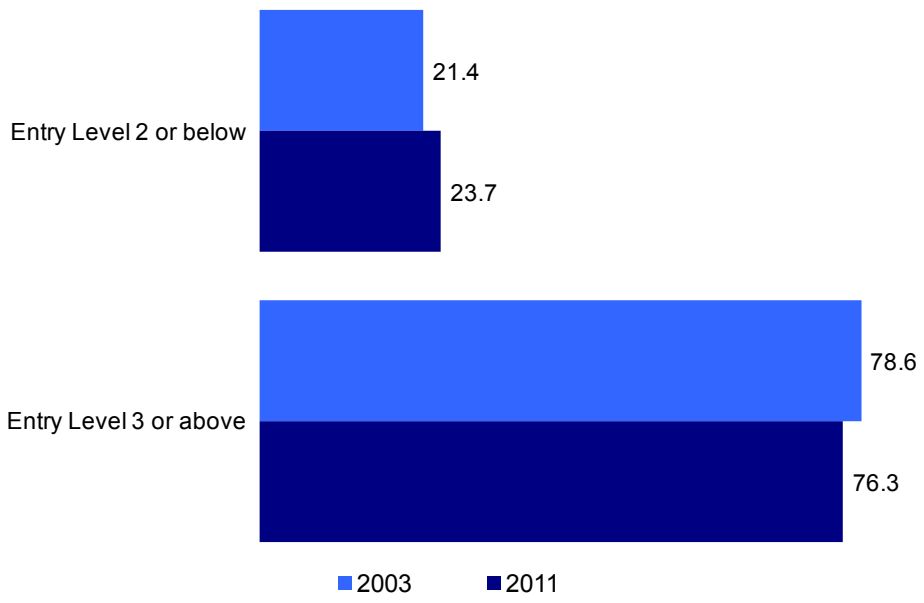
Level 2 or above since 2003, as shown in Table 4.3 the most likely level of change is between +12.0 and +12.5 percentage points.[46]

## 4.4 Overall distribution of Numeracy Levels

Three quarters (76 per cent) of respondents achieved an Entry Level 3 score or above in numeracy, with one quarter (24 per cent) achieving an Entry Level 2 score or below. Therefore it is estimated that 26 million adults aged 16 to 65 in England had Entry Level 3 or above numeracy skills, and 8.1 million had Entry Level 2 or below numeracy skills.

In comparison to 2003, this represents a small decrease in numeracy skills. The proportion of respondents being classified at Entry Level 3 or above has declined from 78.6 per cent in 2003 to 76.3 per cent in 2011. The proportion of respondents being classified at Entry Level 2 or below has increased from 21.4 per cent to 23.7 per cent. These findings are illustrated in Figure 4.3.

**Figure 4.3 Numeracy Levels in 2003 and 2011 (%)**

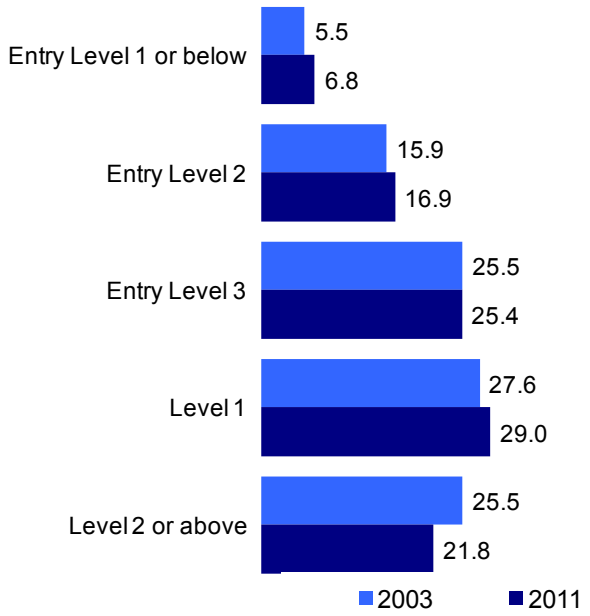



Base: SfL2003 All aged 16-65 with numeracy score (8040) / SfL2011 All aged 16-65 with numeracy score (5823)

The distribution of numeracy skills can be seen in Figure 4.4, and population estimates for all adults aged 16-65 in England are shown in Table 4.4. The changes between 2003 and 2011 are found at the highest and the lowest Numeracy Levels. The number of respondents being classified at Level 2 or above in numeracy has decreased slightly, from 25.5 per cent in 2003 to 21.8 per cent in 2011. The number of respondents at the lowest level, Entry Level 1 or below has increased from 5.5 per cent in 2003 to 6.8 per cent in 2011. The proportion of respondents achieving the intermediary levels has not changed significantly.

[46] Note, when rounded to one decimal place the likelihood of the difference being between +12 and +12.5 percentage points is 17.4 per cent, and between +12.5 and +13 percentage points is 16.7 per cent.

## Figure 4.4 Numeracy Levels in 2003 and 2011 (%)




Base:SfL2003 All aged 16-65 with numeracy score (8040) / SfL2011 All aged 16-65 with numeracy score (5823)

## Table 4.4 Numeracy Levels in 2003 and 2011 including population estimates

| | 2003 | | | 2011 | | |
|---|---|---|---|---|---|---|
| | % | Margins of error | Population estimate (million) | % | Margins of error | Population estimate (million) |
| Entry Level 1 or below | 5.5 | (4.8 – 6.1) | 1.7 | 6.8 | (6.0 – 7.8) | 2.3 |
| Entry Level 2 | 15.9 | (14.9 – 17.0) | 5.1 | 16.9 | (15.8 – 18.1) | 5.8 |
| Entry Level 3 | 25.5 | (24.4 – 26.7) | 8.1 | 25.4 | (24.1 – 26.8) | 8.7 |
| Level 1 | 27.6 | (26.5 – 28.9) | 8.8 | 29.0 | (27.7 – 30.4) | 9.9 |
| Level 2 or above | 25.5 | (24.2 – 26.9) | 8.1 | 21.8 | (20.5 – 23.2) | 7.5 |
| | | | | | | |
| Entry Level 2 and below | 21.4 | (20.1 – 22.7) | 6.8 | 23.7 | (22.4 – 25.1) | 8.1 |
| Entry Level 3 and above | 78.6 | (77.3 – 79.9) | 25.1 | 76.3 | (74.9 – 77.6) | 26 |
| Unweighted | | 8040 | (31.9 million) | | 5823 | (34.1 million) |

Base: Base:SfL2003 All aged 16-65 with numeracy score / SfL2011 All aged 16-65 with numeracy score

Table 4.5 shows a range of possible values for this magnitude of change (for the proportion at Entry Level 3 or above). Each possible value for this magnitude of change is given a likelihood score, so for example, we can see that the likelihood that the change in the proportion reaching Level 1 is less than or equal to -2 per cent is 64 per cent. The second row again breaks down these cumulative values to show the likelihood of change between two values. For example, the likelihood that the increase is between -2.5 percentage points and -2.0 percentage points is 21 per cent.

There is a one per cent likelihood of a positive change since 2003 in the proportion of respondents achieving Numeracy Entry Level 3 or above. The most likely level of change is between -2.5 and -2.0 percentage points (21 per cent).

**Table 4.5 Percentage achieving Entry Level 3 or above Numeracy – likelihood of different magnitudes of change**

| | Magnitude of change | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -5% | -4.5% | -4 | -3.5% | -3% | -2.5% | -2% | -1.5% | -1% | -0.5% | 0% | +0.5% |
| Cumulative probability distribution | 0% | 1% | 4% | 11% | 25% | 44% | 64% | 81% | 92% | 97% | 99% | 100 % |
| Interval probability distribution | 0% | 1% | 3% | 7% | 13% | 19% | 21% | 17% | 11% | 5% | 2% | 1% |

Base: SfL2003 All aged 16-65 with Entry Level 3 or above numeracy score and SfL2011 All aged 16-65 with Entry Level 3 or above numeracy score

## 4.5 Overall distribution of the ICT components

Table 4.6 displays the distributions of each of the four ICT components.

**Table 4.6 ICT Levels**

| | WORD PROCESSING | | EMAIL[47] | | SPREADSHEET[48] | | MULTIPLE CHOICE | |
|---|---|---|---|---|---|---|---|---|
| | % | Margins of error | % | Margins of error | % | Margins of error | % | Margins of error |
| Below Entry Level | 14.5 | (12.9 – 16.3) | 30.4 | (28.0 – 33.0) | 38.8 | (36.2 – 41.4) | 7.7 | (6.6 – 9.1) |
| Entry Level 1 | 11.6 | (10.0 – 13.5) | | | | | * | (0.3 – 0.9) |
| Entry Level 2 | 17.1 | (15.3 – 19.1) | 0.8 | (0.5 – 1.3) | | | 1.2 | (0.7 – 1.9) |
| Entry Level 3 | 16.3 | (14.6 – 18.1) | 8.6 | (7.4 – 10.0) | 27.4 | (25.3 – 29.6) | 12.3 | (10.7 – 14.2) |
| Level 1 | 15.3 | (13.7 – 17.2) | 7.7 | (6.6 – 9.1) | 16.9 | (15.0 – 18.9) | 25.7 | (23.7 – 27.9) |
| Level 2 or above | 25.1 | (23.0 – 27.3) | 52.4 | (49.9 – 55.0) | 17.0 | (15.3 – 18.9) | 52.5 | (50.0 – 55.1) |
| Unweighted | 2253 | | 2247 | | 2228 | | 2274 | |

Base: SfL2011 All aged 16-65 with word processing / email / spreadsheet / multiple choice score

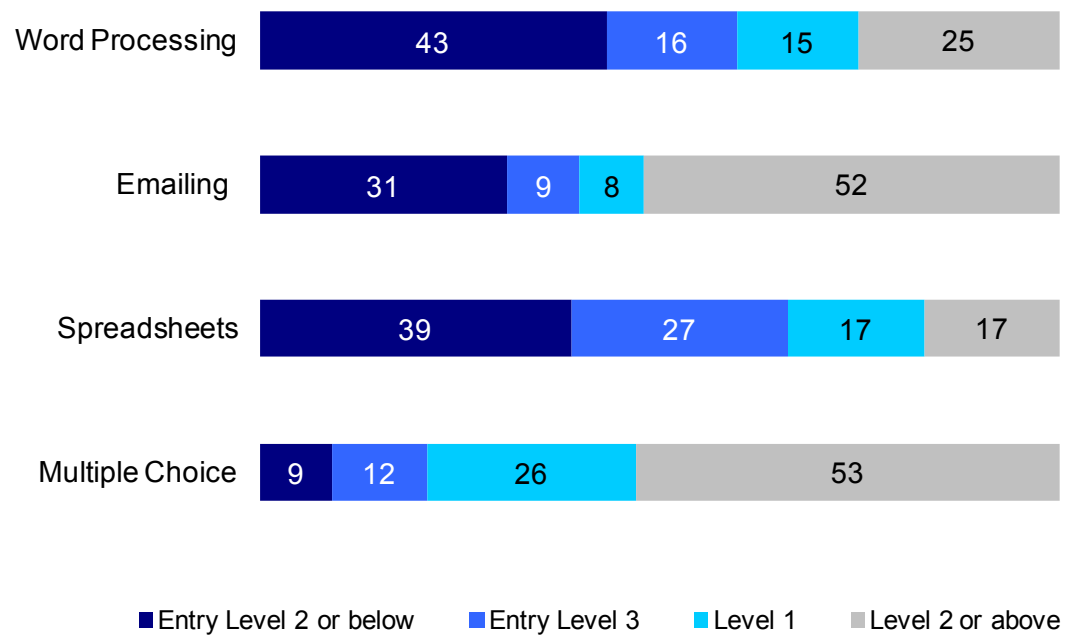
[47] The lowest level on this component is Entry Level 1 and below.

[48] The lowest level on this component is Entry Level 2 and below.

Performance on the three skill areas varied (Figure 4.5). Of the three practical components respondents tended to perform at the highest levels on the email component, with half of respondents (52 per cent) being classified at Level 2 or above. Respondents were least likely to achieve a Level 2 or above on the spreadsheet components, where 17 per cent were classified at this level. Of the four components, word processing had the highest proportion of respondents achieving Entry Level 2 or below (43 per cent).

Overall, respondents achieved the highest scores in the multiple choice element. Just over half of respondents (53 per cent) achieved Level 2 or above on this element, and a further quarter (26 per cent) achieved Level 1. This suggests that 26.7 million adults aged 16 to 65 in England have Level 1 or above skills on this component. Only eight per cent of respondents did not achieve at least an Entry Level qualification, which equates to 2.6 million 16-65 year-olds in England. Unlike the three skill components, the multiple choice component was not a 'practical' assessment,[49] and therefore it is unsurprising that the highest standards were obtained in this component. This element was designed to provide Entry Level topics for people without practical skills, along with measurement of the Skills for Life standards that do not require practical tasks to assess them, and assessment of awareness and usage of the internet.

**Figure 4.5 ICT Levels (%)**




Base: SfL2011 All aged 16-65 with word processing score (2253) / email score (2247) / spreadsheet score (2228) / multiple choice score (2274)

[49] The three skill components were based on Real Applications Test Environment (RATE) technology, where respondents undertook common tasks in authentic contexts using real ICT applications, typical of standard commercial applications.

Population estimates for the four ICT components are shown in Table 4.7.

**Table 4.7 ICT Levels - population estimates**

| | WORD PROCESSING (million) | EMAIL (million) | SPREADSHEET (million) | MULTIPLE CHOICE (million) |
|---|---|---|---|---|
| Entry Level 2 or below | 14.8 | 10.7 | 13.2 | 3.2 |
| Entry Level 3 | 5.6 | 2.9 | 9.3 | 4.2 |
| Level 1 | 5.2 | 2.6 | 5.8 | 8.8 |
| Level 2 or above | 8.6 | 17.9 | 5.8 | 17.9 |
| Unweighted | | (34.1 million) | | |

Base: SfL2011 All aged 16-65 with word processing scores / email scores / spreadsheet scores / multiple choice scores

## 4.6 Literacy, numeracy and ICT distributions by age

The Department for Business, Innovation and Skills holds responsibility for funding those aged 19 or over in higher or further education. The literacy and numeracy skills for those aged 16-18 and 19 and over are displayed in Tables 4.8 and 4.9. Section 5.5.1 explores the relationship between literacy and numeracy with age in more depth.

Since 2003, there has been an increase in the proportion of respondents aged 16-18 and 19 and over reaching Level 2 or above in literacy and a corresponding decrease in the proportion achieving a Level 1 score. For the 16-18 year old group there has been a 13 percentage point rise in the proportion achieving a Level 2 or above score, and for the 19-65 year old group a 12 percentage point rise. Reflecting the overall findings, neither group has seen an increase in the proportion being classified at a Level 1 or above score (Table 4.8).

**Table 4.8 Literacy Levels by age (16-18 and 19-65)**

| | 2003 | | | 2011 | | |
|---|---|---|---|---|---|---|
| | All | 16-18 | 19-65 | All | 16-18 | 19-65 |
| | % | % | % | % | % | % |
| Entry Level 1 or below | 3 | 2 | 3 | 5 | 3 | 5 |
| Entry Level 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Entry Level 3 | 11 | 12 | 11 | 8 | 10 | 8 |
| Level 1 | 40 | 42 | 39 | 28 | 30 | 28 |
| Level 2 or above | 44 | 43 | 44 | 57 | 56 | 57 |
| | | | | | | |
| Entry Level 3 or below | 16 | 15 | 16 | 15 | 14 | 15 |
| Level 1 or above | 84 | 85 | 84 | 85 | 86 | 85 |
| Unweighted | 7874 | 337 | 7535 | 5824 | 228 | 5593 |

Base: SfL2003 All aged 16-65 with literacy score / SfL2011 All aged 16-65 with literacy score

For numeracy, amongst the 19-65 year old group, reflecting the overall findings there has been a small decline in the proportion of respondents achieving an Entry Level 3 or above score (from 79 per cent in 2003 to 77 per cent). Whilst a decline is also evident among respondents aged 16-18 (from 79 per cent to 72 per cent), it is not statistically significant at the 5 per cent

confidence level – although this is likely to be due to the lower base size for 16-18 year-olds and does not necessarily imply no change in the numeracy skills for this age group. The data are shown in Table 4.9.

**Table 4.9 Numeracy Levels by age (16-18 and 19-65)**

| | 2003 | | | 2011 | | |
|---|---|---|---|---|---|---|
| | All | 16-18 | 19-65 | All | 16-18 | 19-65 |
| | % | % | % | % | % | % |
| Entry Level 1 or below | 5 | 6 | 5 | 7 | 4 | 7 |
| Entry Level 2 | 16 | 15 | 16 | 17 | 24 | 16 |
| Entry Level 3 | 25 | 30 | 25 | 25 | 29 | 25 |
| Level 1 | 28 | 27 | 28 | 29 | 24 | 29 |
| Level 2 or above | 25 | 22 | 26 | 22 | 19 | 22 |
| | | | | | | |
| Entry Level 2 or below | 21 | 21 | 21 | 24 | 28 | 23 |
| Entry Level 3 or above | 79 | 79 | 79 | 76 | 72 | 77 |
| Unweighted | 8040 | 348 | 7689 | 5823 | 233 | 5587 |

Base: SfL2003 All aged 16-65 with numeracy score / SfL2011 All aged 16-65 with numeracy score

Table 4.10 displays the ICT performance of respondents aged 16-18 and 19-65.[50] On all four components respondents aged 16-18 were more likely to achieve an Entry Level 3 or above score than their older counterparts. Across the three practical components, the difference was largest on the spreadsheet component (a difference of 28 percentage points), and smallest on the email component (a difference of 22 percentage points).

**Table 4.10 ICT Levels by age (16-18 and 19-65)**

| | WORD PROCESSING | | | EMAIL | | | SPREADSHEET | | | MULTIPLE CHOICE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | 16-18 | 19-65 | All | 16-18 | 19-65 | All | 16-18 | 19-65 | All | 16-18 | 19-65 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 2 or below | 43 | 20 | 45 | 31 | 10 | 33 | 39 | 12 | 41 | 9 | 1 | 10 |
| Entry Level 3 or above | 57 | 80 | 55 | 69 | 90 | 67 | 61 | 88 | 59 | 91 | 99 | 90 |
| Unweighted | 2253 | 95 | 2158 | 2247 | 95 | 2152 | 2228 | 94 | 2134 | 2274 | 94 | 2180 |

Base: SfL2011 All aged 16-65 with word processing scores / email scores / spreadsheet scores / multiple choice scores

[50] For full breakdown see Appendix Table 4.A1.

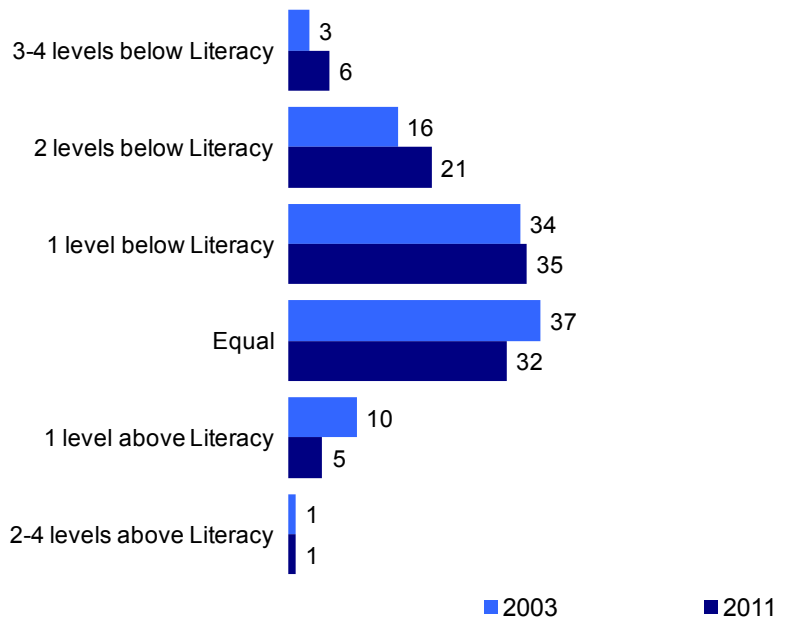
## 4.7 The Relationship between Literacy, Numeracy and ICT skills

This section explores the relationship between literacy, numeracy and ICT skills. It should be noted that the cross tabulations shown in this section include imputed assessment scores. However, the correlation co-efficients[51] included are based on unweighted score data. The rational for this is included in Annex 5.

### 4.7.1 Literacy and Numeracy

Literacy and numeracy are two different skills but in line with 2003, numeracy was correlated with literacy. The numeracy assessment was presented in English and respondents were required to read text before they could carry out each task (although the text is quite limited for most questions). Just over six in ten respondents (62 per cent) performed at a lower level in the numeracy assessment than in the literacy assessment. Only six per cent of respondents achieved a higher level in numeracy than in literacy. In 2003, one in ten (10 per cent) of respondents were classified at a higher level in numeracy than literacy, and 53 per cent performed to a lower standard. This is shown in Figure 4.6. The correlation co-efficient is 0.53.

**Figure 4.6 Numeracy Level measured against Literacy Level in 2003 and 2011 (%)**




Base: SfL2003 All aged 16-65 with literacy and numeracy score ( 7517) / SfL2011 All aged 16-65 with literacy and numeracy score (4652)

[51] A correlation co-efficient is a mathematical measure of how one number is related to another. A correlation coefficient will always be between +1 and -1. A correlation coefficient of +1 or -1 means that two numbers are perfectly correlated either positively or negatively. A positive correlation means that as one variable increases so does the other, and a negative correlation means that as one variable decreases the other increases. A correlation co-efficient of 0 means that the two numbers are not related. The closer the correlation coefficient is to zero, the greater the uncertainty there is in the correlation.

Exploring this relationship further, Table 4.11 displays Numeracy Levels broken down by Literacy Levels. Six in ten respondents (60 per cent) who achieved Entry Level 1 or below on the literacy assessment, also performed at this level on the numeracy assessment. Amongst respondents who performed at Level 2 or above on literacy, one third (33 per cent) also performed at Level 2 or above in numeracy, and 37 per cent performed at Level 1.

**Table 4.11 Numeracy Level by Literacy Level**

| | | LITERACY LEVELS | | | | |
|---|---|---|---|---|---|---|
| **NUMERACY LEVELS** | | Entry Level 1 or below | Entry Level 2 | Entry Level 3 | Level 1 | Level 2 or above |
| | | % | % | % | % | % |
| Entry Level 1 or below | % | 60 | 23 | 16 | 5 | 1 |
| Entry Level 2 | % | 26 | 53 | 41 | 26 | 7 |
| Entry Level 3 | % | 9 | 17 | 32 | 34 | 21 |
| Level 1 | % | 4 | 6 | 9 | 25 | 37 |
| Level 2 or above | % | 1 | - | 1 | 10 | 33 |
| Unweighted | | 200 | 84 | 357 | 1331 | 2680 |

Base: SfL2011 All aged 16-65 with literacy and numeracy scores

Table 4.12 shows how literacy and numeracy skills were distributed across the population, with each cell representing different 'proficiency' skill group. Seven in ten respondents (72 per cent) achieved at least Level 1 on the literacy assessment, and at least Entry Level 3 on the numeracy assessment. This has decreased from 74 per cent in 2003, and is attributable to the small decline in overall numeracy skills since 2003. As in 2003, one in ten (10 per cent) failed to achieve at least Level 1 on the literacy assessment and Entry Level 3 on the numeracy assessment.

**Table 4.12 Literacy and Numeracy combinations – overall percentage of sample in each cell in 2003 and 2011**

| | | LITERACY LEVELS | | | |
|---|---|---|---|---|---|
| | | 2003 | | 2011 | |
| **NUMERACY LEVELS** | | Entry Level 3 or below | Level 1 or above | Entry Level 3 or below | Level 1 or above |
| | | % | % | % | % |
| Entry Level 2 and below | % | 10 | 10 | 10 | 14 |
| Entry Level 3 or above | % | 5 | 74 | 4 | 72 |

Base: SfL2003 All aged 16-65 with literacy and numeracy scores (7517) / SfL2011 All aged 16-65 with literacy and numeracy scores (4652)

The full distribution of Levels across both assessments is shown in Table 4.13. Many of the cells have values below one per cent indicating a relatively rare combination. The margins of error around these statistics though small in an *absolute* sense, are relatively large in a relative sense. Consequently, the grossing of these figures to population totals is not recommended.

**Table 4.13 Literacy and Numeracy combinations – overall percentage of sample in each cell**

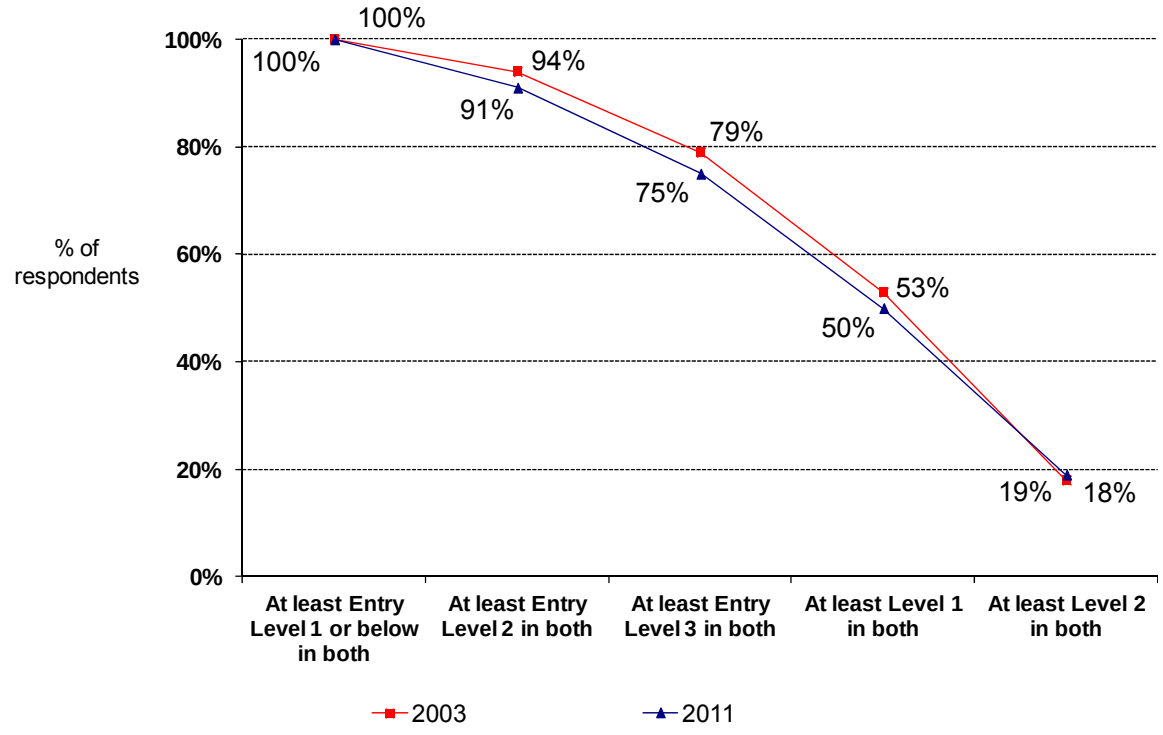
| NUMERACY LEVELS | | LITERACY LEVELS | | | | | |
|---|---|---|---|---|---|---|---|
| | | Entry Level 1 or below | Entry Level 2 | Entry Level 3 | Level 1 | Level 2 or above | TOTAL |
| | | % | % | % | % | % | % |
| Entry Level 1 or below | % | 3 | * | 1 | 1 | 1 | 7 |
| Entry Level 2 | % | 1 | 1 | 3 | 7 | 4 | 17 |
| Entry Level 3 | % | * | * | 2 | 10 | 12 | 25 |
| Level 1 | % | * | * | 1 | 7 | 21 | 30 |
| Level 2 or above | % | * | - | * | 3 | 19 | 22 |
| TOTAL | % | 5 | 2 | 8 | 29 | 57 | 100 |

Correlation Coefficient: 0.53

Base: SfL2011 All aged 16-65 with literacy and numeracy scores (Unweighted = 4652)

Figure 4.7 displays the changes seen in the proportion of respondents who achieve minimum levels in both assessments across 2003 and 2011.

**Figure 4.7 Minimum Levels of combined Literacy and Numeracy in 2003 and 2011**




Base: SfL2003 All aged 16-65 with literacy and numeracy score (7517) / SfL2011 All aged 16-65 with literacy and numeracy score (4652)

### 4.7.2 Literacy, Numeracy and ICT

Despite the practical nature of the word processing, email and spreadsheet components, all tasks within the ICT assessment were presented in English and respondents were required to read text before they could carry out each task.

The literacy assessment correlated with each of the ICT components, as did the numeracy assessment. The correlation coefficients are displayed in Table 4.14, all were statistically significant (at the five per cent confidence interval level). It is interesting to note the similarity in the correlation between the three practical components to the literacy and numeracy assessments.

**Table 4.14 Literacy / Numeracy and ICT correlation coefficients**

| | Word Processing | Email | Spreadsheet | Multiple Choice |
|---|---|---|---|---|
| Literacy | 0.51 | 0.46 | 0.43 | 0.50 |
| Numeracy | 0.55 | 0.49 | 0.49 | 0.54 |

Tables 4.A2 to 4.A5 in the Appendix of Tables show the combined performance of respondents on the literacy and ICT tasks, and the numeracy and ICT tasks. The percentage of the sample in each combination is displayed. As illustrated in the tables there was a tendency for respondents who scored higher on the literacy assessment to also score higher on the ICT components. This was most marked in the email and multiple choice components. For numeracy, a similar pattern emerged. However, this is not to say respondents who had lower scores on either the literacy or numeracy assessments could not achieve high scores on the ICT components. For example 11 per cent of all respondents performed at Entry Level 2 or below on the numeracy component, but achieved at least Level 1 on the ICT multiple choice element. However, for the other ICT components those with poor numeracy rarely achieved above a Level1 score.

### 4.7.3 Correlations between ICT components

The four ICT components measure different skill sets, and it is possible for people to have limited experience of one skill set and therefore perform at a low standard, but be capable of reaching a much higher standard on another skill set.

Nevertheless, high correlations were found between all four components, with each ICT component correlating positively with each other. The correlation co-efficients are shown in Table 4.15; all were statistically significant (at the 5 per cent confidence interval level).

**Table 4.15 ICT – correlation co-efficients**

| | WORD PROCESSING | EMAIL | SPREADSHEET | MULTIPLE CHOICE |
|---|---|---|---|---|
| WORD PROCESSING | | 0.81 | 0.80 | 0.71 |
| EMAIL | 0.80 | | 0.75 | 0.64 |
| SPREADSHEET | 0.80 | 0.75 | | 0.60 |
| MULTIPLE CHOICE | 0.71 | 0.64 | 0.60 | |

Tables 4.A6 to 4.A11 in the Appendix of tables display the combined performance of respondents on each combination of the ICT components.

# 5 Skills Levels and demographic characteristics

## 5.1 Key Findings

**Linguistic and Cultural backgrounds**

- Just over one in ten respondents (11 per cent) did not speak English as a first language (an increase from seven per cent in 2003). London had the largest proportion of such respondents (34 per cent).
- Speaking English as a first language was linked with higher literacy, numeracy and ICT. Amongst native English speakers there was a small increase in the proportion reaching Literacy Level 1 or above (from 86 per cent in 2003 to 88 per cent in 2011).
- Differences in skills were also apparent by ethnicity. Although there was a close link between first language spoken and ethnicity, when controlling for language by focusing solely on respondents with English as a first language, some differences by ethnicity were still apparent.

**Geo-demographic characteristics**

- There was a relationship between people's standard of skills and their geo-demographic characteristics, in particular deprivation.
- When controlling for first language spoken, the North East had the poorest numeracy and ICT performance. It also had the poorest literacy performance along with London. In Yorkshire and the Humber, the West Midlands and the South East increases in literacy performance since 2003 were observed. A sizable decline in numeracy performance since 2003 was only apparent in London.

**Personal demographic characteristics**

- Reflecting the findings from 2003, age was not a strong discriminator for performance in literacy or numeracy.
- An improvement in literacy performance since 2003 was apparent for 55-65 year-olds (which is most likely due to the educational circumstances of the 55-65 year-old age group in the Skills for Life 2003 Survey).
- Since 2003 there has been a decline in the numeracy performance of 16-24 year-olds. No other age groups showed a similar decline.
- There was a clear generational gap in ICT performance, with older respondents tending to perform at a much lower standard than younger respondents.
- Women were slightly more likely than men to achieve Literacy Level 2 or above. However, in numeracy men still outperformed women (though this was less marked than in 2003).
- In line with 2003, household socio-economic status (NS-SEC) was linked to literacy, numeracy and ICT abilities.

- Health was linked to abilities in literacy, numeracy and ICT, with performance in all assessments declining in line with falling ratings of health.

## 5.2 Introduction

This chapter examines the associations between skills and a series of descriptive demographic characteristics. For literacy and numeracy, comparisons are also made to the Skills for Life 2003 Survey (SfL2003). The demographic characteristics examined can be broadly divided into the following three sub-groups:

- linguistic and cultural background (collected in the background questionnaire in the following questions: 'Ethnicid', 'Sesol' to 'Swksch');
- geo-demographic characteristics, including Region, socio-economic indicators and housing tenure (collected in the background questionnaire in questions 'Qxtenu1' to 'Qxrent2' and 'Qwork' to 'HNEmplee', and from the address information of interviewed respondents); and
- personal characteristics, including sex, age and health (collected in the background questionnaire in the following questions: 'Sex to 'Agebana' and 'Hqdis' to 'Hqlim').[52]

## 5.3 Skills amongst respondents from different linguistic and cultural backgrounds

This section explores the relationship between language and ethnicity when assessing literacy, numeracy and ICT skills.

### 5.3.1 Language

Just over one in ten (11 per cent) respondents reported that English was not their first language.[53] This is an increase from 2003, where the equivalent figure was seven per cent. Half (50 per cent) of these respondents were from London, which remains unchanged compared with 2003 (47 per cent) (Table 5.1).

[52] The Background questionnaire can be found in Annex 3.

[53] It should be noted that the background questionnaire did not record immigration status and that speaking English as a first language can only be used as a rough proxy for this.

**Table 5.1 Location of respondents by first language (EFL / ENFL)**

| | 2003 | | | 2011 | | |
|---|---|---|---|---|---|---|
| | Total | EFL | ENFL | Total | EFL | ENFL |
| | % | % | % | % | % | % |
| South East | 16 | 16 | 15 | 16 | 17 | 12 |
| London | 15 | 13 | 47 | 16 | 12 | 50 |
| North West | 14 | 14 | 8 | 13 | 14 | 7 |
| East | 11 | 11 | 5 | 11 | 11 | 7 |
| West Midlands | 11 | 11 | 8 | 10 | 11 | 8 |
| South West | 10 | 10 | 3 | 10 | 11 | 2 |
| Yorkshire and The Humber | 10 | 10 | 6 | 10 | 11 | 7 |
| East Midlands | 9 | 9 | 7 | 9 | 9 | 5 |
| North East | 5 | 5 | 1 | 5 | 5 | 1 |
| Unweighted | 8730 | 8270 | 460 | 7230 | 6620 | 610 |

Base: SfL2003 All aged 16-65 / SfL2011 All aged 16-65

London had the largest proportion of respondents who reported that their first language was not English (ENFL) (34 per cent). Other Regions had far fewer respondents with ENFL, as Table 5.2 shows.

**Table 5.2 First language (EFL / ENFL) by Region**

| | All | South West | North East | North West | East Midlands | East | Yorkshire and the Hum. | South East | West Midlands | London |
|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % |
| **2003** | | | | | | | | | | |
| EFL | 93 | 98 | 97 | 96 | 95 | 97 | 96 | 94 | 95 | 79 |
| ENFL | 7 | 2 | 3 | 4 | 5 | 3 | 4 | 6 | 5 | 21 |
| Unweighted | 8730 | 941 | 974 | 989 | 856 | 842 | 970 | 1229 | 931 | 998 |
| **2011** | | | | | | | | | | |
| EFL | 89 | 98 | 97 | 95 | 93 | 93 | 93 | 92 | 91 | 66 |
| ENFL | 11 | 2 | 3 | 5 | 7 | 7 | 7 | 8 | 9 | 34 |
| Unweighted | 7230 | 750 | 457 | 938 | 627 | 815 | 742 | 1310 | 771 | 820 |

Base: SfL2003 All aged 16-65 / SfL2011 All aged 16-65

Mirroring the findings from 2003, just over two thirds of respondents with ENFL (67 per cent) were from black and minority ethnic groups (BME) and they made up just over half (52 per cent) of all respondents from BME backgrounds. Additionally, the majority of respondents with ENFL were not born in the UK (92 per cent) and the most common places of birth were India (13 per cent), Pakistan (eight per cent) and Poland (eight per cent).[54]

[54] See Appendix Table 5.A1.

Table 5.3 displays first language spoken by age. Declines in the proportion of respondents with EFL since 2003 are evident amongst those aged 25-34 and 35-44.[55] If first language status is used as a proxy for immigration, this would suggest that there has been more immigration amongst younger groups into England.

Changes in first language spoken by age and generation are examined further in Section 5.5.1 of this chapter, and in the generational analysis in Chapter 6.

**Table 5.3 First language (EFL / ENFL) by age**

| | All | 16-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-65 |
|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % |
| **2003** | | | | | | | |
| EFL | 93 | 97 | 92 | 90 | 93 | 93 | 96 |
| ENFL | 7 | 3 | 8 | 10 | 7 | 7 | 4 |
| Unweighted | 8730 | 498 | 673 | 1925 | 2256 | 1679 | 1696 |
| **2011** | | | | | | | |
| EFL | 89 | 91 | 89 | 83 | 87 | 92 | 95 |
| ENFL | 11 | 9 | 11 | 17 | 13 | 8 | 5 |
| Unweighted | 7230 | 386 | 513 | 1397 | 1616 | 1584 | 1731 |

Base: SfL2003 All aged 16-65 / SfL2011 All aged 16-65

Three quarters (74 per cent) of respondents with ENFL felt that they spoke English well enough to hold a conversation. This is broadly in line with the data from 2003 (67 per cent). Twenty seven per cent spoke English as their main language at home, and 61 per cent spoke English as their main language at work or college. Whilst there is no change since 2003 in the proportion who spoke English as their main language at home (31 per cent), this represents an increase in the use of English in the workplace (50 per cent in 2003).

After English, the four most common languages spoken by respondents with ENFL were Punjabi (13 per cent), Hindi (12 per cent), and French and Urdu (10 per cent respectively). In 2003, the four most common languages were Punjabi (15 per cent), French (13 per cent), Urdu (12 per cent) and Gujarati (10 per cent)[56]. Examining respondents' self assessment of their English skills, 37 per cent of respondents with ENFL reported that they were 'very good' at speaking English, and a further 31 per cent felt they were 'fairly good'. These self assessments remain unchanged from 2003.[57]

### *Literacy and Numeracy*

Reflecting the findings observed in 2003, respondents who reported English as their first language tended to perform at a higher level on both the literacy and numeracy assessments than respondents with ENFL. The importance of English as a first language is also highlighted in the regression analysis later (in Section 6.3), which shows not having English as a first language

[55] Whilst the table shows declines in all other age groups also, these do not reach levels of statistical significance at the 5 per cent level.

[56] See Appendix Table 5.A2.

[57] See Appendix Table 5.A3.

is a predictor of 'weak' literacy and numeracy performance. As shown in Table 5.4 respondents whose first language was English were more likely to achieve Level 1 or above on the literacy assessment and Entry Level 3 or above on the numeracy assessment.

**Table 5.4 Literacy and Numeracy Levels by first language (EFL / ENFL)**

| | LITERACY LEVELS | | | NUMERACY LEVELS | | |
|---|---|---|---|---|---|---|
| | All | EFL | ENFL | All | EFL | ENFL |
| | % | % | % | % | % | % |
| Entry Level 1 or below | 5 | 3 | 21 | 7 | 5 | 18 |
| Entry Level 2 | 2 | 2 | 5 | 17 | 16 | 20 |
| Entry Level 3 | 8 | 7 | 17 | 25 | 26 | 23 |
| Level 1 | 28 | 29 | 27 | 29 | 30 | 25 |
| Level 2 or above | 57 | 60 | 31 | 22 | 23 | 14 |
| | | | | | | |
| (Literacy - Entry Level 3 or below) / Numeracy - (Entry Level 2 or below) | 15 | 12 | 42 | 27 | 22 | 38 |
| (Literacy - Level 1 or above) / (Numeracy - Entry Level 3 or above) | 85 | 88 | 58 | 76 | 78 | 62 |
| Unweighted | 5824 | 5345 | 479 | 5823 | 5328 | 495 |

Base: SfL2011 All aged 16-65 with literacy scores/ SfL2011 All aged 16-65 with numeracy score

When focusing solely on respondents who spoke English as a first language (EFL), there has been a small increase in the proportion reaching Level 1 or above in literacy: in 2003 86 per cent reached this standard, rising to 88 per cent in 2011. Findings for numeracy mirror the findings for all respondents, with a small decrease in the proportion reaching Entry Level 3 or above since 2003 (decreasing from 80 per cent in 2003 to 78 per cent in 2011).[58]

Respondents with ENFL who claimed to have 'very good' spoken English tended to perform to a higher standard in literacy: 78 per cent were classified at Level 1 or above, compared to 58 per cent of all respondents with ENFL. Reflecting the pattern observed in 2003, their performance was similar to that achieved by respondents whose first language was English. Although they were still less likely to achieve Level 1 or above and more likely to achieve Entry Level 3 or below, there were no marked differences in performance at each individual Literacy Level (Table 5.5).

For numeracy, as shown in Table 5.5, these respondents performed at a similar standard as those with EFL. In 2003, whilst these respondents outperformed all other respondents with ENFL, they still had weaker skills than respondents with EFL.

[58] See Appendix Table 5.A4.

**Table 5.5 Literacy and Numeracy Levels by first language (EFL / ENFL) and self assessment of spoken English**

| | LITERACY LEVELS | | | | NUMERACY LEVELS | | | |
|---|---|---|---|---|---|---|---|---|
| | All | EFL | ENFL | ENFL but 'very good at speaking English' | All | EFL | ENFL | ENFL but 'very good at speaking English' |
| | % | % | % | % | % | % | % | % |
| Entry Level 1 or below | 5 | 3 | 21 | 9 | 7 | 5 | 18 | 8 |
| Entry Level 2 | 2 | 2 | 5 | 4 | 17 | 16 | 20 | 13 |
| Entry Level 3 | 8 | 7 | 17 | 9 | 25 | 26 | 23 | 19 |
| Level 1 | 28 | 29 | 27 | 26 | 29 | 30 | 25 | 35 |
| Level 2 or above | 57 | 60 | 31 | 52 | 22 | 23 | 14 | 25 |
| | | | | | | | | |
| (Literacy - Entry Level 3 or below) / Numeracy - (Entry Level 2 or below) | 15 | 12 | 42 | 22 | 24 | 22 | 38 | 21 |
| (Literacy - Level 1 or above) / (Numeracy - Entry Level 3 or above) | 85 | 82 | 58 | 78 | 76 | 78 | 62 | 79 |
| Unweighted | 5824 | 5545 | 479 | 182 | 5823 | 5328 | 495 | 191 |

Base: SfL2011 All aged 16-65 with literacy scores/ SfL2011 All aged 16-65 with numeracy score

Respondents were asked to give a self assessment of their maths skills by rating how good they were at working with numbers. Interestingly, respondents with EFL were more likely to give an 'accurate' rating (when maths ability is measured by the score on the numeracy assessment). Eighty eight per cent of respondents with EFL who rated their maths ability as 'very good' also achieved Entry Level 3 or above on the numeracy assessment. However, amongst such respondents with ENFL, 74 per cent achieved Entry Level 3 or above.[59] This may be due to the fact that the numeracy assessment was written in English and so respondents would need to be able to read the question text in English to carry out the numeracy tasks. Alternatively it is possible that people from non English-speaking cultures may have an inaccurate or poorer concept of what English numeracy standards involve, and/or numeracy standards in general.

***ICT***

Table 5.6 illustrates the performance of respondents with EFL compared to respondents with ENFL in the four components of the ICT assessment.

Of the three practical components, differences were only apparent on the spreadsheet component with respondents with ENFL more likely to achieve Entry Level 2 or below (51 per cent versus 37 per cent) and less likely to achieve Entry Level 3 or above (49 per cent versus 63 per cent). Whilst differences in performance on the other two practical components are evident in Table 5.6 they do not reach conventions of statistical significance (at the five per cent confidence interval level) due to relatively small base sizes.

[59] See Appendix Table 5.A5.

The largest differences between the two groups were found on the multiple choice component. Native English speakers tended to perform at a higher standard on this component compared to respondents with ENFL, with 55 per cent being classified at Level 2 or above compared to 31 per cent of respondents with ENFL.[60]

**Table 5.6 ICT Levels by first language (EFL / ENFL)**

| | WORD PROCESSING | | | EMAIL | | | SPREADSHEET | | | MULTIPLE CHOICE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All % | EFL % | ENFL % | All % | EFL % | ENFL % | All % | EFL % | ENFL % | All % | EFL % | ENFL % |
| Entry Level 2 or below | 43 | 42 | 53 | 31 | 30 | 40 | 39 | 37 | 51 | 9 | 9 | 16 |
| Entry Level 3 | 16 | 17 | 13 | 9 | 9 | 7 | 27 | 28 | 21 | 12 | 11 | 23 |
| Level 1 | 15 | 15 | 17 | 8 | 8 | 6 | 17 | 17 | 17 | 26 | 25 | 30 |
| Level 2 or above | 25 | 26 | 17 | 52 | 53 | 47 | 17 | 18 | 12 | 53 | 55 | 31 |
| | | | | | | | | | | | | |
| Entry Level 2 or below | 43 | 42 | 53 | 31 | 30 | 40 | 39 | 37 | 51 | 9 | 9 | 16 |
| Entry Level 3 or above | 57 | 57 | 47 | 69 | 70 | 60 | 61 | 63 | 49 | 91 | 91 | 84 |
| Unweighted | 2253 | 2081 | 172 | 2247 | 2075 | 172 | 2228 | 2057 | 171 | 2274 | 2099 | 175 |

Base: SfL2011 All aged 16-65 with word processing / email / spreadsheet / multiple choice score

Further analysis suggests that English speaking ability may play a role in ICT performance. The performance of respondents with ENFL who rated themselves as 'very good' at speaking English was more in line with the performance of all respondents with EFL across the four components. The main exception to this is in the email component: 67 per cent of respondents with ENFL who rated themselves as 'very good' at speaking English achieved Level 2 or above, compared to 53 per cent of all respondents with EFL.[61]

Additionally, respondents were asked to give a self assessment of their computer skills. Interestingly, respondents with EFL were more likely to be accurate about their ICT ability on the multiple choice and word processing components. For instance, 77 per cent of native English speakers who rated themselves as 'very good' at using computers achieved Level 2 or above on the multiple choice component compared to 55 per cent of such respondents with ENFL. For word processing, the equivalent figures were 50 per cent versus 33 per cent. However, no such differences were found for the email component and spreadsheet component.[62] It is important to note that respondents were required to rate their general computer ability, not their ability at specific computer tasks and this may explain some of the above differences. This analysis must also be treated with caution due to the small base sizes of some of the groups.

[60] For full breakdown see Appendix Table 5.A6.

[61] See Appendix Table 5.A6.

[62] See Appendix Table 5.A7.

### 5.3.2 Ethnicity

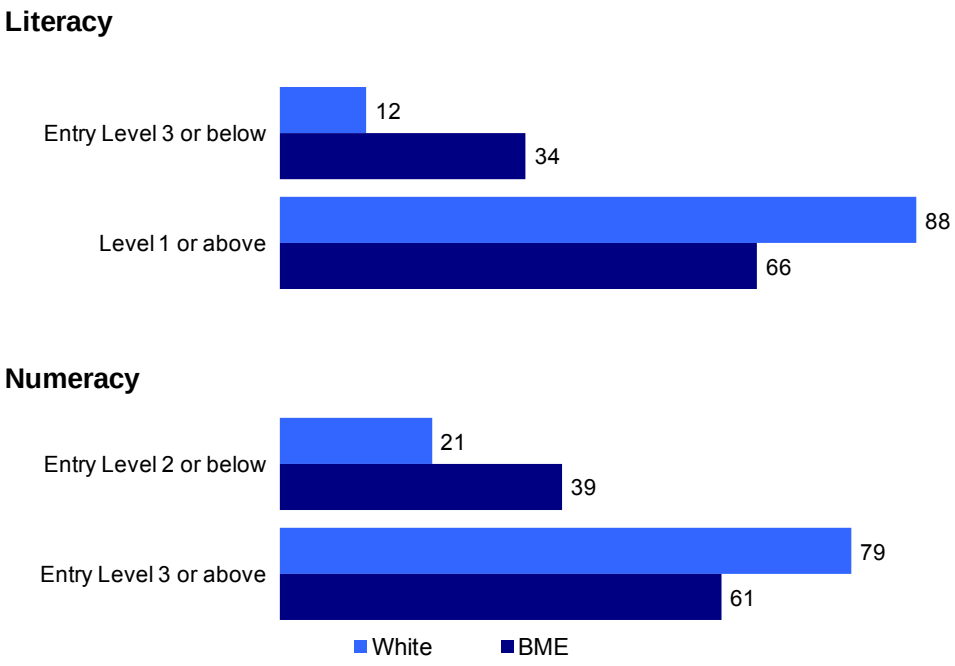
The vast majority of respondents (86 per cent) selected their ethnicity as 'White'.[63] As was the case in 2003, it is difficult to make statistically sound conclusions about the assessment performance of the different ethnic groups in England due to the small base sizes of some of the ethnic groups. In this section the full breakdown of ethnicity will be examined, however analysis of ethnicity later on in the report focuses on White respondents versus those from BME backgrounds.

Forty six per cent of respondents from BME backgrounds lived in London, and they made up 40 per cent of respondents from London. A further 11 per cent were located in the South East and West Midlands respectively. Forty eight per cent of respondents from BME backgrounds had English as their first language compared to 96 per cent of White respondents.[64]

#### *Literacy and Numeracy*

In both the literacy and numeracy assessments, White respondents tended to achieve higher scores than respondents from BME backgrounds. This is illustrated in Figure 5.1.[65]

**Figure 5.1 Literacy and Numeracy Levels by ethnicity (%)**




Base: SfL 2011 All aged 16-65 with literacy sore (5824) / SfL2011 All aged 16-65 with numeracy score (5823)

This relationship can be explored further by examining individual ethnic groups. Table 5.7 shows the performance on the literacy assessment by the White British, Asian (Indian), Asian (Pakistani), Black (Caribbean) and Black (African) ethnic groups.

[63] Either 'White British', 'White Irish' or 'Other White background'.

[64] See Appendix Table 5.A8 and 5.A9.

[65] For full breakdown see Appendix Table 5.A10.

**Table 5.7 Literacy Levels by ethnicity**

| | All | White British | Asian (Indian) | Asian (Pakistani) | Black (Caribbean) | Black (African) |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | % |
| Entry Level 1 or below | 5 | 3 | 10 | 24 | - | 15 |
| Entry Level 2 | 2 | 2 | 3 | 1 | 1 | 2 |
| Entry Level 3 | 8 | 6 | 17 | 18 | 17 | 26 |
| Level 1 | 28 | 29 | 26 | 28 | 44 | 27 |
| Level 2 or above | 57 | 60 | 43 | 30 | 38 | 30 |
| | | | | | | |
| Entry Level 3 or below | 15 | 11 | 31 | 42 | 18 | 43 |
| Level 1 or above | 85 | 89 | 69 | 58 | 82 | 57 |
| Unweighted | 5824 | 4903 | 130 | 79 | 63 | 108 |

Base: SfL2011 All aged 16-65 with literacy score

The White British and Black (Caribbean) ethnic groups performed to a similar standard, with the Black (Caribbean) ethnic group just as likely to achieve Level 1 or above as the White British ethnic group (though White British respondents had a greater likelihood of achieving a Level 2 or above score). Both of these groups outperformed the other ethnic groups surveyed.

Performance amongst Asian (Indian), Asian (Pakistani) and Black (African) ethnic groups were similar to each other, with all groups equally likely to be classified at Level 1 or above.

This pattern differs to that observed in 2003. In 2003, White British respondents achieved the highest performance in literacy, followed by the Asian (Indian) ethnic group.[66]

Reflecting the findings from SFL2003, the data suggest that the competence in speaking English of the different ethnic groups plays a large role in determining literacy skills. The majority (91 per cent) of the Black (Caribbean) ethnic group spoke English as a first language. However, within the Asian (Indian), Asian (Pakistani) and Black (African) ethnic groups less than half of respondents spoke English as a first language.[67] Therefore, in line with 2003, it could be argued that these three ethnic groups performed relatively well on the literacy assessment. For example, despite only 41 per cent of the Asian (Indian) ethnic group speaking English as a first language, 69 per cent of this group achieved a Level 1 or above score.

Additional analysis supports this. As shown in Table 5.8, when analysis was focused solely on those respondents with EFL, the performance differences between the White British/Black (Caribbean) ethnic group and other ethnic groups largely disappeared (with the exception of Entry Level 3).[68] However, it should be noted that respondents from the combined White British/Black (Caribbean) ethnic group were slightly more likely to achieve a Level 1 or above score (89 per cent) than the combined other ethnic groups (82 per cent).

[66] See Appendix Table 5.A11.

[67] See Appendix Table 5.A12.

[68] Due to small base sizes, analysis of the individual ethnic groups is not possible. Therefore all other ethnic groups have been combined to form an 'Other' category.

**Table 5.8 Literacy Levels by ethnicity amongst respondents with EFL**

| | All | White British and Black (Caribbean) | All other ethnic groups |
|---|---|---|---|
| | % | % | % |
| Entry Level 1 or below | 3 | 3 | 4 |
| Entry Level 2 | 2 | 2 | 1 |
| Entry Level 3 | 7 | 6 | 12 |
| Level 1 | 29 | 29 | 24 |
| Level 2 or above | 60 | 60 | 59 |
| | | | |
| Entry Level 3 or below | 12 | 11 | 18 |
| Level 1 or above | 88 | 89 | 82 |
| Unweighted | 5345 | 4952 | 392 |

Base: SfL2011 All aged 16-65 respondents with EFL and literacy score

Analysis of the numeracy assessment data reveals a slightly different pattern. Table 5.9 displays the numeracy performance of the main ethnic groups.

**Table 5.9 Numeracy Levels by ethnicity**

| | All | White British | Asian (Indian) | Asian (Pakistani) | Black (Caribbean) | Black (African) |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | % |
| Entry Level 1 or below | 7 | 5 | 13 | 17 | 7 | 20 |
| Entry Level 2 | 17 | 16 | 17 | 32 | 44 | 31 |
| Entry Level 3 | 25 | 26 | 31 | 24 | 30 | 22 |
| Level 1 | 29 | 30 | 25 | 14 | 13 | 19 |
| Level 2 or above | 22 | 23 | 14 | 13 | 6 | 5 |
| | | | | | | |
| Entry Level 2 or below | 24 | 21 | 30 | 49 | 51 | 51 |
| Entry Level 3 or above | 76 | 79 | 70 | 51 | 49 | 49 |
| Unweighted | 5823 | 4912 | 132 | 80 | 60 | 104 |

Base: SfL2011 All aged 16-65 with numeracy score

For numeracy (unlike literacy) the White British and Asian (Indian) ethnic groups performed to a similar standard. Although the Asian (Indian) ethnic group was just as likely as the White British ethnic group to achieve Entry Level 3 or above, the latter were more likely to achieve a Level 2 or above score. Both of these groups performed better in the numeracy assessment than other ethnic groups.

Performance between the Asian (Pakistani), Black (Caribbean) and Black (African) ethnic groups was similar, with all groups equally likely to be classified at Entry Level 3 or above.

This pattern differs slightly to that of 2003, where the Asian (Indian) group tended to perform at a higher level than the other non-white ethnic groups, but below the White British ethnic group.[69]

As with literacy, when controlling for language by focusing solely on respondents with EFL, the performance difference between the White British ethnic group and all the other ethnic groups is reduced (Table 5.10).

More specifically, when the Black (Caribbean) group is excluded from the 'all other ethnic' group, the differences in performance largely disappear, with the combined 'all other ethnic' group just as likely to achieve Entry Level 3 or above as the White British ethnic group.

**Table 5.10 Numeracy Levels by ethnicity amongst respondents with EFL**

| | All | White British | All other ethnic groups | All other groups exc. Black (Caribbean) |
|---|---|---|---|---|
| | % | % | % | % |
| Entry Level 1 or below | 5 | 5 | 6 | 6 |
| Entry Level 2 | 16 | 16 | 23 | 21 |
| Entry Level 3 | 26 | 26 | 27 | 27 |
| Level 1 | 30 | 30 | 28 | 29 |
| Level 2 or above | 23 | 23 | 16 | 18 |
| | | | | |
| Entry Level 2 or below | 22 | 21 | 29 | 27 |
| Entry Level 3 or above | 78 | 79 | 71 | 73 |
| Unweighted | 5328 | 4897 | 429 | 371 |

Base: SfL2011 All aged 16-65 with EFL and numeracy score

Although the findings presented above suggest that ethnicity may have limited impact on literacy and numeracy, these findings focused on aggregated ethnic groups. When the more detailed breakdowns of ethnic groups are examined (when analysis is restricted to only those respondents with English as a first language), some differences do remain for some ethnic groups, as displayed in Table 5.11. For example, respondents from Black African backgrounds still tend to achieve lower scores than the average for both literacy and numeracy, as do the respondents from Black Caribbean backgrounds for numeracy.[70] The role of ethnicity is explored further in the regression analysis in Section 6.3.

[69] See Appendix Table 5.A13.

[70] Findings must be treated with caution due to small base sizes. For full breakdowns see Appendix Table 5.A14.

**Table 5.11 Literacy and Numeracy Levels by ethnicity amongst respondent with EFL**

| | All | White British | Asian (Indian) | Asian (Pakistani) | Black (Caribbean) | Black (African) |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | % |
| **LITERACY LEVELS** | | | | | | |
| Entry Level 3 or below | 12 | 11 | 20 | 21 | 20 | 36 |
| Level 1 or above | 88 | 89 | 80 | 79 | 80 | 64 |
| Unweighted | 5345 | 4893 | 55 | 42 | 59 | 45 |
| **NUMERACY LEVELS** | | | | | | |
| Entry Level 2 or below | 22 | 21 | 19 | 35 | 54 | 45 |
| Entry Level 3 or above | 78 | 79 | 81 | 65 | 46 | 55 |
| Unweighted | 5328 | 4897 | 56 | 40 | 58 | 38 |

Base: SfL2011 All aged 16-65 with EFL and literacy score / SfL2011 All aged 16-65 with EFL and numeracy score

Note: small base sizes

### *ICT*

Due to the small base sizes of individual ethnic groups, analysis of ICT performance by ethnicity focuses on comparisons between White respondents[71] and those from BME backgrounds. Performance on each of the four ICT components by ethnicity is shown in Table 5.12. Performance did not vary between White respondents and respondents from BME backgrounds on the word processing and spreadsheet components. However, differences were found within the email component, with White respondents more likely to achieve Level 2 or above. Additionally, for the multiple choice component, White respondents were more likely to achieve Level 2 or above and less likely to achieve Entry Level 3 or below.

**Table 5.12 ICT Levels by ethnicity**

| | WORD PROCESSING | | | EMAIL | | | SPREADSHEET | | | MULTIPLE CHOICE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | White | BME | All | White | BME | All | White | BME | All | White | BME |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 2 or below | 43 | 42 | 51 | 31 | 30 | 36 | 39 | 38 | 46 | 9 | 9 | 15 |
| Entry Level 3 | 16 | 16 | 15 | 9 | 8 | 12 | 27 | 28 | 26 | 12 | 11 | 23 |
| Level 1 | 15 | 15 | 15 | 8 | 8 | 9 | 17 | 17 | 15 | 26 | 26 | 27 |
| Level 2 or above | 25 | 26 | 20 | 52 | 54 | 43 | 17 | 18 | 13 | 53 | 55 | 35 |
| Unweighted | 2253 | 2025 | 228 | 2247 | 2018 | 229 | 2228 | 2003 | 225 | 2274 | 2044 | 230 |

Base: SfL2011 All aged 16-65 with word processing / email / spreadsheet / multiple choice score

Performance differences between White respondents and those from BME backgrounds can be largely attributed to language differences (and whether or not English was the first language).

[71] Either 'White British', 'White Irish' or 'Other White background'.

When analysis between White respondents and those from BME backgrounds is based upon only those respondents with EFL, the differential between the two groups on the email task is no longer apparent, and for the multiple choice element is reduced (Table 5.13).

**Table 5.13 ICT Levels by ethnicity amongst respondents with EFL**

| | WORD PROCESSING | | | EMAIL | | | SPREADSHEET | | | MULTIPLE CHOICE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | White | BME | All | White | BME | All | White | BME | All | White | BME |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 2 or below | 42 | 42 | 41 | 30 | 30 | 28 | 37 | 37 | 38 | 9 | 8 | 12 |
| Entry Level 3 | 17 | 16 | 21 | 9 | 8 | 15 | 28 | 28 | 30 | 11 | 10 | 20 |
| Level 1 | 15 | 15 | 14 | 8 | 8 | 11 | 17 | 17 | 16 | 25 | 25 | 23 |
| Level 2 or above | 26 | 26 | 24 | 53 | 54 | 46 | 18 | 18 | 15 | 55 | 56 | 45 |
| Unweighted | 2081 | 1958 | 123 | 2075 | 1952 | 123 | 2057 | 1937 | 120 | 2099 | 1976 | 123 |

Base: SfL2011 All aged 16-65 with EFL and word processing / email / spreadsheet / multiple choice score

## 5.4 The relationship between skills and geo-demographic characteristics

One of the aims of the Skills for Life 2011 Survey (SfL2011) was to examine skills across geographical areas, to try to identify areas with greater than average skills needs, and to explore which, if any, have experienced changes since SfL2003.

The data can be broken down by a number of different geo-demographic schemata. This section focuses on analysis of the Index of Multiple Deprivation (IMD), Region, urban and rural areas, type of neighbourhood, and housing tenure.

### 5.4.1 The Index of Multiple Deprivation

The English Indices of Multiple Deprivation identify the most deprived areas across the country. For SfL2011, IMD 2010 has been used, which is the most recent edition of the indices (published in March 2011).[72] IMD 2010 uses 38 separate indicators, organised across seven distinct domains:

- income,
- employment,
- health and disability,
- education skills and training,
- barriers to housing and other services,

[72] Available online at: http://www.communities.gov.uk/corporate/researchandstatistics/statistics/subject/indicesdeprivation, accessed on 28/03/12.

- crime and
- living environment.

These are combined using appropriate weights to create an IMD score for each Lower Layer Super Output Area (LSOA) in England. IMD 2010 can therefore be used to rank every LSOA in England according to its relative deprivation.[73] IMD 2010 is a continuous measure of relative deprivation therefore there is no definitive point on the scale below which areas are considered to be deprived and above which they are not. In most cases, it is user defined by applying a cut-off value beyond which areas are deemed to be the most deprived. Many users of IMD 2010 focus on the most deprived 10 per cent (the most deprived decile) of LSOAs in England.[74] IMD scores can be attributed to SfL2011 survey respondents, by examining the LSOA in which each survey respondent lives.

In SfL2003, the IMD 2000 was used. Therefore only limited comparisons between the two surveys have been made, and these must be treated with caution.[75]

In 2011, the IMD score started at 1 (least deprived) and peaked at 84 amongst Lower Layer Super Output Areas sampled in the SfL2011.[76] The mean score was 22, but the median score was 17 with the 75$^{th}$ percentile falling at 31 so the scale had a natural skew towards its lower end. It should be noted that the scale is not strictly proportional. An area with an IMD value of 40 is not necessarily twice as deprived as one with an IMD value of 20. The cumulative IMD scores for SfL2003 and SfL2011 are shown in Figure 5.2.

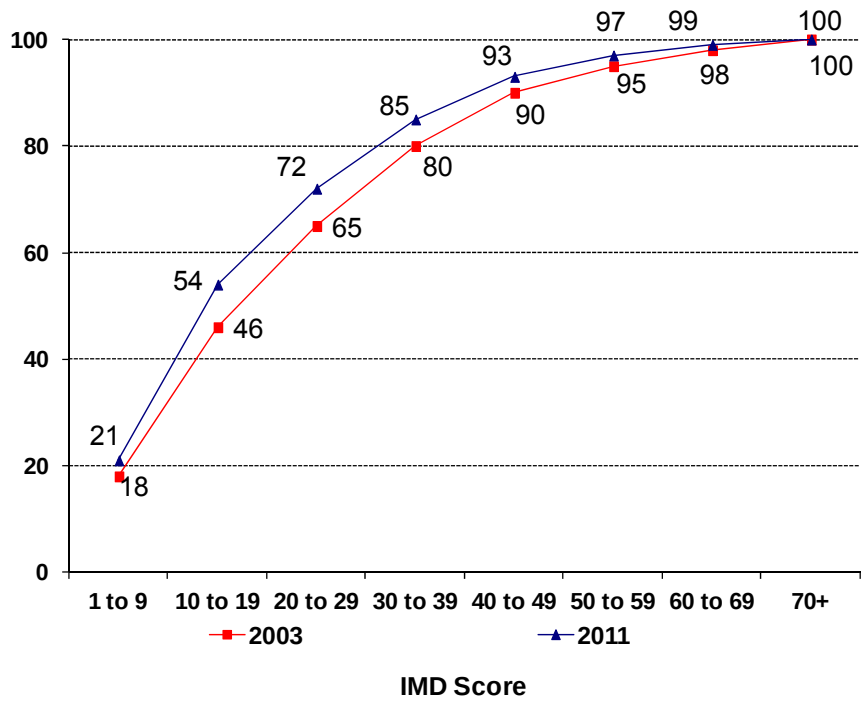
[73] Super Output Areas are a unit of geography used by Neighbourhood Statistics designed for small area statistics. There are two layers: Lower Layer Super Output Areas (LSOAs) and Middle Layer Super Output Areas (MSOAs). LSOAs were built using 2001 Census data from groups of Output Areas. Further details available online at: http://www.neighbourhood.statistics.gov.uk/dissemination/Info.do?page=aboutneighbourhood/geography/geography.htm, accessed on 28/03/12.

[74] Communities and Local Government (2010) The English Indices of Deprivation 2010, available online at: http://www.communities.gov.uk/documents/statistics/pdf/1871208.pdf, accessed on 28/03/12.

[75] IMD 2000 used 8,500 English wards as the basic geographical area of analysis, whilst the IMD 2010 was based on a finer level of detail - 32,482 English Lower Layer Super Output Areas (LSOAs). IMD 2000 was also based on six separate deprivation indices (income, employment, health, education, housing and services access), compared to the seven in IMD 2010 (listed above).

[76] The IMD distribution in the survey sample is a near match for England as a whole. (This was also the case in the 2003 survey.) In the whole of England the maximum score is 87.8

**Figure 5.2 Cumulative IMD values (%)**




Base: SfL2003 All aged 16-65 (8730) / SfL2011 All aged 16-65 (7230)

### *Literacy*

As in 2003, there was a clear relationship between IMD value and performance in the literacy assessment. The lower the IMD value the higher the literacy assessment score. After grouping the IMD values into bands of ten points, four natural band-groupings emerged:

Band A: 1-9 (21 per cent of all respondents)

Band B: 10-19 (33 per cent of all respondents)

Band C: 20-29 (18 per cent of all respondents)

Band D: 30 or more (28 per cent of all respondents)

*Lowest level of deprivation*

↓

*Greatest level of deprivation*

In 2003, four natural band-groupings emerged but these were slightly different, as follows: Band A: 1-9 (in line with 2011), Band B: 10-19 (in line with 2011), Band C: 20-39 (different to 2011) and 40 or more (different to 2011).

In 2011, respondents in Bands A and B more were more likely than average to achieve Level 1 or above in literacy and those in Band D were less likely than average to achieve Level 1 or above. Performance of those in Band C was line with the average. It is therefore respondents from Band D areas that exhibited the greatest levels of literacy needs.

Respondents in Band A had the strongest performance, with 95 per cent of respondents classified at Level 1 or above. Whilst the performance of respondents in Band B was above average, their performance was lower than those in Band A, with 89 per cent achieving a Level 1 or above score.

It is interesting to note that whilst proportions of respondents in each Band achieving Level 1 or above differ, this difference is predominantly driven by differing proportions achieving a Level 2 or above score. As can be seen in Table 5.14 there are only small differences across the Bands in the proportion of respondents achieving Level 1, but there are much larger differences in the proportion achieving Level 2 or above.[77]

**Table 5.14 Literacy Levels by IMD category**

| | All | Band A: 1-9 | Band B: 10-19 | Band C: 20-29 | Band D: 30+ |
|---|---|---|---|---|---|
| | % | % | % | % | % |
| Entry Level 3 or below | 15 | 5 | 11 | 16 | 26 |
| Level 1 | 28 | 24 | 28 | 28 | 33 |
| Level 2 or above | 57 | 71 | 62 | 56 | 41 |
| | | | | | |
| Level 1 or above (combined) | 85 | 95 | 89 | 84 | 74 |
| Unweighted | 5824 | 1235 | 1897 | 1038 | 1654 |

Base: SfL2011 All aged 16-65 with literacy scores

### *Numeracy*

For the numeracy assessment, Band D (IMD value of 30 or more) was broken down into two groups, as there was a notable difference in performance between respondents in areas with an IMD value of 30-39 and those with a value of 40 and above. This created five natural bands:

Band A: 1-9 (21 per cent of all respondents) — *Lowest level of deprivation*

Band B: 10-19 (33 per cent of all respondents)

Band C: 20-29 (18 per cent of all respondents)

Band D1: 30-39 (12 per cent of all respondents)

Band D2: 40 or more (15 per cent of all respondents) — *Greatest level of deprivation*

These bands were in line with those created in SfL 2003.

As with literacy, respondents in Bands A and B tended to score above the average in numeracy, with respondents in both of these Bands more likely than average to achieve an Entry Level 3 or above score (Table 5.15). Respondents in Band A, however, outperformed those in Band B (87 per cent of Band A were classified at Entry Level 3 compared to 81 per cent of Band B).

Respondents in Bands D1 and D2 were less likely than average to achieve Entry Level 3 or above, but the performance of these two groups differed: those in Band D2 were considerably less likely to achieve Entry Level 3 or above than those in Band D1 (59 per cent compared to 68 per cent). Considerable proportions from both groups had numeracy skills needs, but the proportion was largest amongst those from Band D2.

[77] For full breakdowns see Appendix Table 5.A15.

The overall pattern of performance across of the five bands is in line with the pattern that emerged in 2003.[78]

**Table 5.15 Numeracy Levels by IMD category**

| | All | Band A: 1-9 | Band B:10-19 | Band C: 20-29 | Band D1: 30-39 | Band D2: 40+ |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | % |
| Entry Level 1 or below | 7 | 2 | 5 | 7 | 11 | 14 |
| Entry Level 2 | 17 | 10 | 15 | 17 | 22 | 27 |
| Entry Level 3 | 25 | 22 | 23 | 28 | 29 | 31 |
| Level 1 | 29 | 33 | 35 | 28 | 24 | 18 |
| Level 2 or above | 22 | 33 | 23 | 21 | 15 | 10 |
| | | | | | | |
| Entry Level 2 or below | 24 | 13 | 19 | 24 | 32 | 41 |
| Entry Level 3 or above | 76 | 87 | 81 | 76 | 68 | 59 |
| Unweighted | 5823 | 1234 | 1900 | 1042 | 713 | 934 |

Base: SfL2011 All aged 16-65 with numeracy scores

***ICT***

There was a clear relationship between IMD value and ICT assessment performance across the four ICT components. Generally, the lower the IMD value the higher the ICT component score.

Across the three practical components, four natural band-groups emerged. These, however, differed slightly to those for literacy and numeracy:

Band A: 1-9 (21 per cent of all respondents) — *Lowest level of deprivation*

Band B: 10-19 (33 per cent of all respondents)

Band C: 20-49 (39 per cent of all respondents)

Band D: 50 or more (seven per cent of all respondents) — *Greatest level of deprivation*

Across all three practical components the performance of each of the four Bands varied considerably, with performance strongest amongst Band A and weakest in Band D (Table 5.16).

Respondents from Band A were more likely than average to achieve an Entry Level 3 or above score across all three components. Respondents from Bands C and D, were less likely than average to achieve this level across the three components, while respondents from Band C tended to perform in line with average.

[78] See Appendix Table 5.A16.

**Table 5.16 ICT Levels by IMD category**

| | All | Band A: 1-9 | Band B: 10-19 | Band C: 20-49 | Band D: 50+ |
|---|---|---|---|---|---|
| **WORD PROCESSING** | % | % | % | % | % |
| Entry Level 2 or below | 43 | 28 | 41 | 50 | 64 |
| Entry Level 3 or above | 57 | 72 | 59 | 50 | 36 |
| Unweighted | 2253 | 483 | 745 | 849 | 176 |
| **EMAIL** | | | | | |
| Entry Level 2 or below | 31 | 20 | 28 | 36 | 53 |
| Entry Level 3 or above | 69 | 80 | 72 | 64 | 47 |
| Unweighted | 2247 | 481 | 743 | 846 | 177 |
| **SPREADSHEET** | | | | | |
| Entry Level 2 or below | 39 | 28 | 35 | 44 | 62 |
| Entry Level 3 or above | 61 | 72 | 65 | 56 | 38 |
| Unweighted | 2288 | 477 | 734 | 841 | 176 |
| **MULTIPLE CHOICE** | | | | | |
| Entry Level 2 or below | 9 | 5 | 7 | 12 | 20 |
| Entry Level 3 or above | 91 | 95 | 93 | 88 | 80 |
| Unweighted | 2274 | 488 | 752 | 851 | 183 |

Base: SfL2011 All aged 16-65 with word processing scores / email scores / spreadsheet scores / multiple choice scores

Performance on the multiple choice component varied by IMD value however the difference was much less marked, with 95 per cent of respondents from Band A achieving an Entry Level 3 or above score, compared to 81 per cent of those from Band D.[79]

### 5.4.2 The Regions

The sample design ensured that robust sample estimates were available for each of the nine administrative Regions in England: North East, North West, Yorkshire and the Humber, East Midlands, West Midlands, East, London, South East and South West.[80] The full breakdowns for regional skills Levels are shown in Appendix Tables 5.A18 to 5.A25.

#### *Literacy*

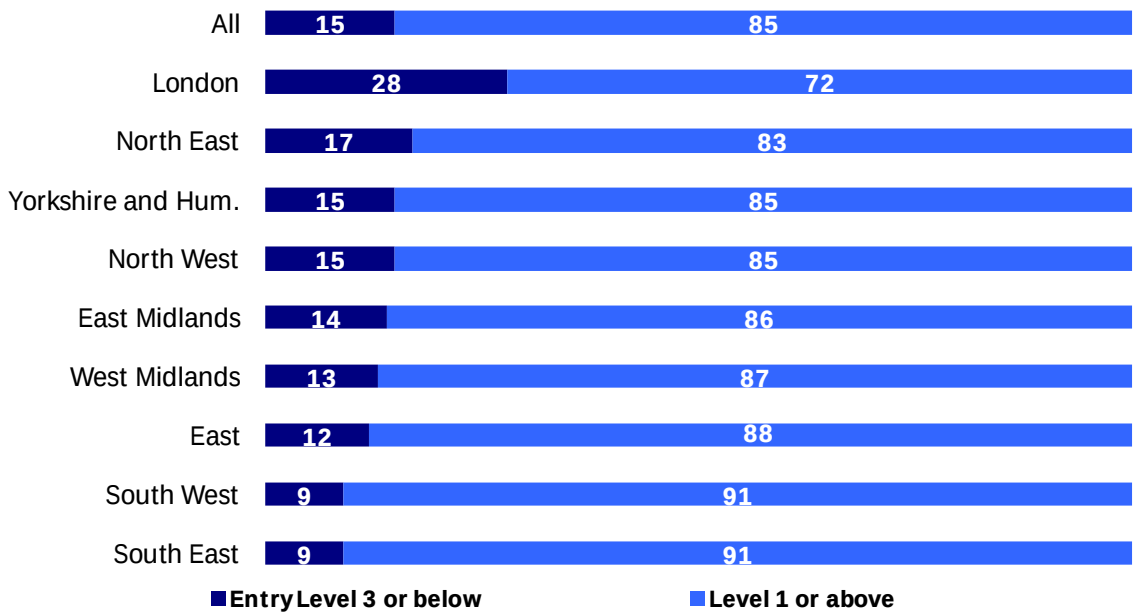
In the South East and South West nine in ten respondents (91 per cent respectively) were classified at Level 1 or above in literacy. By contrast, London had the lowest proportion reaching this Level (72 per cent). However, in London, English was not the first language for a third of the residents surveyed (34 per cent), and therefore its lower performance will be related to this factor. When examining only those respondents with EFL, the performance of London improves (83 per cent). It does, however, still remain lower than the average performance (88 per cent).

[79] For full breakdowns see Appendix Table 5.A17.

[80] Prior to April 2011 these were know as 'Government Office Regions'. Further information available online at: http://www.ons.gov.uk/ons/guide-method/geography/beginner-s-guide/administrative/england/government-office-regions/index.html, accessed on 28/03/12.

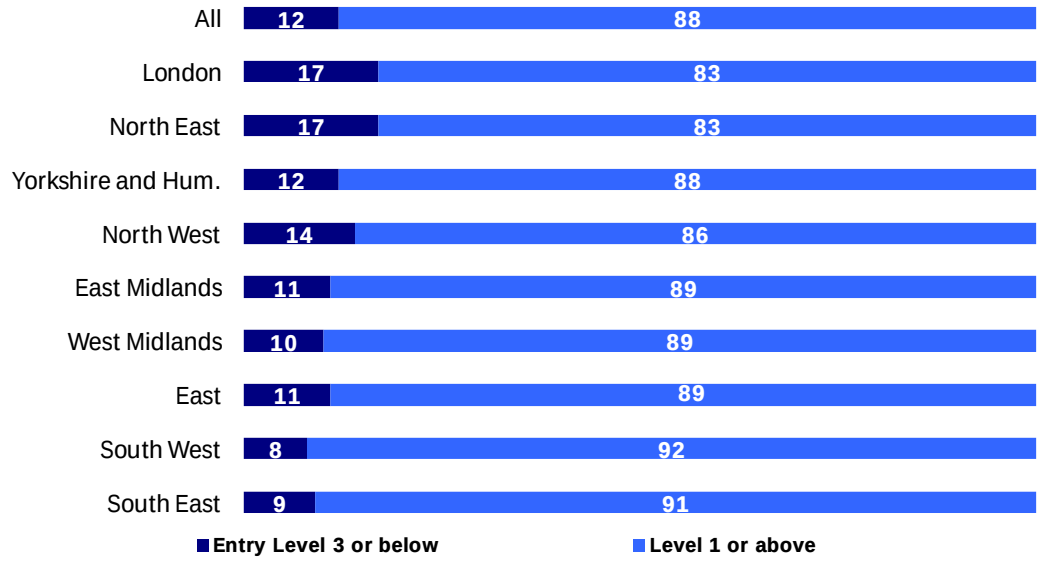
When controlling for first language (by focusing solely on respondents with EFL), London and the North East had the lowest Literacy Levels. This is illustrated in Figures 5.3 and 5.4.[81]

**Figure 5.3 Literacy Levels by Region (%)**




Base: SfL2011 All aged 16-65 with literacy scores (5824)

**Figure 5.4 Literacy Levels by Region amongst respondents with EFL (%)**




Base: SfL2011 All aged 16-65 with EFL and with literacy scores (5345)

[81] For full breakdowns see Appendix Tables 5.A18 and 5.A19.

In order to draw comparisons between 2003 and 2011 literacy performance at the regional level, the comparisons must be based only on native English speakers. This is because there is a relationship between literacy performance and ability to speak English as a first language (see Section 5.3), and the proportion of respondents with ENFL has increased since 2003.In 2011, half of all respondents with ENFL (50 per cent) were living in London.

When focussing analysis solely upon native English speakers, an increase is evident in the proportion of respondents reaching Level 1 or above in the following three Regions: Yorkshire and the Humber (from 83 per cent in 2003 to 88 per cent in 2011), the West Midlands (84 per cent to 89 per cent) and the South East (89 per cent to 91 per cent). There have been no changes in the proportion of respondents reaching Level 1 or above in the other Regions.[82]

Each Region had a different geo-demographic profile, and it has already been shown (in Section 5.4.1) that such profiles can be positively or negatively correlated with performance in the literacy assessment. The IMD value serves as a useful summary variable of these differences. Three quarters (75 per cent) of respondents from the South East lived in areas with an IMD value of between 0-19 (i.e. areas of low deprivation). The corresponding figure for London was 36 per cent and for the North East was 40 per cent (Table 5.17).

**Table 5.17 IMD by Region**

| | All | London | West Midlands | North East | Yorkshire and the Hum. | North West | South West | East Midlands | East | South East |
|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % |
| 1-9 | 21 | 9 | 12 | 15 | 16 | 17 | 24 | 25 | 28 | 39 |
| 10-19 | 33 | 27 | 37 | 25 | 29 | 28 | 44 | 33 | 38 | 36 |
| 20-29 | 18 | 26 | 19 | 17 | 21 | 13 | 18 | 16 | 18 | 12 |
| 30+ | 28 | 38 | 33 | 43 | 33 | 43 | 13 | 26 | 16 | 13 |
| Unweighted | 7230 | 820 | 771 | 457 | 742 | 938 | 750 | 627 | 815 | 1310 |

Base: SfL2011 All aged 16-65

When literacy performance by Region is based upon only those respondents who live in Regions with an IMD value of 10-19 and 20-29 and 30+ (the three IMD bands with substantial numbers in every Region), the differences between the Regions are much less marked. However, London was still found to have a weaker performance than the other Regions. When examining just those respondents with EFL, then the performance of London again improves, As illustrated in Table 5.18, within the three bands London and the North East perform broadly in line with the majority of other Regions within the band (Table 5.18). However this analysis should be treated with caution due to the small base sizes of some of the groups.[83]

[82] For full breakdowns see Appendix Table 5.A19.

[83] For full breakdowns see Appendix Table 5.A20.

**Table 5.18 Literacy Levels by Region of those living in areas within IMD values 10-19/ 20-29/ 30+ with EFL**

| | All | North East | North West | Yorkshire and the Humb. | East Mids | West Mids. | East | London | South East | South West |
|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % |
| **IMD value of 10-19** | | | | | | | | | | |
| Entry Level 3 or below | 9 | 12 | 8 | 9 | 15 | 6 | 10 | 13 | 7 | 5 |
| Level 1 or above | 91 | 88 | 92 | 91 | 85 | 94 | 90 | 87 | 93 | 95 |
| Unweighted | 1788 | 94 | 203 | 166 | 150 | 198 | 241 | 134 | 349 | 253 |
| **IMD value of 20-29** | | | | | | | | | | |
| Entry Level 3 or below | 13 | 20 | 14 | 15 | 12 | 10 | 14 | 12 | 12 | 11 |
| Level 1 or above | 87 | 80 | 86 | 85 | 88 | 90 | 86 | 88 | 88 | 89 |
| Unweighted | 943 | 52 | 106 | 122 | 84 | 107 | 103 | 128 | 129 | 112 |
| **IMD value of 30+** | | | | | | | | | | |
| Entry Level 3 or below | 21 | 25 | 20 | 17 | 18 | 19 | 21 | 29 | 20 | 23 |
| Level 1 or above | 79 | 75 | 80 | 83 | 82 | 81 | 79 | 71 | 80 | 77 |
| Unweighted | 1440 | 158 | 309 | 184 | 124 | 189 | 91 | 158 | 142 | 85 |

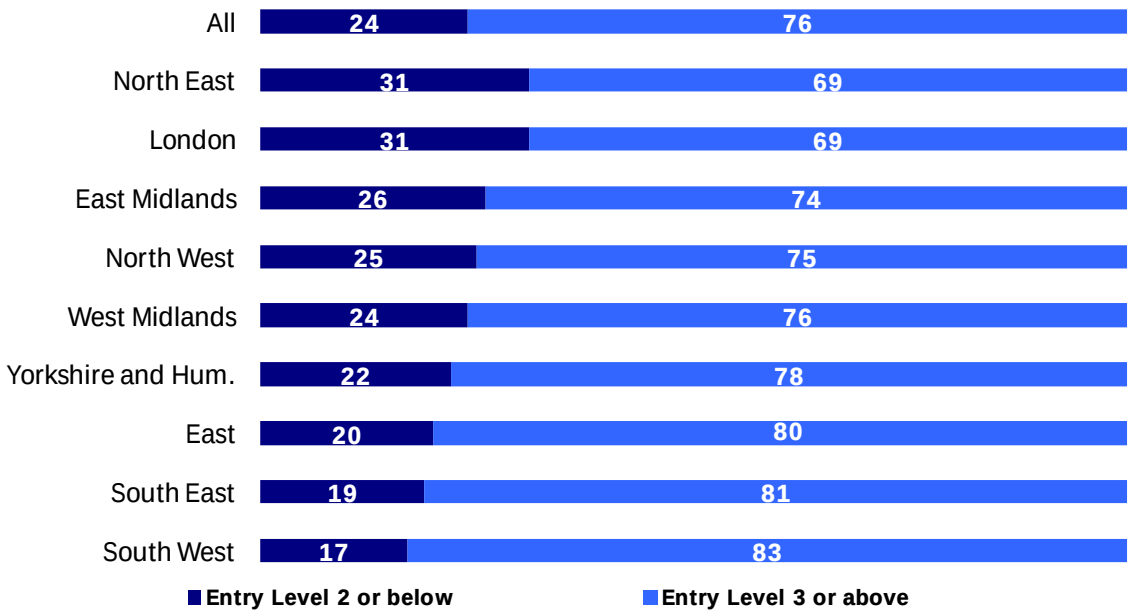
Base: SfL2011 All aged 16-65 with EFL in areas with IMD values 10-19, 20-29 and 30+ with literacy scores

These findings suggest that the literacy performance differences between the Regions can be explained largely by other factors that vary geographically, such as IMD values and English as a first language.

### *Numeracy*

The regional pattern for the numeracy assessment closely reflects the pattern for literacy. The South West, South East and East Regions had the highest proportions of respondents performing at Entry Level 3 or above. London and the North East had the lowest proportion reaching this standard (Figure 5.5).

**Figure 5.5 Numeracy Levels by Region (%)**

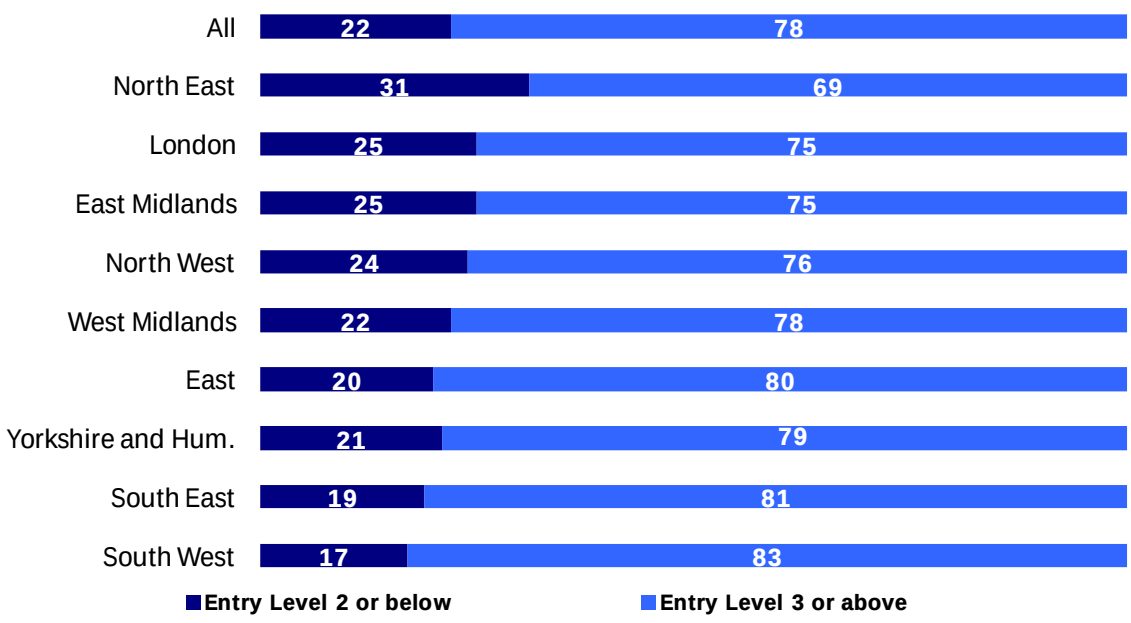



Base: SfL2011 All aged 16-65 with numeracy scores (5823)

However, when examining only respondents with EFL, the performance of respondents from London improves (75 per cent), coming into line with the average performance across the country (Figure 5.6). As in 2003, the North East Region had the weakest performance, with 69 per cent of respondents with EFL reaching Level 3 or above.[84]

[84] For full breakdowns see Appendix Tables 5.A21 and 5.A22.

**Figure 5.6 Numeracy Levels by Region amongst respondents with EFL (%)**




Base:SfL2011 All aged 16-65 with EFL with numeracy scores (5328)

In comparison to 2003, when focusing solely on native English speakers, London was the only Region to see a significant decline in Numeracy Levels, from 81 per cent reaching Entry Level 3 or above in 2003, falling to 75 per cent in 2011.[85]

When examining regional numeracy performance within IMD bands (based on native English speakers only), generally the regional differences diminish. However a few sizable differences remain, which was not the case with literacy. For example within areas with an IMD value of 20-29, the performance of respondents in the North East is still significantly lower than the other Regions (Table 5.19).[86]

[85] See Appendix Table 5.A22.

[86] For full breakdown see Appendix Table 5.A23.

**Table 5.19 Numeracy Levels by Region of those living in areas within IMD bands 10-19 / 20-29 / 30+ with EFL**

| | All | North East | North West | Yorkshire and the Humb. | East Mids. | West Mids. | East | London | South East | South West |
|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % |
| **IMD value of 10-19** | | | | | | | | | | |
| Entry Level 2 or below | 18 | 25 | 16 | 13 | 27 | 15 | 19 | 19 | 19 | 13 |
| Entry Level 3 or above | 83 | 75 | 84 | 87 | 72 | 85 | 81 | 81 | 81 | 87 |
| Unweighted | 1786 | 98 | 196 | 167 | 154 | 208 | 243 | 118 | 350 | 252 |
| **IMD value of 20-29** | | | | | | | | | | |
| Entry Level 2 or below | 23 | 42 | 16 | 19 | 28 | 14 | 17 | 25 | 29 | 23 |
| Entry Level 3 or above | 77 | 58 | 84 | 81 | 72 | 86 | 83 | 75 | 71 | 77 |
| Unweighted | 941 | 57 | 96 | 122 | 84 | 104 | 105 | 127 | 133 | 113 |
| **IMD value of 30+** | | | | | | | | | | |
| Entry Level 2 or below | 36 | 39 | 36 | 35 | 36 | 39 | 40 | 33 | 31 | 34 |
| Entry Level 3 or above | 64 | 61 | 64 | 65 | 64 | 61 | 60 | 67 | 69 | 66 |
| Unweighted | 1430 | 160 | 310 | 183 | 124 | 189 | 90 | 155 | 141 | 78 |

Base: SfL2011 All aged 16-65 with EFL in areas with IMD 10-19, 20-29 and 30+ with numeracy scores

### *ICT*

Some differences in ICT performance between the Regions were also evident (Table 5.20). ICT performance across all four components was lowest in the North East, whereas the East, the South East and the South West had strongest performance across all four ICT components.[87]

Some of these regional differences may be 'explained' by other factors. Language played a large role in the regional variation found in literacy and numeracy skills, and it also appears to be playing a role here. As with literacy and numeracy this was most notable in London. When focusing analysis solely on respondents with EFL, the performance of London residents improves in each of the four ICT components.

[87] For full breakdown see Appendix Table 5.A24.

**Table 5.20 ICT Levels by Region**

| | All | North East | North West | Yorkshire and the Humb. | East Mids. | West Mids. | East | London | South East | South West |
|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % |
| **WORD PROCESSING** | | | | | | | | | | |
| Entry Level 2 or below | 43 | 52 | 50 | 46 | 47 | 47 | 36 | 47 | 35 | 36 |
| Entry Level 3 or above | 57 | 50 | 54 | 54 | 53 | 53 | 64 | 53 | 65 | 64 |
| Unweighted | 2253 | 140 | 281 | 229 | 203 | 255 | 258 | 236 | 414 | 237 |
| **EMAIL** | | | | | | | | | | |
| Entry Level 2 or below | 31 | 41 | 38 | 32 | 33 | 36 | 24 | 39 | 22 | 23 |
| Entry Level 3 or above | 69 | 59 | 62 | 68 | 67 | 64 | 76 | 62 | 78 | 77 |
| Unweighted | 2247 | 138 | 280 | 229 | 201 | 254 | 261 | 237 | 410 | 237 |
| **SPREADSHEET** | | | | | | | | | | |
| Entry Level 2 or below | 39 | 46 | 46 | 42 | 40 | 45 | 32 | 43 | 29 | 32 |
| Entry Level 3 or above | 61 | 54 | 54 | 58 | 60 | 55 | 68 | 57 | 71 | 68 |
| Unweighted | 2228 | 137 | 278 | 228 | 201 | 254 | 259 | 232 | 403 | 236 |
| **MULTIPLE CHOICE** | | | | | | | | | | |
| Entry Level 2 or below | 9 | 18 | 11 | 12 | 11 | 11 | 4 | 12 | 5 | 7 |
| Entry Level 3 or above | 91 | 82 | 89 | 88 | 89 | 89 | 96 | 88 | 95 | 93 |
| Unweighted | 2274 | 142 | 287 | 232 | 204 | 254 | 262 | 237 | 418 | 238 |

Base: SfL2011 All aged 16-65 with word processing scores / email scores / spreadsheet scores / multiple choice scores

The frequency of using a computer also appears to play a role. When examining 'frequent' computers users, that is respondents who use a computer at home or at work either daily or at least two to four times a week, some variation by Region is apparent, with residents of the North East significantly less likely to be 'frequent' computer users than respondents from all other Regions. When comparing regional performance of just those respondents who are frequent ICT users, the performance of North Eastern residents improves on all four ICT components. The East, the South East and the South West had the highest proportions of 'frequent' computer users and these three Regions tended to have the strongest performance across the ICT assessment. Table 5.21 illustrates the performance of respondents with EFL who are 'frequent' computer users.[88]

[88] For full breakdown see Appendix Table 5.A25.

**Table 5.21 ICT Levels by Region amongst respondents with EFL who are 'frequent' computer**

| | All | North East | North West | Yorkshire and the Humb. | East Mids. | West Mids. | East | London | South East | South West |
|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % |
| **WORD PROCESSING** | | | | | | | | | | |
| Entry Level 2 or below | 33 | 38 | 37 | 34 | 35 | 38 | 29 | 35 | 28 | 29 |
| Entry Level 3 or above | 67 | 62 | 63 | 66 | 65 | 62 | 71 | 65 | 72 | 71 |
| Unweighted | 1678 | 88 | 202 | 174 | 150 | 184 | 222 | 134 | 330 | 194 |
| **EMAIL** | | | | | | | | | | |
| Entry Level 2 or below | 20 | 23 | 24 | 19 | 21 | 24 | 18 | 25 | 15 | 15 |
| Entry Level 3 or above | 80 | 77 | 76 | 81 | 79 | 76 | 82 | 75 | 85 | 85 |
| Unweighted | 1676 | 86 | 201 | 175 | 148 | 184 | 224 | 136 | 328 | 194 |
| **SPREADSHEET** | | | | | | | | | | |
| Entry Level 2 or below | 28 | 31 | 32 | 30 | 26 | 35 | 25 | 30 | 22 | 26 |
| Entry Level 3 or above | 72 | 69 | 68 | 870 | 74 | 65 | 75 | 70 | 78 | 74 |
| Unweighted | 1658 | 86 | 199 | 172 | 148 | 184 | 222 | 133 | 321 | 193 |
| **MULTIPLE CHOICE** | | | | | | | | | | |
| Entry Level 2 or below | 1 | 2 | 3 | - | * | 2 | - | 4 | * | 1 |
| Entry Level 3 or above | 98 | 98 | 97 | 100 | 100 | 98 | 100 | 96 | 100 | 99 |
| Unweighted | 1695 | 89 | 207 | 177 | 151 | 183 | 224 | 136 | 334 | 194 |

Base: SfL2011 All aged 16-65 with EFL who are frequent computer users with multiple choice scores / word processing scores / email scores / spreadsheet scores

### 5.4.3 Urban and rural areas

The urban/rural definition is an official National Statistic introduced in 2004, and defines rurality over very small census based geographies.[89] Census output areas forming settlements with populations over 10,000 are urban, while the remainder are rural. This definition was introduced following the SfL2003; therefore comparisons on this measurement cannot be made.[90]

Just over eight in ten respondents (83 per cent) lived in urban areas and 17 per cent in rural areas. Younger respondents were more likely to live in urban areas than older respondents (85 per cent of respondents aged under 35 lived in urban areas compared to 76 per cent aged over 55).[91]

[89] Further information is available online at: http://www.ons.gov.uk/ons/guide-method/geography/products/area-classifications/rural-urban-definition-and-la/rural-urban-definition--england-and-wales-/index.html, accessed on 28/03/12.

[90] In SfL2003, some analysis of urban and rural areas was conducted based on the Countryside Agency's classification system of Local Authority Districts in England as 'Urban' and 'Rural', based on a range of socio-economic characteristics of the population at local authority level. In contrast, the urban/rural National Statistic introduced in 2004 follows a settlement based approach at the Census Output Area level.

[91] See Appendix Table 5.A26.

Respondents in rural areas were more likely to achieve a Level 1 or above score in literacy and an Entry Level 3 or above score in numeracy. This will in part be due to the fact that the vast majority of respondents with ENFL live in urban areas (98 per cent of respondents with ENFL live in urban areas, with only two per cent in rural areas).[92] When only native English speakers are included in the analysis, the performance differences between those in urban and rural areas diminish, however a difference still remains. This is illustrated in Table 5.22.[93]

**Table 5.22 Literacy and Numeracy Levels by type of area (urban/rural) amongst all respondents and those with EFL**

| | ALL | | | EFL | | |
|---|---|---|---|---|---|---|
| | All | Urban | Rural | All | Urban | Rural |
| | % | % | % | % | % | % |
| **LITERACY LEVELS** | | | | | | |
| Entry Level 3 or below | 15 | 16 | 8 | 12 | 13 | 8 |
| Level 1 or above | 85 | 84 | 92 | 88 | 87 | 92 |
| Unweighted | 5824 | 4780 | 1044 | 5345 | 4318 | 1027 |
| **NUMERACY LEVELS** | | | | | | |
| Entry Level 2 or below | 24 | 25 | 16 | 22 | 24 | 15 |
| Entry Level 3 or above | 76 | 75 | 84 | 78 | 76 | 85 |
| Unweighted | 5823 | 4762 | 1061 | 5328 | 4288 | 1040 |

Base 1 : SfL2011 All aged 16-65 with literacy score / SfL2011 All aged 16-65 with EFL and literacy score

Base 2 : SfL2011 All aged 16-65 with numeracy score / SfL2011 All aged 16-65 with EFL and numeracy score

Performance on the three practical skill components of the ICT assessment varied by rurality, with those living in rural areas tending to outperform those in urban areas (Figure 5.7).[94] No difference was evident on the multiple choice component. As with literacy and numeracy, English as a first language seems to impact on ICT skills. When controlling for first language (by restricting analysis to only respondents with EFL) the performance differences decrease, although they do not disappear entirely.[95]

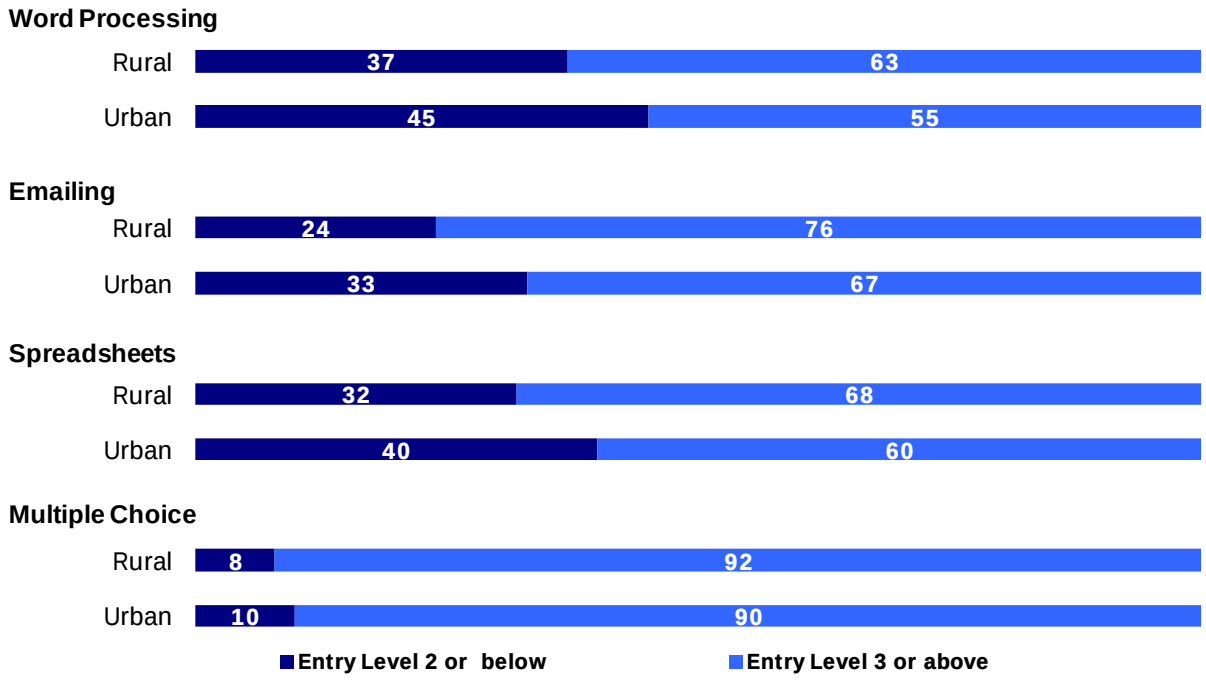
[92] See Appendix Table 5.A27.

[93] For full breakdowns see Appendix Tables 5.A28 and 5.A29.

[94] For full breakdowns see Appendix Table 5.A30.

[95] See Appendix Table 5.A31.

**Figure 5.7 ICT Levels by type of area (urban/rural) (%)**




Base: SfL2011 All aged 16-65 with word processing scores / email scores / spreadsheet scores

As examined in Section 5.4.2 frequency of computer use plays a role in explaining the ICT variance between Regions. However, it does not appear to be playing a role here, as frequency of computer use does not vary between urban and rural areas.[96]

### 5.4.4 Type of neighbourhood

The Output Area Classification (OAC) is a geo-demographic tool developed by the Office of National Statistics (ONS), and offers socio-demographic data for local areas. OAC is constructed from Output Areas (OA) by creating a hierarchy of clusters, which together typify the characteristics of a particular area. There are three layers that make up the hierarchy: Supergroups, Groups and Subgroups.[97]

Analysis in this section focuses on comparisons of skills between the seven Supergroups. Comparisons will not be made to 2003, as the OAC classification was released after SfL2003, in July 2005.

[96] See Appendix Table 5.A32.

[97] Vickers, D. and P. Rees (2006) *Methodology Used for Producing ONS's Small Area Population Estimates.* The Office for National Statistics, Population Trends 125 (Autumn 2006), available online at: http://www.ons.gov.uk/ons/rel/population-trends-rd/population-trends/no--125--autumn-2006/population-trends-pt3.pdf, accessed on 28/03/12.

Supergroups have a unique combination of characteristics captured by the census, and these create distinct differences between the Supergroups. The characteristics of each of the Supergroups is shown in Table 5.23.[98]

**Table 5.23 Characteristics of Supergroups**

| VARIABLES WITH PROPORTIONS ABOVE THE UK AVERAGE | VARIABLES WITH PROPORTIONS BELOW THE UK AVERAGE |
|---|---|
| **Supergroup 1 – 'Blue Collar Communities'** *(Found across all of the UK with high concentrations in the North East, South Wales, and cities around Scotland and the Midlands)* | |
| Terrace Housing | Higher Education Qualifications |
| Public Renting | Flats |
| **Supergroup 2 – 'City Living'** *(High concentrations in city areas especially London)* | |
| Single person households (not pensioner) | Detached housing |
| Private rents | Households with non-dependent children aged 5-14 |
| Flats | |
| Higher Education qualifications | |
| People born outside the UK | |
| **Supergroup 3 'Countryside'** *(Found across the UK, especially in more rural areas)* | |
| Detached housing | Public transport to work |
| Home workers | Population density |
| People working in agriculture | Flats |
| Two or more car households | |
| **Supergroup 4 'Prospering Suburbs'** *(The most common area type in the UK)* | |
| Detached housing | Public renting |
| Two or more car households | Private renting |
| | Terraced housing |
| | Flats |
| | No central heating |
| **Supergroup 5 'Constrained by circumstances'** *(Found around cities)* | |
| Public renting | Detached housing |
| Flats | Tow or more car households |
| | Higher education qualifications |
| **Supergroup 6 'Typical Traits'** *(Found throughout the UK)* | |
| Terrace housing | Public renting |
| **Supergroup 7 'Multicultural'** *(Found in concentrations around major cities such as London and Birmingham)* | |
| Minority ethnic population | Detached housing |
| People born abroad | |
| Flats | |
| Public renting | |
| Private renting | |
| Use of public transport to work | |

The distribution of the Supergroups for SfL2011 respondents is shown in Table 5.24. The highest proportions of respondents were found in 'Prospering Suburbs' (Supergroups 4) and 'Typical Traits' (Supergroup 6) (22 per cent and 23 per cent respectively), and the lowest in 'City Living' (Supergroup 2) (five per cent). This is broadly in line with the national average for the UK.

[98] The proportions listed refer to the UK average and not the English Average. See: Williams, S. and A. Botterill (2006) *Profiling Areas Using the Output Area Classification.* Office for National Statistics, Regional Trends 39.

| Table 5.24 Supergroup distribution | | |
|---|---|---|
| | | All<br>% |
| Supergroup 1 | 'Blue Collar Communities' | 16 |
| Supergroup 2 | 'City Living' | 5 |
| Supergroup 3 | 'Countryside' | 10 |
| Supergroup 4 | 'Prospering Suburbs' | 22 |
| Supergroup 5 | 'Constrained by circumstances' | 8 |
| Supergroup 6 | 'Typical Traits' | 23 |
| Supergroup 7 | 'Multicultural' | 15 |
| Unweighted | | 7230 |
| Base: SfL2011 All aged 16-65 | | |

### *Literacy and Numeracy*

There was found to be a relationship between the Supergroups and literacy and numeracy performance (Table 5.25).[99]

| Table 5.25 Literacy and Numeracy Levels by Supergroups | All<br>% | SG 1<br>% | SG 2<br>% | SG 3<br>% | SG 4<br>% | SG 5<br>% | SG 6<br>% | SG 7<br>% |
|---|---|---|---|---|---|---|---|---|
| **LITERACY** | | | | | | | | |
| Entry Level 3 or below | 15 | 19 | 11 | 8 | 6 | 21 | 10 | 34 |
| Level 1 or above | 85 | 81 | 89 | 92 | 94 | 79 | 90 | 66 |
| Unweighted | 5824 | 973 | 282 | 631 | 1205 | 584 | 1433 | 716 |
| **NUMERACY** | | | | | | | | |
| Entry Level 2 or below | 24 | 30 | 20 | 14 | 14 | 39 | 20 | 36 |
| Entry Level 3 or above | 76 | 70 | 80 | 86 | 86 | 61 | 80 | 64 |
| Unweighted | 5823 | 969 | 282 | 621 | 1221 | 606 | 1408 | 716 |
| Base: SfL2011 All aged 16-65 with literacy scores /SfL2011 All aged 16-65 with numeracy scores | | | | | | | | |

The link between Supergroups and literacy and numeracy performance appears to be largely explained by the prevalence of certain characteristics within each of the Supergroups. For literacy, 'Multicultural' (Supergroup 7) had the weakest performance: this had the lowest proportion of respondents achieving Level 1 or above (66 per cent), substantially lower than the

[99] For full breakdowns see Appendix Tables 5.A33 and 5.A34.

national average (85 per cent). This is not unexpected; areas in this group tend to be multi-cultural, with higher proportions than the UK average of minority ethnic populations and those born abroad. As identified earlier, these characteristics are strongly associated with native English speaking, and respondents with ENFL tended to perform relatively poorly in literacy. This group also has a higher than average proportion of people in rental accommodation rented from public landlords, which as explored further in Section 5.4.5, is associated with lower literacy performance.

For numeracy, performance was weakest in 'Constrained by circumstances' (Supergroup 5) and 'Multicultural' (Supergroup 7), with the lowest proportion of respondents achieving Entry Level 3 or above (61 per cent and 64 per cent respectively). Supergroup 5 had a higher than average proportion of respondents in rental accommodation rented from public landlords, and a lower proportion of those with Higher Education (HE) qualifications. Both of these factors are explored later in the report in Sections 5.4.5 and 7.4 and are linked to numeracy performance.

Respondents from 'City Living' (Supergroup 2), 'Countryside' (Supergroup 3), 'Prospering Suburbs' (Supergroup 4) and 'Typical Traits' (Supergroup 6) were more likely than average to be classified at Level 1 or above on the literacy assessment, and at Entry Level 3 or above on the numeracy assessment. These groups all had a higher proportion of some variables in relation to the UK average which were positively associated with literacy and numeracy performance, such as HE qualifications.

### *ICT*

In line with literacy and numeracy assessment performance, performance across the four ICT components varied by Supergroup area.

Across the three practical components, performance tended to be weakest in 'Constrained by circumstances' (Supergroup 5), with the lowest proportion of respondents performing at Entry Level 3 or above. Again this will be linked to the characteristics found in this group, such as a higher than average proportion of respondents in rental accommodation rented from public landlords, and a lower than average proportion with HE qualifications. Respondents from 'City Living' (Supergroup 2) and 'Prospering Suburbs' (Supergroup 4) had strong performance; with the highest proportions of respondents achieving Entry Level 3 or above across the three practical components (Table 5.26). Again both of these groups had characteristics associated with strong ICT performance.[100]

Frequency of using a computer (as reported during SfL2011) varied by Supergroup. Respondents in 'Constrained by circumstances' (Supergroup 5) had the lowest proportion of 'frequent' computer users[101] (68 per cent), whereas 'City Living' (Supergroup 2) and 'Prospering Suburbs' (Supergroup 4) had the highest proportions (90 per cent and 89 per cent respectively) and therefore this is likely in part to explain the lower performance of this group.[102]

[100] For full breakdowns see Appendix Table 5.A35.

[101] 'Frequent' computer users are respondents who use a computer at home or at work either daily or at least two to four times a week.

[102] See Appendix Table 5.A36.

**Table 5.26 ICT Levels by Supergroups**

| | All | SG 1 | SG 2 | SG 3 | SG 4 | SG 5 | SG 6 | SG 7 |
|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % |
| **WORD PROCESSING** | | | | | | | | |
| Entry Level 2 or below | 43 | 53 | 31 | 39 | 30 | 61 | 44 | 46 |
| Entry Level 3 or above | 57 | 47 | 69 | 61 | 70 | 39 | 56 | 54 |
| Unweighted | 2253 | 370 | 93 | 259 | 461 | 236 | 593 | 241 |
| **EMAIL** | | | | | | | | |
| Entry Level 2 or below | 31 | 37 | 18 | 24 | 24 | 47 | 30 | 38 |
| Entry Level 3 or above | 69 | 63 | 83 | 76 | 76 | 53 | 70 | 62 |
| Unweighted | 2247 | 371 | 94 | 257 | 457 | 236 | 590 | 242 |
| **SPREADSHEET** | | | | | | | | |
| Entry Level 2 or below | 39 | 47 | 27 | 35 | 27 | 55 | 40 | 42 |
| Entry Level 3 or above | 61 | 53 | 73 | 65 | 73 | 45 | 60 | 58 |
| Unweighted | 2228 | 368 | 91 | 255 | 455 | 236 | 586 | 237 |
| **MULTIPLE CHOICE** | | | | | | | | |
| Entry Level 2 or below | 9 | 12 | 5 | 8 | 5 | 18 | 6 | 15 |
| Entry Level 3 or above | 91 | 88 | 95 | 92 | 95 | 82 | 94 | 85 |
| Unweighted | 2274 | 371 | 95 | 262 | 467 | 238 | 597 | 244 |

Base: SfL2011 All aged 16-65 with word processing scores / email scores / spreadsheet scores / multiple choice scores

### 5.4.5 Housing tenure

Six in ten respondents (58 per cent) were owner-occupiers or in the process of buying their home with a mortgage, and a third of respondents (32 per cent) rented their home. This is a change from 2003, where 69 per cent of respondents were owner-occupiers, with a quarter (25 per cent) in rental accommodation. In line with 2003, the likelihood of living in an owner-occupied home increases with age, with 36 per cent of 16-19 year living in such a home increasing to 77 per cent of 55-65 year-olds.[103]

Forty two per cent of respondents in rental accommodation rented their home from a private landlord, and a further quarter (25 per cent) from a local authority/council. Other landlords included housing associations/charity trusts (16 per cent) and relatives or friends (13 per cent). This is a change from 2003 where 37 per cent of respondents in rental accommodation rented their home from the local authority/council and only 29 per cent from private landlords.[104]

Nine in ten (91 per cent) respondents who lived in owner-occupied homes[105] achieved Level 1 or above in literacy, and 83 per cent achieved Entry Level 3 or above in numeracy. Performance of tenants was mixed. Those renting from the local authority tended to achieve much lower scores

[103] See Appendix Tables 5.A37 and 5.A38.

[104] See Appendix Table 5.A39.

[105] Including those buying a home with a mortgage.

on both the literacy and numeracy assessments (64 per cent achieved Level 1 or above on literacy, and 53 per cent achieved Entry Level 3 or above in numeracy). Those renting from private landlords tended to perform at a higher standard on both assessments than those renting from the local authority, but still at a lower level than owner-occupiers. This trend was also evident in 2003 (Table 5.27).

Compared to 2003, there has been a small increase in the proportion of owner-occupiers achieving Level 1 or above in literacy (from 88 per cent in 2003 to 91 per cent in 2011). There has been no change to their numeracy performance. Amongst tenants, the numeracy performance of tenants renting from a private landlord decreased substantially from 80 per cent in 2003 to 71 per cent in 2011. Their performance on the literacy assessment remained unchanged.[106]

**Table 5.27 Literacy and Numeracy Levels by housing tenure in 2003 and 2011**

| | 2003 | | | | | 2011 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All | Owner-occupiers | All tenants | Renting from private landlord | Renting from local authority | All | Owner-occupiers | All tenants | Renting from private landlord | Renting from local authority |
| | % | % | % | % | % | % | % | % | % | % |
| **LITERACY** | | | | | | | | | | |
| Entry Level 3 or below | 16 | 12 | 26 | 18 | 36 | 15 | 9 | 24 | 20 | 36 |
| Level 1 or above | 84 | 88 | 74 | 82 | 64 | 85 | 91 | 76 | 80 | 64 |
| Unweighted | 7874 | 5358 | 2371 | 649 | 1011 | 5824 | 3449 | 2135 | 888 | 592 |
| **NUMERACY** | | | | | | | | | | |
| Entry Level 2 or below | 21 | 17 | 32 | 20 | 43 | 24 | 17 | 35 | 29 | 47 |
| Entry Level 3 or above | 79 | 83 | 68 | 80 | 57 | 76 | 83 | 65 | 71 | 53 |
| Unweighted | 8040 | 5427 | 2461 | 666 | 1058 | 5823 | 3446 | 2131 | 878 | 592 |

Base: SfL2011 All aged 16-65 with literacy scores / SfL2011 All aged 16-65 with numeracy scores

Performance on the ICT components varied by tenure in a very similar pattern to that evident for literacy and numeracy. The performance of owner occupiers tended to be stronger than the performance across the combined tenant group. However, performance once again varied amongst tenants, with those renting from a private landlord tending to achieve higher scores. This is illustrated in Table 5.28.[107] The performance of those renting from a private landlord was in line with that of respondents' living in occupier-owned homes. This is likely to be linked to the high proportion of younger respondents living in privately rented homes (28 per cent of those aged under 35 compared to eight per cent aged 35-65).

[106] For full breakdowns see Appendix Tables 5.A40 and 5.A41.

[107] For full breakdowns see Appendix Table 5.A42.

**Table 5.28 ICT Levels by housing tenure**

| | All | Owner-occupiers | All tenants | Renting from private landlord | Renting from local authority |
|---|---|---|---|---|---|
| | % | % | % | % | % |
| **WORD PROCESSING** | | | | | |
| Entry Level 2 or below | 43 | 41 | 47 | 34 | 70 |
| Entry Level 3 or above | 57 | 59 | 53 | 66 | 30 |
| Unweighted | 2253 | 1328 | 843 | 340 | 236 |
| **EMAIL** | | | | | |
| Entry Level 2 or below | 31 | 29 | 36 | 27 | 50 |
| Entry Level 3 or above | 69 | 71 | 64 | 73 | 50 |
| Unweighted | 2247 | 1323 | 842 | 341 | 235 |
| **SPREADSHEET** | | | | | |
| Entry Level 2 or below | 39 | 37 | 42 | 34 | 59 |
| Entry Level 3 or above | 61 | 63 | 58 | 66 | 41 |
| Unweighted | 2228 | 1314 | 834 | 337 | 235 |
| **MULTIPLE CHOICE** | | | | | |
| Entry Level 2 or below | 9 | 7 | 12 | 6 | 21 |
| Entry Level 3 or above | 91 | 93 | 88 | 94 | 79 |
| Unweighted | 2274 | 1342 | 848 | 341 | 236 |

Base: SfL2011 All aged 16-65 with word processing / email / spreadsheet / multiple choice scores

Home ownership is associated with stability and regular sources of income. In line with 2003, young people yet to settle down, single parents and those in lower paid jobs were disproportionately represented among the renters. With the general exception of young people per se, these other groups tended to perform less well on the assessments, and therefore there is likely to be a degree of inter-collinearity between these variables and assessment performance.

## 5.5 The relationship between skills and personal demographic characteristics

The previous section examined abilities in the context of geographical characteristics, but this section focuses on the individual characteristics of respondents, specifically: age, gender, social classifications and health. Education and employment variables are discussed fully in Chapters 7 and 8 respectively but are touched upon here as well.

### 5.5.1 Age

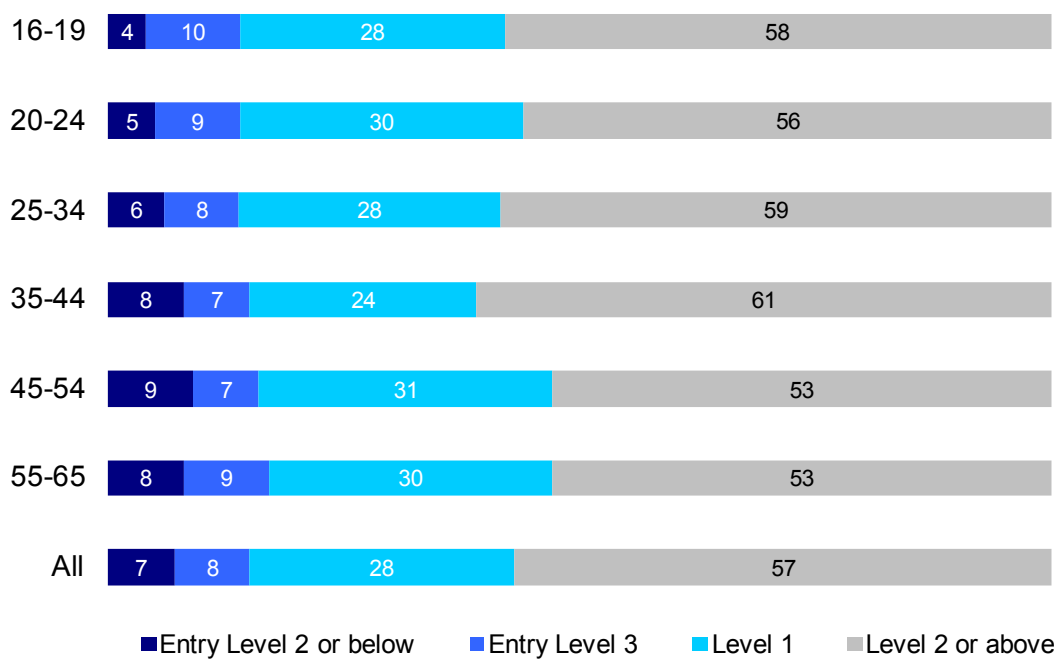
At a top-line level, age was not a strong performance discriminator in either the literacy or the numeracy assessment, and there was little variation between the age groups. This reflects the findings from SfL2003.

Whilst this section examines between-cohort differences (comparing the same age group in across the two surveys e.g. those aged 16-19 in 2003 with those aged 16-19 in 2011), the generational analysis in Chapter 6 examines age in further detail by looking at passage of time differences (comparing the same generation between SfL2011 and SfL2003 e.g. those aged 16-19 in 2003 with those aged 24-27 in 2011).

***Literacy***

There was no variation in the proportion of each age group classified at Level 1 or above in literacy. Figure 5.8 illustrates the distribution of Literacy Levels by age. Very few differences can be seen. The most notable difference is the disparity between those aged 45 and over and people aged 35-44 in achieving Level 2 or above.

**Figure 5.8 Literacy Levels by age (%)**




Base: SfL2011 All aged 16-65 with literacy scores (5824)

As discussed further in Chapter 7, there were large differences in educational achievement between the different age groups, with young respondents more likely to hold a qualification than older respondents. When examining only respondents who had finished their education, two in ten (21 per cent) respondents aged 55-65 held no qualifications compared to one in ten (11 per cent) respondents aged under 20. The relatively 'flat' age data for the literacy assessment suggests that the difference in age group in underlying ability was minimal. This reflects the findings from SfL2003.

With the exception of those aged 55-65 there have been very little change since 2003 in the proportion of respondents achieving Level 1 or above in literacy (Table 5.29). In 2003 77 per cent of those aged 55-65 achieved Level 1 or above in literacy, a much lower proportion than amongst the other age groups. However, in 2011 the gap in performance has more or less disappeared (with 84 per cent of those aged 55-65 achieving Level 1 or above compared to 84-87 per cent of the other age groups). This appears to be a generation effect, but the reason for it

is hard to discern. It may be due to the educational circumstances of those aged 55-65 in SfL2003 (a group not included in the SfL2011 population). Since the education of these respondents coincided with the Second World War, they may have lost out educationally compared to those born afterwards (the 'baby boomers').[108] This is supported by the generational analysis in Chapter 6, where no 'passage of time' effect is evident (Tables 6.4 and 6.5, in Section 6.4.2).

A large increase in respondents achieving a Level 2 or above score and corresponding decrease in the proportion achieving a Level 1 score was evident amongst all age groups. However, it is interesting to note that the upshift is smallest among 45-54 year-olds, who only saw an eight per cent rise in the proportion achieving Level 2 or above (compared to the average upshift of 12 per cent).

**Table 5.29 Literacy Levels by age in 2003 and 2011**

| | 2003 | | | | | | | 2011 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | 16-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-65 | All | 16-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-65 |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 1 or below | 3 | 3 | 4 | 3 | 3 | 4 | 4 | 5 | 3 | 4 | 4 | 6 | 6 | 6 |
| Entry Level 2 | 2 | 2 | 1 | 2 | 2 | 3 | 3 | 2 | 1 | 1 | 2 | 2 | 3 | 2 |
| Entry Level 3 | 11 | 12 | 7 | 9 | 10 | 12 | 15 | 8 | 10 | 9 | 8 | 7 | 7 | 9 |
| Level 1 | 40 | 41 | 45 | 40 | 40 | 36 | 40 | 28 | 28 | 30 | 28 | 24 | 31 | 30 |
| Level 2 or above | 44 | 43 | 43 | 47 | 46 | 45 | 38 | 57 | 58 | 56 | 59 | 61 | 53 | 53 |
| | | | | | | | | | | | | | | |
| Level 1 or above | 84 | 84 | 88 | 87 | 85 | 82 | 77 | 85 | 86 | 86 | 87 | 85 | 84 | 84 |
| Unweighted | 7874 | 444 | 613 | 1774 | 2044 | 1509 | 1488 | 5824 | 315 | 417 | 1116 | 1307 | 1278 | 1388 |

Base: SfL2003 All aged 16-65 with literacy scores / SfL2011All aged 16-65 with literacy scores

### *Numeracy*

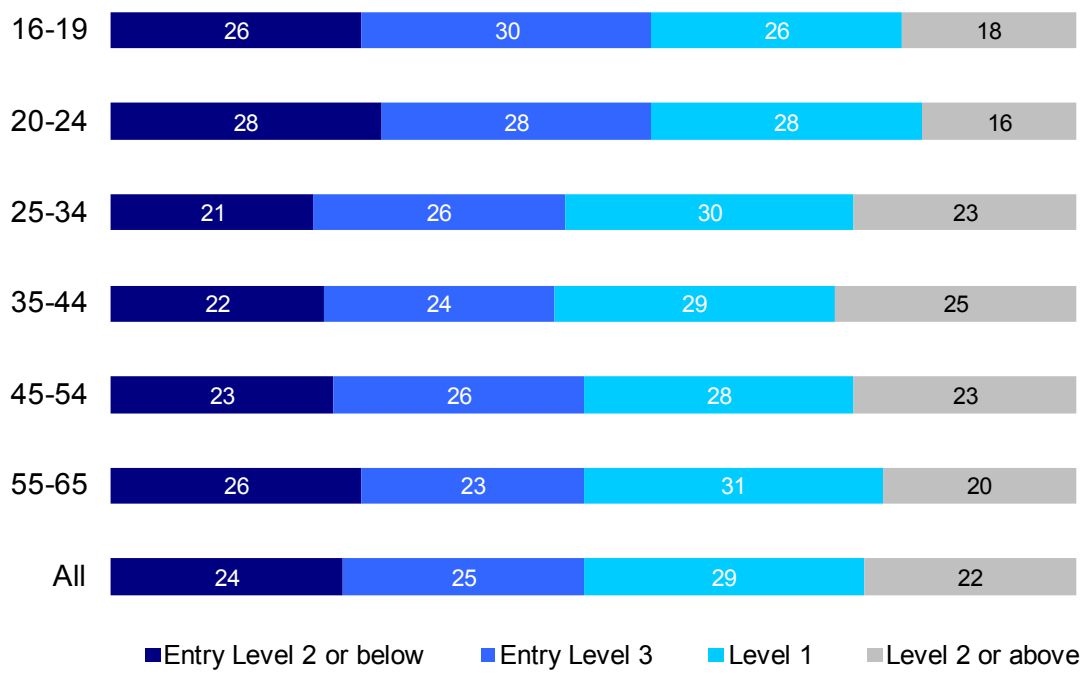
In contrast to literacy, there were some (albeit relatively small) variations in numeracy performance by age. The proportion of respondents in each age group achieving Entry Level 3 or above in the numeracy assessment ranged from 73 per cent (amongst 20-24 year-olds) to 79 per cent (amongst 25-34 year-olds). The distributions are displayed in Figure 5.9.

There has been very little change since 2003 in the proportion of respondents in most age groups with Numeracy Entry Level 3 or above. However, findings for the 16-24 age groups stand out. The data show a substantial decrease in the proportion achieving Entry Level 3 or above

[108] The school leaving age was raised to 15 in 1947.

among 20-24 year-olds (from 81 per cent in 2003 to 72 per cent in 2011) and a decline of five percentage points amongst 16-19 year-olds.[109]

**Figure 5.9 Numeracy Levels by age (%)**




Base: SfL2011 All aged 16-65 with numeracy scores (5823)

Moreover, whereas in SfL2003 the youngest respondents outperformed the oldest respondents, this was no longer the case in 2011. The youngest and oldest SfL2011 groups performed at a similar standard (Table 5.30).

[109] Although it should be noted that the decline amongst 16-19 year-olds does not reach statistical significance at the 5 per cent level.

**Table 5.30 Numeracy Levels by age in 2003 and 2011**

| | 2003 | | | | | | | 2011 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | 16-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-65 | All | 16-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-65 |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 1 or below | 5 | 6 | 4 | 4 | 5 | 6 | 7 | 7 | 4 | 7 | 6 | 7 | 7 | 8 |
| Entry Level 2 | 16 | 15 | 14 | 14 | 15 | 16 | 19 | 17 | 22 | 20 | 15 | 15 | 16 | 18 |
| Entry Level 3 | 25 | 29 | 30 | 24 | 24 | 24 | 26 | 25 | 30 | 28 | 26 | 24 | 26 | 23 |
| Level 1 | 28 | 27 | 27 | 28 | 29 | 27 | 27 | 29 | 26 | 28 | 30 | 29 | 28 | 31 |
| Level 2 or above | 25 | 23 | 24 | 29 | 27 | 26 | 20 | 22 | 18 | 16 | 23 | 25 | 23 | 20 |
| | | | | | | | | | | | | | | |
| Entry Level 2 or below | 21 | 21 | 19 | 19 | 20 | 22 | 27 | 24 | 26 | 28 | 21 | 22 | 23 | 26 |
| Entry Level 3 or above | 79 | 79 | 81 | 81 | 80 | 78 | 73 | 76 | 74 | 72 | 79 | 78 | 77 | 74 |
| Unweighted | 8040 | 461 | 631 | 1764 | 2029 | 1551 | 1538 | 5823 | 318 | 416 | 1125 | 1306 | 1259 | 1396 |

Base: SfL2003 All aged 16-65 with numeracy score / SfL2011 All aged 16-65 with numeracy score

As identified in Section 5.3.1 the proportion of respondents with EFL has decreased since 2003, particularly amongst the younger age groups.[110] It might be hypothesised that the decline in numeracy performance amongst the younger groups could be related to the increased proportions of those with ENFL in these groups. However, this does not appear to the case. Table 5.31 displays numeracy performance by age restricted to respondents with EFL, and the same pattern is still evident. Declines in the proportion of respondents reaching Entry Level 3 or above are apparent in the youngest age groups (16-24),[111] with the youngest age groups performing in line with oldest groups. This suggests that the rise in the proportion in the respondents with ENFL in the younger age groups does not fully account for the decline in numeracy performance observed amongst these groups.

[110] Suggesting that there has perhaps been more immigration amongst younger people (if fist language status is used as a proxy for immigration status).

[111] Although it should be noted that the decline amongst 16-19 year-olds does not reach statistical significance at the five per cent level.

**Table 5.31 Numeracy Levels by age amongst EFL in 2003 and 2011**

| | 2003 | | | | | | | 2011 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | 16-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-65 | All | 16-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-65 |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 1 or below | 4 | 6 | 3 | 3 | 3 | 5 | 7 | 5 | 4 | 6 | 5 | 4 | 5 | 8 |
| Entry Level 2 | 16 | 15 | 14 | 14 | 15 | 16 | 19 | 16 | 22 | 20 | 14 | 14 | 16 | 17 |
| Entry Level 3 | 25 | 29 | 31 | 24 | 24 | 24 | 26 | 26 | 30 | 29 | 26 | 24 | 27 | 23 |
| Level 1 | 28 | 27 | 27 | 29 | 29 | 28 | 27 | 30 | 25 | 29 | 31 | 30 | 28 | 31 |
| Level 2 or above | 26 | 24 | 25 | 31 | 28 | 27 | 20 | 23 | 19 | 17 | 24 | 27 | 23 | 20 |
| | | | | | | | | | | | | | | |
| Entry Level 2 or below | 20 | 21 | 17 | 16 | 19 | 21 | 27 | 22 | 25 | 26 | 19 | 18 | 22 | 25 |
| Entry Level 3 or above | 80 | 79 | 83 | 84 | 81 | 79 | 73 | 78 | 75 | 74 | 81 | 82 | 78 | 75 |
| Unweighted | 7648 | 450 | 591 | 1633 | 1988 | 1485 | 1498 | 5328 | 291 | 381 | 966 | 1163 | 1181 | 1344 |

Base: SfL2003 All aged 16-65 amongst EFL with numeracy scores / SfL2011 All aged 16-65 amongst EFL with numeracy scores

### *ICT*

The data reveals a different pattern between age and ICT skills, with ICT skills decreasing with age. Across all four components, younger respondents tended to score higher than older respondents. The difference was largest in the spreadsheet component, where 86 per cent of 16-19 year-olds achieved an Entry Level 3 or above score, compared to 38 per cent of 55-65 year-olds (Table 5.32).[112] Across the three practical components, the performance of those aged 55-65 tended to be lower than average; those aged 45-54 performed in line with the average; while those in the lower age groups performed better than the average. This is in line with the regression analysis in Section 6.3, which also identifies age as one of the key predicting variables of 'weak' ICT assessment performance.

This is likely to represent a very real generational gap due to the large increase in home computer ownership in recent years (69 per cent of respondents owned a computer in 2003 compared to 91 per cent in 2011). Access to a computer either at home or work is lower for older respondents (with 14 per cent of 55-65 years not having access to a computer, compared to an average of eight per cent across all respondents), and fewer older respondents were 'frequent'[113] computer users (68 per cent of 55-65 were 'frequent' computer users compared to an average of 82 per cent across all respondents).

[112] For full breakdowns see Appendix Table 5.A43.

[113] 'Frequent' computer users are respondents who use a computer at home or at work either daily or at least two to four times a week.

**Table 5.32 ICT Levels by age**

| | All | 16-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-65 |
|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % |
| **WORD PROCESSING** | | | | | | | |
| Entry Level 2 or below | 43 | 24 | 19 | 30 | 43 | 56 | 65 |
| Entry Level 3 or above | 57 | 76 | 81 | 70 | 57 | 44 | 35 |
| Unweighted | 2253 | 120 | 158 | 447 | 499 | 494 | 535 |
| **EMAIL** | | | | | | | |
| Entry Level 2 or below | 31 | 12 | 17 | 20 | 30 | 38 | 53 |
| Entry Level 3 or above | 69 | 88 | 83 | 80 | 70 | 62 | 47 |
| Unweighted | 2247 | 120 | 158 | 445 | 500 | 491 | 533 |
| **SPREADSHEET** | | | | | | | |
| Entry Level 2 or below | 39 | 14 | 19 | 26 | 42 | 47 | 62 |
| Entry Level 3 or above | 61 | 86 | 81 | 74 | 58 | 53 | 38 |
| Unweighted | 2228 | 119 | 157 | 441 | 493 | 488 | 530 |
| **MULTIPLE CHOICE** | | | | | | | |
| Entry Level 2 or below | 9 | 1 | 1 | 4 | 7 | 11 | 24 |
| Entry Level 3 or above | 91 | 99 | 99 | 96 | 93 | 89 | 76 |
| Unweighted | 2274 | 119 | 159 | 450 | 505 | 504 | 537 |

Base: SfL2011 All aged 16-65 with word processing scores / email scores / spreadsheet scores / multiple choice scores

### *The relationship between literacy, numeracy and ICT by age*

As demonstrated in Chapter 4, performance in the literacy and numeracy assessments both correlated positively with performance in the ICT assessment. This means that respondents with ‘strong’ literacy or numeracy are likely to have ‘strong’ ICT skills and conversely those with ‘weak’ literacy or numeracy are likely to have ‘weak’ ICT skills. When examining these correlations by age, the strengths of the correlations were found to vary a little, particularly with regards to literacy, with weaker correlations for the two oldest groups. This means the difference between these ‘strong’ and ‘weak’ groups is likely to be smaller for older respondents compared to the under-45s.

| Table 5.33 Literacy / Numeracy and ICT Correlation Coefficients by age | | | | | |
|---|---|---|---|---|---|
| | WORD PROCESSING | EMAIL | SPREADSHEET | MULTIPLE CHOICE | 'Average' correlation across the four components |
| **16-19** | | | | | |
| LITERACY | 0.58 | 0.55 | 0.48 | 0.46 | 0.52 |
| NUMERACY | 0.60 | 0.49 | 0.51 | 0.63 | 0.56 |
| **20-24** | | | | | |
| LITERACY | 0.63 | 0.48 | 0.54 | 0.42 | 0.52 |
| NUMERACY | 0.67 | 0.49 | 0.62 | 0.58 | 0.59 |
| **25-34** | | | | | |
| LITERACY | 0.54 | 0.47 | 0.47 | 0.55 | 0.50 |
| NUMERACY | 0.53 | 0.44 | 0.46 | 0.51 | 0.49 |
| **35-44** | | | | | |
| LITERACY | 0.57 | 0.55 | 0.49 | 0.57 | 0.55 |
| NUMERACY | 0.64 | 0.54 | 0.58 | 0.56 | 0.58 |
| **44-54** | | | | | |
| LITERACY | 0.52 | 0.47 | 0.42 | 0.49 | 0.48 |
| NUMERACY | 0.60 | 0.53 | 0.52 | 0.54 | 0.55 |
| **55-65** | | | | | |
| LITERACY | 0.48 | 0.41 | 0.34 | 0.45 | 0.42 |
| NUMERACY | 0.56 | 0.53 | 0.48 | 0.59 | 0.54 |

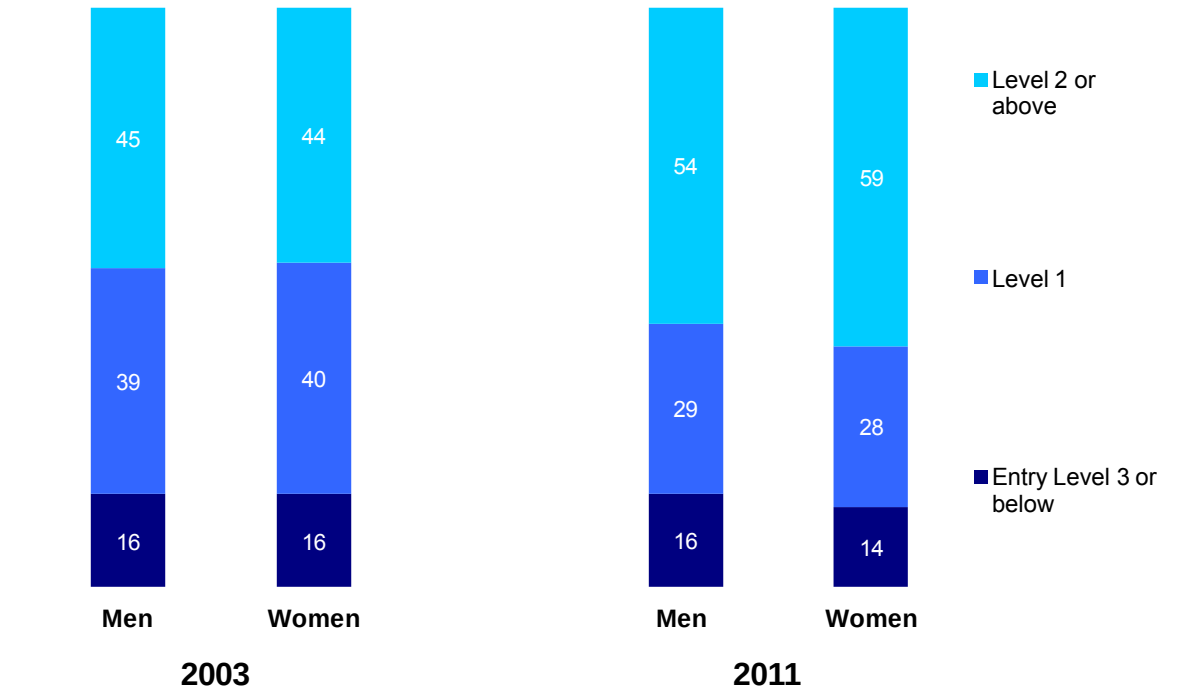
### 5.5.2 Gender

***Literacy***

In 2003, no differences were evident in literacy performance between men and women. However, in 2011 women were slightly more likely to achieve a Level 2 or above score (59 per cent) than men (54 per cent). Since 2003, there have been increases for both genders in the proportion achieving Level 2 or above and decreases in the proportion achieving Level 1. This, however, was slightly more marked in women than men (Figure 5.10).[114]

[114] For full breakdowns see Appendix Table 5.A44.

**Figure 5.10 Literacy Levels by gender (%)**




Base: SfL2003 All aged 16-65 with literacy scores (7874) / SfL2011 All aged 16-65 with literacy scores (5824)

### *Literacy Levels within gender and age*

In 2003, whilst there were no performance differences between men and women, differences were apparent among specific age groups. Young men (aged 16-24) performed at a slightly lower standard compared to both young women (40 per cent achieved Level 2 or above compared to 46 per cent of women) as well as men in other age groups.

Table 5.34 details Literacy Levels between men and women within age groups for SfL2011. Here a slightly different pattern emerges. The only sizable differences in performance between men and women can be found between those aged 35 and 44. Within this age group, men were more likely than women to achieve Entry Level 3 or below (19 per cent versus 11 per cent), and women were much more likely to achieve a Level 2 or above score (64 per cent versus 57 per cent). It does not appear to be the case that men aged 34-45 are performing poorly, but rather that women aged 34-45 tend to outperform the females in other age groups.[115]

[115] For full breakdowns see Appendix Table 5.A45.

**Table 5.34 Literacy Levels by age and gender**

| | MEN | | | | | | WOMEN | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | 16-24 | 25-34 | 35-44 | 45-54 | 55-65 | All | 16-24 | 25-34 | 35-44 | 45-54 | 55-65 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 3 or below | 16 | 15 | 14 | 19 | 16 | 17 | 14 | 13 | 13 | 11 | 16 | 16 |
| Level 1 | 29 | 31 | 28 | 24 | 34 | 30 | 28 | 27 | 27 | 25 | 28 | 31 |
| Level 2 or above | 54 | 54 | 58 | 57 | 50 | 52 | 59 | 60 | 60 | 64 | 56 | 54 |
| Unweighted | 2520 | 347 | 433 | 562 | 558 | 618 | 3304 | 385 | 683 | 745 | 720 | 770 |

Base: SfL2011 All aged 16-65 with literacy scores

### *Numeracy*

Mirroring the 2003 findings, there were differences in 2011 between men's and women's performance in the numeracy assessment, with men more likely than women to achieve Entry Level 3 or above (80 per cent versus 73 per cent). The differences in performance appear to be more marked in the numeracy assessment compared to the literacy assessment.

Whilst a difference between the performance of men and women was evident in both 2003 and 2011, the performance of men has declined slightly, falling from 83 per cent being classified at Entry Level 3 or above in 2003 to 80 per cent in 2011. The performance of women remains relatively unchanged (75 per cent in 2003 and 73 per cent in 2011).[116]

### *Numeracy Levels within gender and age*

In 2003, differences between the performance of men and women were apparent within all age groups, though the performance gap was narrower in the younger age groups. This was due to the poor performance of men aged 16-24 in comparison to the other male age groups. In 2011 the trend that emerges is different. Differences were apparent between all age groups with the exception of the 35-44 year old group. Within this age group men and women performed very similarly, with 79 per cent of men and 77 per cent of women achieving Entry Level 3 or above (Table 5.35).[117]

[116] See Appendix Table 5.A46.

[117] For full breakdowns see Appendix Table 5.A47.

**Table 5.35 Numeracy Levels by age and gender**

| | MEN | | | | | | WOMEN | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | 16-24 | 25-34 | 35-44 | 45-54 | 55-65 | All | 16-24 | 25-34 | 35-44 | 45-54 | 55-65 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 2 or below | 20 | 23 | 17 | 21 | 20 | 20 | 28 | 31 | 26 | 23 | 27 | 31 |
| Entry Level 3 or above | 79 | 77 | 83 | 79 | 80 | 80 | 73 | 69 | 74 | 77 | 73 | 68 |
| Unweighted | 2528 | 349 | 438 | 563 | 551 | 625 | 3295 | 385 | 687 | 473 | 708 | 771 |

Base: SfL 2011 All aged 16-65 with numeracy scores

### *Numeracy Levels within gender and employment*

As was the case in 2003, there were significant differences in economic activity between men and women. However, this does not wholly explain the differences between the two genders in numeracy performance.

Men were again more likely than women to be in employment, with 75 per cent of men being either in paid employment or self employment compared to 64 per cent of women. Respondents in employment tended to outperform those who were unemployed in the numeracy assessment, with eight in ten (82 per cent) employed respondents achieving Entry Level 3 or above compared to 63 per cent of unemployed respondents.[118] This may suggest that poor numeracy skills were a large barrier to labour market entry or that employed people use numeracy skills more often and therefore keep them relatively fresh. As concluded in 2003, both are probably true. However, it is still the case that even among employed respondents, men outperformed women, with 85 per cent of men being classified at Entry Level 3 or above, compared to 78 per cent of women.[119]

Men were more likely than women to be employed in Managerial and professional occupations[120] and respondents in these occupations tended to outperform their counterparts in the numeracy assessment. However, when comparing males in Managerial and professional occupations with females in such occupations the difference in numeracy is still apparent; 92 per cent of men in these occupations achieved Entry Level 3 or above compared to 85 per cent of women. This pattern was also observed in 2003.[121]

Whilst Managerial and professional occupations tend to require a greater degree of numeracy than other occupations, there is some variation within specific occupations. Therefore it is possible that women are less likely than men to work in the sorts of managerial/professional occupations that have a strong numerate component.

[118] See Appendix Tables 5.A48 and 5.A49.

[119] See Appendix Table 5.A50.

[120] The combined NS-SEC groups 'Higher managerial and professional occupations', 'Lower managerial and professional occupations'.

[121] See Appendix Table 5.A51.

### *Numeracy Levels within gender and qualification categories*

Amongst respondents who had finished their education, women were slightly more likely than men to not hold any qualifications (12 per cent versus 10 per cent). As explored further in Chapter 7, respondents without any qualifications tended to score lower on the numeracy assessment than those who held qualifications. Therefore it is possible that the weaker performance of women could, in part, be due to a difference in qualifications held.

It is interesting to note that the difference between men and women who held qualifications was only apparent in the oldest age group: those aged 55-65. This was also the case in 2003. In 2011, 25 per cent of women in this age group held no qualifications compared to 16 per cent of their male counterparts.

Restricting analysis to just those respondents who held a pass grade A*-C in GCSE Maths (or equivalent) a difference in performance between men and women was still observed. Two fifths (40 per cent) of men achieved Level 2 or above, compared to 27 per cent of women. This suggests that differences in qualifications held cannot fully explain the differences between men's and women's performance in the numeracy assessment.[122]

### *ICT*

There were very few differences in ICT performance between men and women. Across the three practical components, the only observed difference was on the spreadsheet component, with men more likely than women to achieve a Level 2 or above score (21 per cent versus 13 per cent). When asked about computer use both in the home and in the workplace, men were more likely than women to report using spreadsheets (51 per cent 42 per cent), so this is likely to account for this small difference.

On the multiple choice component, a similar difference emerged with men more likely than women to achieve a Level 2 or above score (56 per cent compared to 49 per cent), and slightly less likely to achieve a Level 1 score (24 per cent versus 28 per cent).[123] This is probably largely explained by the differences in employment between men and women. Men were more likely to be in employment (either paid employment or self employment), and those in employment tended to perform better on the multiple choice component. When focusing analysis solely on those in employment, the performance differences between men and women on the multiple choice component largely disappear.

[122] See Appendix Table 5.A52.

[123] See Appendix Table 5.A53.

### 5.5.3 Social classifications (NS-SEC)

Since 2001, the NS-SEC (National Statistics Socio-Economic Classification) system has been used for all official statistics and surveys. It replaced the Social Class classification system based on Occupation (SC) and Socio-economic groups (SEG).[124]

***Literacy***

Literacy performance varied by household NS-SEC, with respondents from households where the household reference person (HRP) was in Managerial and professional occupations (group 1) tending to have the strongest performance and respondents from 'Working class' households (group 5)[125] tending to have the weakest performance (Table 5.36).[126]

As illustrated in Table 5.35, Literacy Level 1 or above was as common amongst respondents in households where the HRP was in a Managerial and professional occupation (group 1) as amongst respondents where the HRP was in an Intermediate occupation (group 2): 93 per cent and 90 per cent, respectively, achieved Level 1 or above. However, respondents living in Managerial and professional occupation households (group 1) were much more likely to achieve Level 2 or above (71 per cent versus 61 per cent). Respondents from 'Working class' households (group 5) were the least likely to achieve a Level 2 or above score (37 per cent). This pattern broadly reflects that observed in 2003.

In comparison to 2003, for the majority of groups there has been no change in the proportion achieving a Level 1 or above score. However, amongst respondents from households where the HRP worked for a small employer or was an own account worker (group 3) the proportion achieving this standard has increased slightly (from 80 per cent in 2003 to 85 per cent in 2011).

Looking at the breakdown between Level 1 and Level 2 or above performance, the overall pattern is reflected amongst all groups, with the proportion achieving Level 2 or above increasing and the proportion achieving Level 1 decreasing since 2003. Respondents from Managerial and professional households (group 1) and Small employers and own account worker households (group 3) have had the largest increases at Level 2 or above (increases of 13 and 14 percentage points respectively).

[124] Further information available online at: http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/soc2010/soc2010-volume-3-ns-sec--rebased-on-soc2010--user-manual/index.html#7 , accessed on 08/08/12.

[125] It should be noted that whilst no reference is made to this group the in current ONS documentation, it was included in the SfL2003 survey findings report, and has been retained here to ensure consistency in comparisons.

[126] For full breakdowns see Appendix Table 5.A54.

**Table 5.36 Literacy Levels by household occupation in 2003 and 2011**

| | All | 1. Managerial and professional | 2. Intermediate occupations | 3. Small employers and own account workers | 4. Supervisors / craft related occupations | 5. Working Class |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | % |
| **2003** | | | | | | |
| Entry Level 3 or below | 16 | 7 | 6 | 20 | 18 | 32 |
| Level 1 | 40 | 36 | 42 | 43 | 44 | 41 |
| Level 2 or above | 44 | 57 | 52 | 37 | 38 | 26 |
| | | | | | | |
| Level 1 or above | 84 | 93 | 94 | 80 | 82 | 68 |
| Unweighted | 7874 | 3082 | 628 | 759 | 962 | 2132 |
| **2011** | | | | | | |
| Entry Level 3 or below | 15 | 7 | 10 | 15 | 18 | 29 |
| Level 1 | 58 | 22 | 29 | 34 | 33 | 35 |
| Level 2 or above | 57 | 71 | 61 | 52 | 49 | 37 |
| | | | | | | |
| Level 1 or above | 85 | 93 | 90 | 85 | 82 | 71 |
| Unweighted | 5824 | 2249 | 472 | 589 | 668 | 1521 |

Base: SfL2003 All aged 16-65 with literacy scores / SfL2011 All aged 16-65 with literacy scores

### *Numeracy*

As with literacy, respondents from Managerial and professional households (group 1) tended to have the strongest numeracy and respondents from 'Working class' households (group 5) tended to have the weakest numeracy (Table 5.37).[127] Respondents from Intermediate occupation households (group 2), Small employer and own account worker households (group 3) and those from Supervisory/craft related occupation households (group 4), tended to perform at a similar standard to one another, with around three quarters of respondents from each being classified at Entry Level 3 or above. This is in line with the pattern that emerged in 2003.

Since 2003, the only group to see a significant decrease in the proportion of respondents achieving Entry Level 3 or above is the Managerial and professional occupation group (group 1) (90 per cent in 2003 decreasing to 88 per cent). The proportion achieving Entry Level 3 or above in the other groups remains relatively unchanged from 2003. It should be noted that although differences for each of these groups between 2003 and 2011 are apparent in Table 5.37, these do not reach conventions of statistical significance (at the five per cent level).

[127] For full breakdowns see Appendix Table 5.A55.

**Table 5.37 Numeracy Levels by household occupation in 2003 and 2011**

| | All | 1. Managerial and professional | 2. Intermediate occupations | 3. Small employers and own account workers | 4. Supervisors / craft related occupations | 5. Working Class |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | % |
| **2003** | | | | | | |
| Entry Level 2 or below | 21 | 10 | 19 | 24 | 25 | 38 |
| Entry Level 3 or above | 79 | 90 | 81 | 76 | 75 | 62 |
| Unweighted | 8040 | 3099 | 644 | 779 | 975 | 2225 |
| **2011** | | | | | | |
| Entry Level 2 or below | 24 | 12 | 24 | 25 | 28 | 40 |
| Entry Level 3 or above | 76 | 88 | 76 | 75 | 72 | 60 |
| Unweighted | 5823 | 2474 | 462 | 597 | 658 | 1514 |

Base: SfL2003 All aged 16-65 with literacy scores / SfL2011 All aged 16-65 with literacy scores

### *ICT*

Across the three practical components, the performance of respondents from Managerial and professional occupation households (group 1) and Intermediate occupation households (group 2) was similar. Respondents from these groups were more likely to achieve Entry Level 3 or above than respondents from all other households. However, respondents in Managerial and professional households (group 1) were slightly more likely than those in Intermediate occupation households (group 2) to achieve Level 2 or above on the spreadsheet component (28 per cent versus 15 per cent) and the email component (69 per cent and 58 per cent).

**Table 5.38 ICT Levels by household occupation**

| | All | 1. Managerial and professional | 2. Intermediate occupations | 3. Small employers and own account workers | 4. Supervisors/ craft related occupations | 5. Working Class |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | % |
| **WORD PROCESSING** | | | | | | |
| Entry Level 2 or below | 43 | 27 | 32 | 55 | 56 | 65 |
| Entry Level 3 or above | 57 | 73 | 68 | 45 | 44 | 35 |
| Unweighted | 2253 | 966 | 181 | 199 | 277 | 585 |
| **EMAIL** | | | | | | |
| Entry Level 2 or below | 31 | 16 | 21 | 43 | 43 | 50 |
| Entry Level 3 or above | 69 | 84 | 79 | 57 | 57 | 50 |
| Unweighted | 2247 | 959 | 182 | 197 | 278 | 585 |
| **SPREADSHEET** | | | | | | |
| Entry Level 2 or below | 39 | 26 | 29 | 47 | 51 | 57 |
| Entry Level 3 or above | 61 | 74 | 71 | 53 | 49 | 43 |
| Unweighted | 2228 | 953 | 178 | 193 | 277 | 582 |
| **MULTIPLE CHOICE** | | | | | | |
| Entry Level 2 or below | 9 | 2 | 7 | 12 | 15 | 18 |
| Entry Level 3 or above | 91 | 98 | 93 | 88 | 85 | 82 |
| Unweighted | 2274 | 973 | 183 | 201 | 281 | 590 |

Base: SfL2011 All aged 16-65 with word processing scores / email scores / spreadsheet scores / multiple choice scores

Respondents from Small employers and own account worker households (group 3) and Supervisors/craft related occupation households (group 4) had similar performance across the three practical components. Their performance was substantially weaker than the performance of respondents from either Managerial and professional occupation households, or Intermediate occupation households (groups 1 and 2). Respondents from 'Working class' households (group 5) had the weakest performance, with the lowest proportion of respondents achieving Entry Level 3 or above across the three practical components (Table 5.38).[128]

### 5.5.4 Health issues

The majority of respondents described their health as 'very good' or 'good' (48 per cent rating it as 'very good' and 35 per cent as 'good'). One in ten (11 per cent) described it as a 'fair', and five per cent as 'poor' or 'very poor'. One in five (20 per cent) reported that they had a longstanding illness, disability or infirmity of some kind, including 13 per cent who felt it placed limits on their activities. These ratings remain unchanged from 2003.[129]

Unsurprisingly, poor health was more prevalent among older respondents. Only 72 per cent of 55-65 year-olds rated their health as 'good' or 'very good' (compared to the average of 84 per cent across all respondents), and 55-65 year-olds were the most likely to say that they had a longstanding illness, disability or infirmity of some kind (34 per cent, compared to 20 per cent of all respondents).[130]

Performance on the literacy and numeracy assessment varied by these health ratings. Nine in ten (89 per cent) respondents who rated their health as 'very good' were classified as Level 1 or above on the literacy assessment, falling to 65 per cent among respondents who rated their health as 'very poor' or 'poor'. There were declines in performance between each step down the health scale, with the exception of ratings of 'poor' and 'very poor', where there were no differences in performance. Respondents who reported they had a longstanding illness, disability or infirmity were also less likely to score Level 1 or above (Table 5.38). This pattern broadly reflects the 2003 pattern.

For numeracy, a similar pattern emerged (Table 5.39).[131]

[128] For full breakdowns see Appendix Table 5.A56.

[129] See Appendix Table 5.A57.

[130] See Appendix Table 5.A58.

[131] For full breakdowns see Appendix Tables 5.A59 and 5.A60.

**Table 5.39 Literacy and Numeracy Levels by health**

| | All | HEALTH RATING | | | | LONGSTANDING ILLNESS OR DISABILITY | |
|---|---|---|---|---|---|---|---|
| | | Very good | Good | Fair | Poor / Very Poor | Yes | No |
| | % | % | % | % | % | % | % |
| **LITERACY** | | | | | | | |
| Entry Level 3 or below | 15 | 11 | 15 | 22 | 35 | 20 | 14 |
| Level 1 or above | 85 | 89 | 85 | 78 | 65 | 80 | 86 |
| Unweighted | 5824 | 2695 | 2055 | 674 | 393 | 1333 | 4475 |
| **NUMERACY** | | | | | | | |
| Entry Level 2 or below | 24 | 19 | 23 | 34 | 48 | 30 | 22 |
| Entry Level 3 or above | 76 | 81 | 77 | 66 | 52 | 70 | 78 |
| Unweighted | 5823 | 2713 | 2063 | 683 | 358 | 1331 | 4474 |

Base: SfL2011 All aged 16-65 with literacy score / SfL2011 All aged 16-65 with numeracy score

Across the four ICT components, a similar patterned emerged, with respondents who rated their health more favourably tending to score more highly on the ICT assessment, along with those without a long standing disability, illness or infirmity (Table 5.40).[132]

[132] For full breakdowns see Appendix Table 5.A61.

## Table 5.40 ICT Levels by health

| | All | HEALTH RATING | | | | LONGSTANDING ILLNESS OR DISABILITY | |
|---|---|---|---|---|---|---|---|
| | | Very good | Good | Fair | Poor / Very Poor | Yes | No |
| | % | % | % | % | % | % | % |
| **WORD PROCESSING** | | | | | | | |
| Entry Level 2 or below | 43 | 33 | 46 | 62 | 78 | 59 | 39 |
| Entry Level 3 or above | 57 | 67 | 54 | 38 | 22 | 41 | 61 |
| Unweighted | 2253 | 1035 | 799 | 272 | 145 | 495 | 1583 |
| **EMAIL** | | | | | | | |
| Entry Level 2 or below | 31 | 23 | 32 | 45 | 63 | 44 | 28 |
| Entry Level 3 or above | 69 | 77 | 68 | 55 | 37 | 56 | 73 |
| Unweighted | 2247 | 1032 | 797 | 271 | 146 | 494 | 1578 |
| **SPREADSHEET** | | | | | | | |
| Entry Level 2 or below | 39 | 30 | 40 | 53 | 71 | 51 | 34 |
| Entry Level 3 or above | 61 | 70 | 60 | 47 | 29 | 49 | 66 |
| Unweighted | 2228 | 1023 | 791 | 268 | 145 | 492 | 1562 |
| **MULTIPLE CHOICE** | | | | | | | |
| Entry Level 2 or below | 9 | 5 | 9 | 19 | 27 | 17 | 7 |
| Entry Level 3 or above | 91 | 95 | 91 | 81 | 73 | 83 | 93 |
| Unweighted | 2274 | 1040 | 815 | 273 | 145 | 501 | 1594 |

Base: SfL2011 All aged 16-65 with literacy score / SfL2011 All aged 16-65 with numeracy score

# 6 Understanding the relationship between skills and personal characteristics

## 6.1 Key findings

**Personal characteristics that predict[133] 'weak' skills**

- From the regression analysis, many of the personal characteristics associated with weak assessment performance are common to all three domains (literacy, numeracy and ICT). These include:
  - English not being the first language of the respondent, especially amongst some ethnic groups
  - Where neither parent stayed in education beyond the age of 16
  - Where there is a (self-assessed) learning difficulty
  - When no educational qualifications are held
  - Working in certain industry sectors (although sample size limitations prevent identification of those most closely associated with weak assessment performance)
  - Working in routine occupations (or the long-term unemployed)
- In addition, there are a number of 'domain-specific' associations:
- Infrequent or zero computer use appears to predict weak literacy and numeracy performance beyond that expected from educational and work status. However, computer use may have a circular, reinforcing quality, both promoting good literacy and numeracy and following from it as well.
- Age operated differently in each domain, with a mild decline after the age of 45 for literacy, a gentle u-shaped distribution for numeracy (youngest and oldest age groups were weakest) and a strong linear relationship for ICT with each succeeding generation having stronger skills than the previous one.
- Women tended to perform at a lower standard than men on the numeracy assessment, even when controlling for other factors. This replicates a finding from 2003.
- The exact relationship between highest qualification and assessment performance varied somewhat between domains. For numeracy, Level 3 qualifications – or better still a degree – gave an advantage over lesser qualifications. For literacy and ICT, there was less of a linear relationship with little advantage conferred by qualifications above Level 2. However, holding *no* qualifications was a strong predictor of weak

[133] Note that, in this context, predictive power demonstrates the strength of *association* rather than of causation.

performance in all three domains.

- As expected, subject-specific qualifications made a difference. Most individuals holding a Level 2 maths qualification performed well on the numeracy and ICT assessments. Holding a Level 2 English language qualification conferred some advantage with regards to the literacy assessment.
- Experience of basic skills training made little or no difference so far as prediction of weak assessment performance is concerned. However, a cross-sectional survey like this one is not an appropriate tool for judging the impact of such training. SfL2011 does not measure the skills of individuals immediately before and after they attended a course: hence, it is not possible to track the progress that learners may have made as a result of their training.

- **Simple generational analysis**
  - We see little evidence of passage-of-time effects in literacy with the exception of the youngest generation reaching the standard of their slightly older peers. This suggests that most people's literacy standard reaches a 'steady state' by their mid twenties. It is also notable that the general 'conversion' of Level 1 skills into Level 2 skills between 2003 and 2011 is stronger with the younger generations than with the older generations. Nevertheless, it is significant for all.
  - Most generations display a small decline in numeracy skills between 2003 and 2011. This is most noticeable with the oldest generation assessed (aged 53-62 in 2011) but not substantial.
  - The language profile of some younger generations has changed substantially since 2003 and this obscures some of the emergent trends (due to the relationship between first language spoken and skills Levels). Acknowledgment of this change in composition is an important requirement of generational analysis, and consequently, the analysis is presented both for the total samples *and for the samples filtered to include only those claiming English as first language*. When analysis is presented on filtered samples, some generational differences which were previously obscured in total sample analysis (because changes in skills Levels are confounded with changes in language profile) become apparent.

## 6.2 Introduction

This chapter seeks to further explore the relationship between skill Levels and personal characteristics. The chapter is divided into two sections.

The first part examines the personal characteristics associated with 'weak' skills, using regression analysis. It explores a range of 'fixed' (largely demographic) characteristics and 'acquired' characteristics to identify the predictors of weak assessment performance. It is worth noting that, although the term 'predictors' has been used, it is not meant to imply a specific *causal* relationship between these characteristics and the skill levels.

The second part of the chapter explores the change in Literacy and Numeracy Levels between 2003 and 2011 for a set of defined generations.

## 6.3 Personal characteristics that predict 'weak' skills – results of regression analysis

### 6.3.1 Introduction

In this section we present the results from a regression analysis which sought to identify the personal characteristics associated with weak assessment performance.

For clarity, 'weak assessment performance' is defined in the following way:

- Literacy: Below Level 1
- Numeracy: Below Entry Level 3
- ICT: Below Entry Level 3 in all three practical dimensions (word processing, spreadsheets and email)

The regression method has been used in preference to multiple bivariate tables because it produces a simpler model, including only those characteristics that have an independent association with skill Levels. In this way the natural correlations between personal characteristics are explicitly identified and handled. Some variables that appear to be strong predictors in the bivariate tables look much weaker in the regression tables, while others retain their strength.[134]

In each model, we have distinguished between two types of personal characteristics: those which are determined at birth or are long-term traits, termed 'fixed' characteristics, and those describing what the individual does or thinks which are termed 'acquired' characteristics and may be subject to change. Although fixed characteristics cannot be changed, their association with assessment performance is not immutable and may be subject to change over time both within and across generations. It is important to recognise that the models presented here are appropriate to England in 2011.

Secondly, the association of fixed characteristics with assessment performance should not be interpreted as an inheritance for each individual when they are born. For example, it is highly unlikely that women are 'naturally' less numerate than men. The difference in skill Levels is much more likely to be due to (unmeasured) systematic variation in upbringing, social and cultural expectations (particularly with regard to the balance between work and family) and other life experiences. The same can be said of other associations between fixed characteristics and assessment performance.

Nevertheless, the observed associations remain statistical facts and there is some value in breaking the regression models into two parts, one based on fixed characteristics only - effectively producing a base likelihood of weak assessment performance – and one in which acquired characteristics have been added. The purpose is to assess whether the strength – if not the direction – of associations differs depending on the base likelihood of weak assessment performance.

[134] Two variables may 'explain' approximately the same variance in the dependent variable. If so, the model with the highest likelihood of producing the data is likely to include only one of them or include one of them as a strong predictor and the other as a lesser predictor, even though the separate predictive power of each variable is similar. This can lead to interpretative problems which is why most regression models do not include predictors that are highly correlated with other predictors in the model.

It should be noted that acquired characteristics are themselves partially determined by fixed characteristics. However they can also be influenced by the kinds of environmental factors that are within the purview of government policy. Ultimately, effective policy in these areas ought to reduce the influence of fixed characteristics for future generations.

### 6.3.2 The models

The characteristics considered for the models are *personal* and do not include geographic indicators or household characteristics such as tenure, presence or otherwise of an internet connection, or the status of the head of household. Although these variables might have predictive power, they are not particularly informative about the kinds of people with weak skills. Table 6.1 describes the personal characteristics that were considered for each model.

Broadly speaking, the acquired characteristics cover education, work, basic skills training, computer use[135] and health. The ten 'attitudes to learning' variables were also considered but the two statements with the strongest associations 'learning isn't for people like me' and 'I didn't get anything out of school') are too closely related to educational attainment to be additionally informative.

The models presented here are 'main effects' models despite the fact that the explanatory power of some models could be improved if two-way interaction terms were included.[136] The deliberate omission of interaction terms from the presented models is not to say that these effects do not exist, rather that the evidence we have is insufficiently clear to warrant further complication of the model. To a great extent, this limitation is due to small sample sizes in many 'interaction' categories.

There is one exception to this general rule: the ethnic group and 'first language' variables have been combined together due to the naturally strong correlation between the two. This correlation makes the respective 'strength of association' measures somewhat unstable when the two variables are separate. Because first language status has a more obvious connection with English literacy, it would be a reasonable approach to omit the ethnic group term altogether. However, despite small sample sizes, it seems more likely than not that ethnic group has some independent influence.

Model fit has been largely measured through two summary outputs: (a) Nagelkerke's pseudo $R^2$ measure of explanatory power, and (b) Hosmer and Lemeshow's goodness-of-fit test (i.e. relative fit of the model across the range of modelled probabilities of weak assessment performance). To avoid inclusion of terms that significantly improve model fit in a statistical sense but not a substantive sense, terms have only been included if they increase the pseudo $R^2$ value by 0.5 percentage points or more or increase it by less than this but improve relative fit.[137]

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[135] This was not included in the ICT model because it is too closely correlated with ICT assessment outcomes to be informative.

[136] An interaction term would be necessary if, for example, the effect of parental education attainment on assessment performance varied significantly between men and women.

[137] The weight of each variable in the model is determined by total change in the model's 'deviance difference' if the variable is removed. The total $R^2$ of the model is allocated to each variable using the same calculation. The 'deviance difference' is also called the '-2 log likelihood' and is a method of comparing the fit of alternative models.

Annexes 7 and 8 include the regression model coefficients and tree diagrams based on the regression model variables. The text in this chapter is a qualitative interpretation of those coefficients.

**Table 6.1 Personal characteristics considered for regression models**

| | |
|---|---|
| **'FIXED' CHARACTERISTICS** | |
| Sex | Male<br>Female |
| Age group | 16-19<br>20-24<br>25-34<br>35-44<br>45-54<br>55-65 |
| Ethnic group/ 'first' language | White British/Irish (almost all EFL)<br>White Other: EFL<br>White Other: ENFL<br>Indian: EFL<br>Indian: ENFL<br>Pakistani: EFL<br>Pakistani: ENFL<br>Other South Asian (mostly ENFL)<br>Black Caribbean and mixed Black Caribbean/White (almost all EFL)<br>Other Black and mixed Black/White: EFL<br>Other Black and mixed Black/White: ENFL<br>Other: EFL<br>Other: ENFL |
| Parental educational attainment | One or more parents stayed in education beyond age 16<br>Neither parent stayed in education beyond age 16 (or DK) |
| *Whether has a learning difficulty | Yes<br>No |
| **'ACQUIRED' CHARACTERISTICS** | |
| Highest qualification | Degree level qualification<br>Non-degree level HE qualification<br>Level 3 qualification<br>Level 2 qualification<br>Level 1 qualification or below<br>Other qualification: level unknown<br>No qualifications |
| Whether has A*-C English GCSE or equivalent | Yes<br>No |
| Whether has A*-C Maths GCSE or equivalent | Yes<br>No |

**Status as 'fixed' or 'acquired' characteristic is debatable. Treated as 'fixed' here*

**Table 6.1 Personal characteristics considered for regression models**

| **'ACQUIRED' CHARACTERISTICS (continued)** | |
|---|---|
| Computer use | Daily<br>Less than daily<br>Never |
| Whether been on an ICT training course | Yes<br>No |
| Basic skills training in English (any) | Yes<br>No |
| Basic skills training in Maths | Yes<br>No |
| Whether has a limiting long-term illness/disability | Yes<br>No |
| Current / most recent occupational type | "White collar "occupations:<br>Higher managerial and professional occupations<br>Lower managerial and professional occupations<br>Intermediate occupations<br><br>Small employers and own account workers<br><br>"Blue collar" occupations:<br>Lower supervisory and technical occupations<br>Semi-routine occupations<br>Routine occupations<br><br>Never worked/ long term unemployed<br>Full-time student |
| Current / most recent industry sector | Agriculture, Forestry and Fishing<br>Manufacturing<br>Construction<br>Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles<br>Transport and Storage<br>Accommodation and Food Service Activities<br>Information and Communication<br>Financial and Insurance Activities<br>Professional, Scientific and Technical Activities<br>Administrative and Support Services Activities |

| Table 6.1 Personal characteristics considered for regression models | |
|---|---|
| | Public Administration and Defence; Compulsory Social Security |
| | Education |
| | Human Health and Social Work Activities |
| | Arts, Entertainment and Recreation |
| | Other Service Activities |
| | Other (inc. long term unemployed and students) |

It is arguable whether a learning difficulty counts as a fixed characteristic or as an acquired characteristic. Almost certainly it differs between individuals and between types of learning difficulty. Although type of learning difficulty was recorded, there are too few cases in each category to include in general models like these.

### 6.3.3 Model 1: The likelihood of weak literacy assessment performance

***Fixed characteristics***

We identified four fixed characteristics that are associated with weak performance in the literacy assessment. In order of predictive power these are:

1. Not having English as first language, especially for some ethnic groups
2. Neither parent staying in education beyond the age of 16
3. Having a (self-assessed) learning difficulty
4. Being aged 45 or older.

Those for whom English is not a first language (ENFL) tended to perform relatively weakly on the literacy assessment. However, there was significant variation by ethnic group. In particular, those self-identifying in the Pakistani group performed at a lower standard than others. It is noticeable that some variance by ethnic group was also observed among those for whom English *is* first language (EFL). The Indian, Pakistani and Black African ethnic groups performed at a lower standard than the white and Black Caribbean groups.

Those for whom at least one parent stayed in education beyond age 16 were very unlikely to have weak literacy skills once other factors are controlled for.

Inevitably, those reporting a learning difficulty struggled with the assessment more than others. It would be very valuable to distinguish between different *types* of learning difficulty but the statistical power is lacking for that analysis.

Sex was not a significant factor and age band only marginally significant.

Application of this four-term regression model allowed us to create three equal-sized groups with different base likelihoods of weak Literacy assessment performance. Analysis of the impact of 'acquired' characteristics is carried out both for the total sample and separately for each of these groups.

Group 1: probability of weak assessment performance = 3-10 per cent (mean = six per cent)

Group 2: probability of weak assessment performance = 10-14 per cent (mean = 12 per cent)

Group 3: probability of weak assessment performance = 14-89 per cent (mean = 26 per cent)

***Model fit (fixed characteristics only)***

The total explanatory power was 17.1 per cent. This is allocated as follows: ethnic group/language (11.4 per cent), parental education (2.7 per cent), learning difficulty status (2.4 per cent), age-band (0.6 per cent). There are no obvious problems with model fit.

***Acquired characteristics***

We identified six acquired characteristics that are associated with weak performance in the literacy assessment. In order of predictive power these are:

1. Working in some industry sectors (although cannot draw firm conclusions about which ones are most closely associated with weak assessment performance )
2. Infrequent or zero use of computers
3. Highest qualification is rated at Level 1 or below
4. No English GCSE/equivalent A*-C
5. Working in routine occupations (or long-term unemployed)
6. Never been on an ICT course

In terms of industry sector, even with a fairly large survey like the Skills for Life 2011 Survey (SfL2011), the sample size per industry sector is small so conclusions can only be tentative. Working in the Education and Public sector administrative sectors appears to lessen the odds of weak assessment performance but there are no other significant sector-level findings despite the strong influence of the variable as a whole.

Those using computers every day tended to achieve a higher Literacy Level than others, and those with *any* experience of computers performed better than those who had never used a computer. These associations survive even when controlling for other factors suggesting that frequency of computer use is an important behavioural variable over and above education and work status. However, frequent computer use may be something that both promotes good literacy and follows from it (i.e. it has a circular, reinforcing quality).

The association between highest qualification and literacy assessment performance is generally high but there is little difference between those with Level 2 qualifications and those with higher qualifications. Individuals with any of these qualifications were unlikely to perform weakly on the literacy assessment. The distinction between a highest qualification at Level 2 and a highest qualification at Level 1 is not particularly large but holding no qualifications (or an unclassifiable qualification) was strongly associated with weak performance.

As expected, holding a qualification relevant to literacy (a Level 2 English language qualification) is associated with better performance on the assessment, even controlling for general qualification level.

In terms of occupation, there appears to be a clear divide between what might be termed “white collar” and “blue collar” occupations, beyond that expected given educational level. This suggests that access to “white collar” work not only requires a good minimum standard of literacy but may also help individuals retain skills in a way that “blue collar” work does not.

Within the “blue collar” group, those working in Routine occupations performed at a lower standard than those working in Semi-routine or Lower supervisory occupations. There was no such subgroup distinction within the “white collar” group.

Basic skills training was not an influential factor and was excluded from the model. This counter-intuitive result *may* be explicable if the impact of such training is to bring students up to the average for their particular combination of personal characteristics. In this scenario, basic skills training *does* make a difference but its impact is hidden in a cross-sectional survey like this one. Ultimately, it requires longitudinal data or formal experimental data to tease out the truth.

However, evidence of having undertaken an ICT training course was a positive indicator. ICT courses are somewhat different from basic skills courses because the attendees are not necessarily behind their statistical peers (those others with the same combination of personal characteristics). They may simply have greater motivation to improve their skills.

Health status had no independent predictive power with regards to the literacy assessment.

### *Fixed and acquired characteristics model fit*

Addition of these acquired variables nearly doubles the explanatory power of the model from 17.1 per cent to 35.6 per cent. In the full model, this is allocated as follows: ‘fixed’ characteristics (18.1 per cent), industry sector (3.7 per cent), computer use (3.4 per cent), highest qualification (3.3 per cent), whether has Level 2 English qualification (3.2 per cent), occupational category (2.9 per cent) and whether gone on an ICT course (1.0 per cent). Note that the allocation of explanatory power to the ‘fixed characteristics’ is slightly different once the acquired characteristics are added to the model. This is due to varied correlation between the acquired and fixed characteristics. There are no obvious problems with model fit.

### *Differences between base groups*

The higher the base likelihood of weak performance in the literacy assessment, the more important the acquired characteristics are. One way of looking at this is to compare the explanatory power of the full model for each of base groups 1, 2 and 3. This varies from 12 per cent for group 1 (the group with the lowest likelihood of weak assessment performance), to 25 per cent for group 2 and 42 per cent for group 3 (the group with the highest likelihood of weak assessment performance).

The models for groups 1 and 2 can be minimised without losing significant explanatory power.

For group 1, it is possible to base a model entirely on the education variables, suggesting that the work variables, while statistically significant in isolation, explain much the same variance as the education variables. In short, work status does not alter assessment performance expectations that are based solely upon knowledge of ‘fixed’ characteristics and educational level.

For group 2, occupational category *does* have some additional predictive power (in the direction expected, although sample sizes are small for some categories) but industry sector is unimportant. Computer use is a strong predictor, something that was not the case for group 1.

Both work variables (occupational category and industry sector) form key and independent parts of the model for group 3 and, overall, have a slightly stronger influence than education. The directions of influence for both the work and education variables are more or less the same as for the total sample model but, interestingly, the influence of highest qualification is weaker for group 3 than it is for groups 1 and 2. Achievement of Level 2 or higher qualifications (as opposed to lower level qualifications) does not seem to make much difference for this group, although holding no qualifications at all remains associated with weak performance on the assessment.

One crucial difference is in the influence of 'fixed' characteristics. Group 3 is highly varied in terms of the base likelihood of weak assessment performance, ranging from 14 per cent to 89 per cent. Given this range, it is not surprising that the 'fixed' characteristics retain their weight in the model.

### 6.3.4 Model 2: The likelihood of weak numeracy assessment performance

***Fixed characteristics***

We identified five fixed characteristics that were associated with weak performance in the numeracy assessment. In order of predictive power these are:

1. Not having English as first language, especially for some ethnic groups
2. Having a (self-assessed) learning difficulty
3. Neither parent staying in education beyond the age of 16
4. Being female
5. Being aged 16 to 24 or 55 and older

Although this model has a number of similarities with the literacy model, there are some distinctive features.

Firstly, language is less of a factor (although still sufficiently strong to be the lead predictor in the model) and secondly, some minority ethnic groups (e.g. Indian and the 'White other' and 'other' categories) perform at the same standard as the majority White British group once differences in first language status are controlled for. In the literacy model, all these groups were more likely to perform weakly on the assessment, even controlling for language status.

Probably the most striking feature of the model is the inclusion of gender. Women were much more likely than men to be categorised below Entry Level 3 in the numeracy assessment. Another feature is the slightly u-shaped age effect in which both the oldest and youngest generations performed relatively weakly on the assessment.

Application of this five-term regression model allowed us to create three groups with different base likelihoods of weak numeracy assessment performance:

Group 1: 4-18 per cent (mean = 14 per cent)

Group 2: 18-26 per cent (mean = 22 per cent)

Group 3: 26-87 per cent (mean = 36 per cent)

### *Model fit (fixed characteristics only)*

The total explanatory power was 11.9 per cent, lower than for the literacy model (17.1 per cent). This is allocated as follows: ethnic group/language (4.8 per cent), learning difficulty status (2.7 per cent), parental education (2.7 per cent), gender (1.1 per cent), age-band (0.6 per cent). There are no obvious problems with model fit.

### *Acquired characteristics*

We identified five acquired characteristics that were associated with weak performance in the numeracy assessment. In order of predictive power these are:

1. No Maths GCSE/equivalent A*-C
2. Highest qualification is rated at Level 2 or below
3. Infrequent or zero computer use
4. Working in particular industry sectors (although the patterning is unclear)
5. Working in lower supervisory or semi-routine and routine occupations (or long-term unemployed)

The association between highest qualification and numeracy is high. Holding any qualifications at all is a significant advantage over holding none and holding Level 3 qualifications and above is a significant advantage over holding lower qualifications. A degree is particularly valuable in this context.

As expected, holding a qualification relevant to numeracy (a Level 2 maths qualification) is associated with better performance on the assessment, even controlling for general qualification level.

In terms of work, there appears to be a moderate divide between “white collar” and “blue collar” occupations, just as there was with literacy. Working in routine occupations in particular is associated with weaker performance on the numeracy assessment, beyond that expected given educational level. However, while with literacy there was no strong distinction between “white collar” categories, here we find that those in the higher professional or managerial occupations score significantly better than those in other “white collar” work. This either suggests that senior “white collar” work helps individuals retain numeracy skills or that a high standard of numeracy is one of the keys to seniority.

As with literacy, the sample size per industry sector is often small so specific conclusions - beyond the bland observation that industry sector seems to matter – are hard to find. Working in the ‘education’, ‘public sector administration’ and ‘finance’ sectors appears to lessen the odds of weak assessment performance. The first two were also associated with strong literacy skills but the addition of ‘finance’ makes intuitive sense.

As with literacy, those using computers frequently tended to achieve a higher assessment score than others, controlling for educational and work status.

Basic skills training in maths or numeracy was not an influential factor and was excluded from the model. This mirrors the literacy model and might be explained in the same way, namely that the impact of such training may be to bring students up to the average for their particular

combination of personal characteristics. However, it requires longitudinal data or formal experimental data to make any firm quantifying statements about the 'impact' of such training.

***Fixed and acquired characteristics model fit***

Addition of these acquired variables nearly doubles the explanatory power of the model from 11.9 per cent to 29.5 per cent. In the full model, this is allocated as follows: 'fixed' characteristics (10.6 per cent), whether has Level 2 maths qualification (5.7 per cent), highest qualification (4.8 per cent), computer use (3.3 per cent), industry sector (2.8 per cent), and occupational category (2.3 per cent). There are no obvious problems with model fit.

***Differences between base groups***

With literacy, we saw that the higher the likelihood of weak assessment performance in each base group, the more important the acquired characteristics are. However, there is much less variation with numeracy. The explanatory power of the final model varied only from 22 per cent to 29 per cent (group 1: 22 per cent; group 2: 22 per cent; group 3: 29 per cent; for literacy, the range was 12-42 per cent).

Only the education and computer use variables were significant for group 1 (those with the lowest likelihood of having weak numeracy). This is a close fit with what was observed for literacy, albeit with an extra penalty if the individual had never used a computer.

For groups 2 and 3 (with medium / high probability of having weak numeracy), the balance shifts so that education and work have more equal weight in terms of predictive power. It is also noticeable that, for group 2, holding a Level 2 maths qualification matters a lot more than overall highest qualification. For group 1, highest qualification carries more weight.

The importance of frequent computer use is also a distinctive feature of the group 2 model, with much stronger penalties associated with infrequent or zero use. The reason for this is unclear.

There was some indication that having a limiting disability or illness is an additional drawback for group 3 but the penalty associated with this was not strong.

Finally, basic skills training was not a significant factor for any group.

### 6.3.5 Model 3: The likelihood of weak ICT assessment performance

***Fixed characteristics***

We identified four fixed characteristics that were associated with weak ICT assessment performance. In order of predictive power these are:

1. Being from an older generation, with a decline in ability for each ten year age band from age 35 upwards
2. Neither parent staying in education beyond the age of 16
3. Not having English as first language
4. Having a (self-assessed) learning difficulty

The most striking difference between the ICT model and the literacy and numeracy models is the dominant influence of age. It carries two thirds of the model's explanatory power. Those aged between 16 and 34 year were much less likely than older individuals to perform weakly on the ICT assessment. Among older people, there was a clear distinction between those aged between 35 and 54 and those aged over 55 with the latter performing weakest of all. However, this is also clear from simple bivariate tables (see Section 5.5.1).

What is interesting is that factors like parental education and language – strong in the other models – are only of secondary importance in the ICT model. The strongest digital divide is between age groups, rather than between different backgrounds. Another notable facet of the model is the minor nature of the debit associated with learning difficulty. While presenting a significant barrier to good literacy and numeracy, it seems to be less important when it comes to ICT.

Gender was not a significant factor and nor was ethnic group, once language is controlled for. Interaction terms would not have improved the model but this may be due to a lack of statistical power, given that the sample size is less than half that allocated to the literacy and numeracy assessments.

Because of the smaller sample size, we have chosen not to separately analyse groups with different base likelihoods of weak ICT assessment performance.

***Model fit (fixed characteristics only)***

The total explanatory power was 18.1 per cent. This is allocated as follows: age-band (11.3 per cent), parental education (3.3 per cent), language status (2.2 per cent), learning difficulty status (1.3 per cent). There are no obvious problems with model fit.

***Acquired characteristics***

We identified six acquired characteristics that were associated with weak ICT assessment performance. In order of predictive power these are:

1. No qualifications
2. Not gone on an ICT course
3. "Blue collar" occupations or long-term unemployed
4. Working in some industry sectors (although patterning is unclear)
5. No Maths GCSE/equivalent A*-C
6. Limiting long-term illness or disability

The association between highest qualification and ICT assessment performance is high. Holding any qualifications at all is a significant advantage over holding none and the 'return' associated with a degree level qualification is greater still. However, distinctions between sub-degree qualifications did not matter greatly.

Holding a Level 2 maths qualification reduced the likelihood of weak ICT assessment performance, possibly because there are many areas of maths that require ICT skills to implement so the skills go hand in hand.

Evidence of having undertaken an ICT training course is also a positive indicator. ICT courses are somewhat different from basic skills courses because the attendees are not necessarily behind their statistical peers (those others with the same combination of personal characteristics). They may simply have greater motivation to improve their skills.

In terms of occupational categories, there is the same "white collar"/"blue collar" distinction as there was with numeracy but without the particular advantage that went with Higher professional or managerial occupations and without the particular disadvantage that went with Routine occupations.

Industry sector is a significant factor in the model but there is sufficient uncertainty around the specific sector coefficients to obscure any patterning. The strongest sector is 'information and communication' which at least makes intuitive sense.

Finally, there was some indication that having a limiting disability or illness is an additional drawback but the strength of this association was not statistically significant.

***Fixed and acquired characteristics model fit***

The addition of these acquired variables nearly triples the explanatory power of the model from 18.1 per cent to 47.0 per cent. In the full model, this is allocated as follows: highest qualification (11.1 per cent), 'fixed' characteristics (9.9 per cent), whether gone on an ICT course (9.6 per cent), occupational category (6.3 per cent), industry sector (4.7 per cent), whether has a Level 2 maths qualification (4.4 per cent), whether has a limiting long-term illness or disability (0.9 per cent). There are no obvious problems with model fit.

## 6.4 Simple Generational Analysis

### 6.4.1 Introduction

In Chapter 5, between cohort differences were examined, by comparing the performance of the same age group in each survey (e.g. those aged 16-19 in 2003 with those aged 16-19 in 2011. However, as the same literacy and numeracy assessments were used in both the Skills for Life 2003 survey (SfL2003) and SfL2011, this also allows us to compare assessment performance for the same generation separated by an eight year interval (a passage-of-time analysis), albeit with the important limitation that the survey respondents are not the same. Instead, we compare two samples drawn from the same generation but eight years apart.

We have defined five generations that are covered in both surveys.[138] Table 6.2 shows the generation definitions.

[138] There is a sixth generation: those aged 55-57 in 2003 and 63-65 in 2011. However, this is too small a group to include in this analysis.

**Table 6.2 Generation definitions**

| | AGE | |
|---|---|---|
| **GENERATION** | **2003** | **2011** |
| 1 | 16-19 | 24-27 |
| 2 | 20-24 | 28-32 |
| 3 | 25-34 | 33-42 |
| 4 | 35-44 | 43-52 |
| 5 | 45-54 | 53-62 |
| Unweighted | 7031 | 5888 |

Base: SfL2003 All aged 16-54 / SfL2011 All aged 24-62

However, these generations have evolved over the course of the eight year interval between surveys. Some members of the 2003 population will have left England or died while others – immigrants to England - will have arrived. Emigration and immigration are likely to be influential factors given the correlation between native English speaking and assessment performance, especially literacy. These population transformations obscure the extent of any change in literacy or numeracy skills between 2003 and 2011.

The extent of this population churn is indicated by Table 6.3 which shows the change between 2003 and 2011 in the proportion claiming English as first language. While the language profile of generations 4 and 5 has hardly changed, it is startlingly different among generations 1 and 2, and substantially different among generation 3. In 2003, 97 per cent of generation 1, 92 per cent of generation 2 and 90 per cent of generation 3 spoke English as a first language. In 2011, only 84-85 per cent of each generation claimed the same.

**Table 6.3 Generation proportions with EFL in 2003 and 2011**

| **GENERATION** | **2003** **%** | **2011** **%** | Difference between 2003 and 2011 % |
|---|---|---|---|
| 1 (16-19>24-27) | 97 | 85 | -12 |
| 2 (20-24>28-32) | 92 | 84 | -8 |
| 3 (25-34>33-42) | 90 | 85 | -5 |
| 4 (35-44>43-52) | 93 | 91 | -2 |
| 5 (45-54>53-62) | 93 | 94 | +1 |
| Unweighted | 498, 673, 1925, 2256, 1679 | 469, 732, 1572, 1629, 1486 | |

Base: SfL2003 All aged 16-54 / SfL2011 All aged 24-62

These findings place an obvious caveat against a simple passage-of-time analysis. Consequently, we present the analysis both for the total samples *and for the samples filtered to*

*include only those claiming English as first language*. Although a crude method of taking out the impact of immigration, it has the advantage of simplicity.

### 6.4.2 Analysis: literacy

Table 6.4 shows the proportion in each generation achieving Level 1 or higher in the literacy assessment. Among generations 2 and 3, a small decline is observed while among the other generations, a small improvement is observed. However, none of the individual differences reach conventional levels of statistical significance.[139] Consequently, there is no strong evidence to support a 'passage-of-time' effect, at least for the generations for which we have data.

**Table 6.4 Generation proportions reaching Literacy Level 1 or above in 2003 and 2011**

| | 2003 | 2011 | Difference between 2003 and 2011 |
|---|---|---|---|
| **GENERATION** | % | % | % |
| 1 (16-19>24-27) | 84.1 | 85.5 | +1.4 |
| 2 (20-24>28-32) | 87.8 | 85.8 | -2.1 |
| 3 (25-34>33-42) | 87.0 | 85.1 | -2.0 |
| 4 (35-44>43-52) | 85.4 | 85.8 | +0.4 |
| 5 (45-54>53-62) | 81.6 | 83.8 | +2.2 |
| Unweighted | 444, 613, 1774, 2044, 1509 | 381, 575, 1269, 1320, 1197 | |

Base: SfL2003 All aged 16-54 with literacy score / SfL2011 All aged 24-62 with literacy score

Table 6.5 shows the same analysis but restricted to first language English speakers and this shows a different picture. In particular, it shows a significant increase in the proportion of the youngest generation (aged between 16 and 19 in 2003 and between 24 and 27 in 2011) reaching Literacy Level 1, but no significant changes for other generations.

This suggests that – ignoring changes in language profile - a generation's aggregate Literacy Level reaches a 'steady state' at around 20 to 25 years of age after most have completed their education with no substantial increases or decreases thereafter (at least not until reaching old age). The improved performance observed among generation 1 only brings this generation in line with those of equivalent age in 2003. In short, there appears to be a slight age effect but no passage-of-time effect. This finding is obscured in the total sample analysis because changes in skill Levels are confounded with changes in language profile.

[139] Which is to say that the probability of a type I error (claiming a change has occurred when one has not occurred) is less than five per cent.

**Table 6.5 Generation proportions with EFL reaching Literacy Level 1 in 2003 and 2011**

| GENERATION | 2003<br>% | 2011<br>% | Difference between 2003 and 2011<br>% |
|---|---|---|---|
| 1 (16-19>24-27) | 84.1 | 90.0 | +5.9* |
| 2 (20-24>28-32) | 90.5 | 90.6 | +0.1 |
| 3 (25-34>33-42) | 90.2 | 89.2 | -0.9 |
| 4 (35-44>43-52) | 87.5 | 88.5 | +1.0 |
| 5 (45-54>53-62) | 84.0 | 85.8 | +1.8 |
| Unweighted | 433, 576, 1642, 1942, 1444 | 333, 495, 1124, 1235, 1143 | |

Base: SfL2003 All aged 16-54 with EFL and literacy score /SfL2011 All aged 24-62 with EFL and literacy score

Note: *statistically significant at 95% level

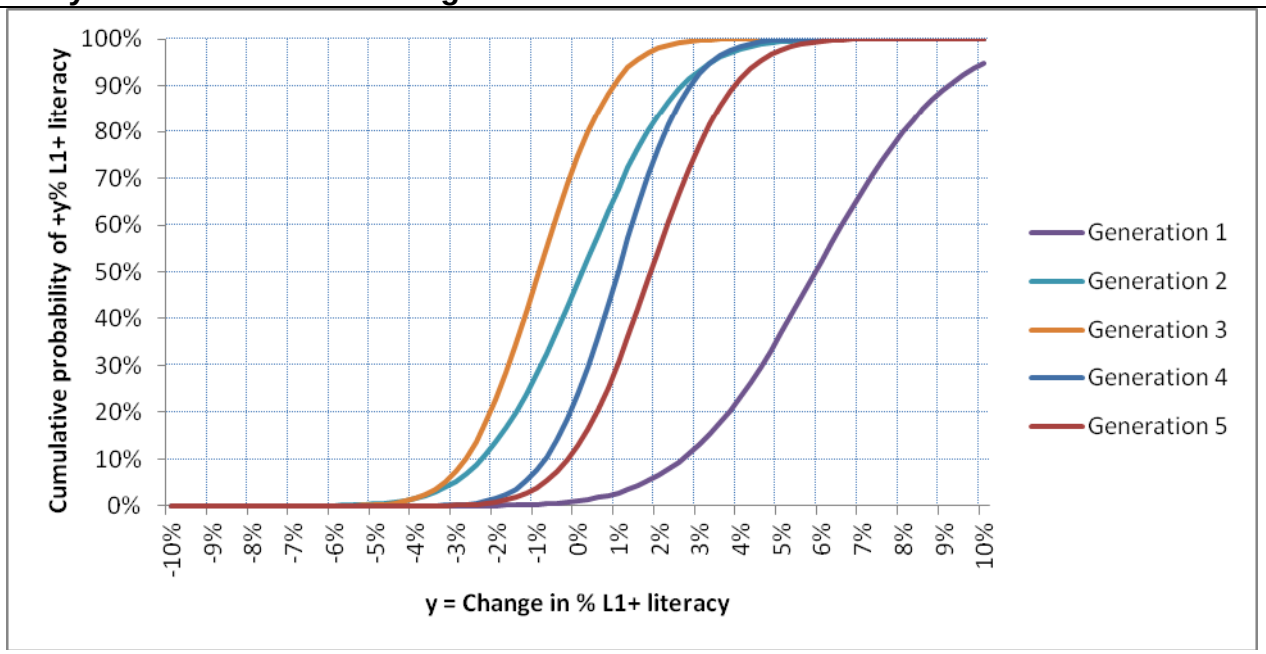
It is worth noting that observed differences that do not reach conventional levels of statistical significance (at the 95 per cent level) should not be routinely dismissed as 'noise'. If we observe a two percentage point increase in the proportion achieving Level 1 or above, then – in our estimation – there is a 50 per cent chance that the change is an increase of two percentage points or more, and a 50 per cent chance that the change is less than this. There is even a small chance that the increase is much greater. For example, for generation 5, the point estimate is +1.8 percentage points but there is an approximately 10 per cent chance that the increase in the proportion achieving Level 1 or above is four percentage points or more, a substantial change by any reckoning.

To illustrate this uncertainty, Figure 6.1 displays cumulative probability curves showing the probability of various magnitudes of change for each generation.

Reading across from the 50 per cent mark on the y axis we can see the point estimate for each generation but the value of Figure 6.1 is in its display of *uncertainty*. For example, for generation 2 the point estimate is +0.1 percentage points but the inter-quartile range is -1.2 to +1.5 percentage points. For generation 5 it is +0.7 to +2.9 percentage points.

Furthermore, if we draw an imaginary vertical line up from the 0 per cent mark on the x-axis we can see the approximate probability of a *decrease* in the proportion with Literacy Level 1 or above (48 per cent for generation 2; 13 per cent for generation 5). The complement of that figure (52 per cent for generation 2; 87 per cent for generation 5) shows the approximate probability of an *increase* in the proportion with Level 1 or higher literacy. The full data displayed in Figure 6.1 are included in Appendix Table 6.A1.

**Figure 6.1: Probabilities of various magnitudes of change in the proportions achieving Literacy Level 1 or above among those with EFL**




Base: SfL2003 All with EFL and literacy score in Generation 1 (433), Generation 2( 576), Generation 3 (1642), Generation 4 (1942), Generation 5 (1444) / SfL2011 All with EFL and numeracy score in Generation 1 (333), Generation 2 (495), Generation 3 (1124), Generation 4 (1235), Generation 5 (1143)

It has already been shown (see Section 4.3) that, while the proportion with Level 1 or above literacy did not change greatly between the two surveys, the proportion reaching Level 2 increased substantially. Table 6.6 (using the language filter) shows this is true of all generations but especially of the younger generations. These changes are far too large to be 'natural' and suggest that interventions since 2003 *have* had an effect, albeit not one of reducing the proportion with Entry Level Literacy (and one that is more pronounced for younger generations).

However, the term 'interventions' covers much more than just central and local government action. It covers environmental factors too. One example is the massive change in internet access and usage since 2003. It seems plausible that this might improve the literacy of those with a sufficient 'base skill level' to get started (Level 1) but not of those with lower skills (Entry Level and below).

**Table 6.6 Generation proportions with EFL reaching Literacy Level 2 or above in 2003 and 2011**

| GENERATION | 2003<br>% | 2011<br>% | Difference between 2003 and 2011<br>% |
|---|---|---|---|
| 1 (16-19>24-27) | 43.4 | 63.7 | +20.3* |
| 2 (20-24>28-32) | 44.5 | 62.5 | +18.0* |
| 3 (25-34>33-42) | 48.7 | 65.8 | +17.1* |
| 4 (35-44>43-52) | 47.2 | 58.3 | +11.1* |
| 5 (45-54>53-62) | 47.1 | 55.2 | +8.0* |
| Unweighted | 433, 576, 1642, 1942, 1444 | 333, 495, 1124, 1235, 1143 | |

Base: SfL2003 All aged 16-54 with EFL and literacy score /SfL2011 All aged 24-62 with EFL and literacy score

Note: *statistically significant at 95% level

### 6.4.3 Analysis: numeracy

Table 6.7 shows the proportion in each generation reaching Entry Level 3 or above in the numeracy assessment. In all generations, a small decline is observed, although none has a magnitude that reaches conventional levels of statistical significance (at the 95 per cent level). Nevertheless, the consistency of the pattern suggests that numeracy declines with the passage of time, or at least has done for these generations in this particular time period.

**Table 6.7 Generation proportions reaching Numeracy Entry Level 3 or above in 2003 and 2011**

| GENERATION | 2003<br>% | 2011<br>% | Difference between 2003 and 2011<br>% |
|---|---|---|---|
| 1 (16-19>24-27) | 78.5 | 76.9 | -1.6 |
| 2 (20-24>28-32) | 81.2 | 78.2 | -3.0 |
| 3 (25-34>33-42) | 81.4 | 78.8 | -2.6 |
| 4 (35-44>43-52) | 79.9 | 78.0 | -1.9 |
| 5 (45-54>53-62) | 78.1 | 74.8 | -3.3 |
| Unweighted | 461, 631, 1764, 2092, 1551 | 379, 583, 1282, 1299, 1183 | |

Base: SfL2003 All aged 16-54 with numeracy score / SfL2011 All aged 24-62 with numeracy score

Table 6.8 shows the same analysis as Table 6.7 but restricted to first language English speakers. It shows a substantial *dilution* of the general decline across generations, with the exception of generation 5, among whom the decline is, if anything, slightly steeper. However, application of a language filter does not entirely change the story in the way it does for literacy. This reflects the weaker correlation between numeracy and first language than is observed between literacy and first language.

**Table 6.8 Generation proportion with EFL reaching Numeracy Entry Level 3 or above in 2003 and 2011**

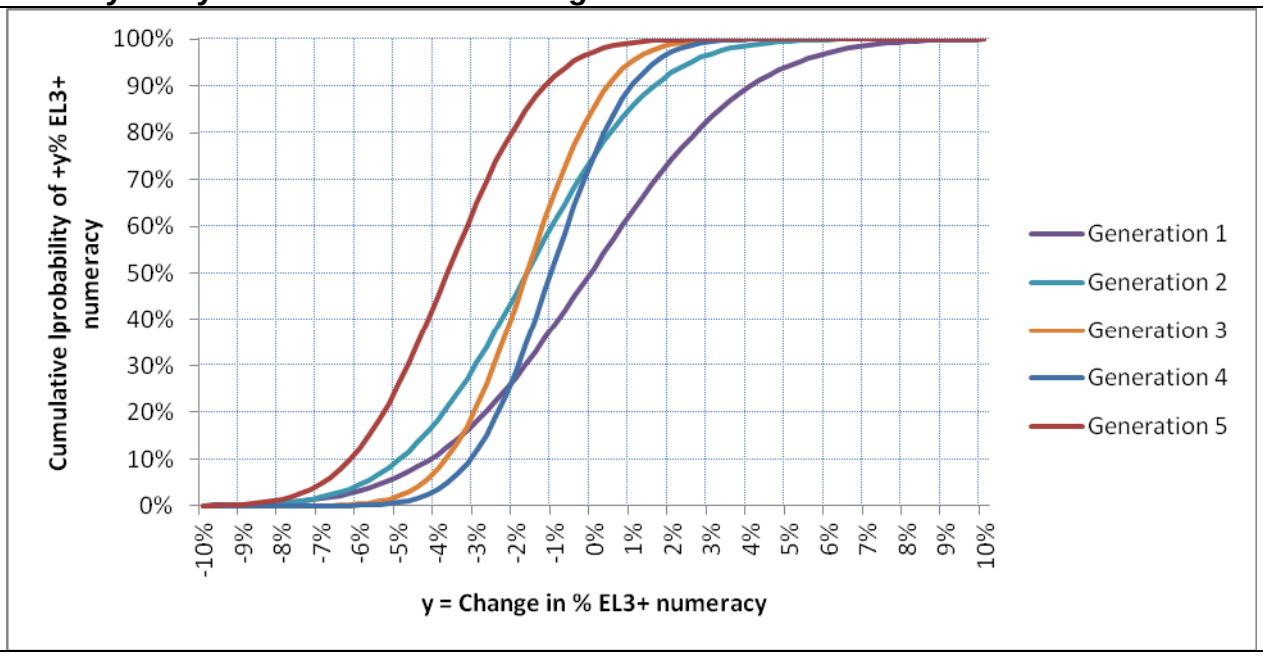
| GENERATION | 2003<br>% | 2011<br>% | Difference between 2003 and 2011<br>% |
|---|---|---|---|
| 1 (16-19>24-27) | 79.0 | 78.9 | -0.1 |
| 2 (20-24>28-32) | 82.7 | 81.0 | -1.7 |
| 3 (25-34>33-42) | 83.6 | 81.9 | -1.7 |
| 4 (35-44>43-52) | 81.4 | 80.4 | -1.1 |
| 5 (45-54>53-62) | 79.0 | 75.3 | -3.7 |
| Unweighted | 450, 591, 1633, 1988, 1485 | 332, 506, 1120, 1210, 1134 | |

Base: SfL2003 All aged 16-54 with EFL and numeracy score / SfL2011 All aged 24-62 with EFL and numeracy score

It might be hypothesised that the small decline observed among the oldest generation is associated with the substantial proportion that has retired from work (17 per cent) and who may be using numeracy skills less frequently. However, retirees performed at a similar standard in the numeracy assessment as those in work, even when controlling for (small) differences in (most recent) occupational profile. Therefore, there is little evidence of retirement as a causal variable.

Figure 6.2 is a numeracy equivalent to Figure 6.1, showing the probability of various magnitudes of change for each generation. As before, it demonstrates the substantial uncertainty in the point estimate due to small sample sizes for some generations (particularly generation 1). The full data displayed in Figure 6.2 are included Appendix Table 6.A2.

**Figure 6.2 Probabilities of various magnitudes of change in the proportions achieving Numeracy Entry Level 3 or above among those with EFL**




Base: SfL2003 All with EFL and numeracy score in Generation 1 (450), Generation 2( 591), Generation 3 (1633), Generation 4 (1988), Generation 5 (1485) / SfL2011 All with EFL and numeracy score in Generation 1 (332), Generation 2 (506), Generation 3 (1120), Generation 4 (1210), Generation 5 (1134)

### 6.4.4 Summary

In summary, we see little evidence of passage-of-time effects in literacy with the exception of the youngest generation reaching the standard of their slightly older peers. This suggests that, for most people, literacy standards reach a 'steady state' by their mid twenties after most have completed their education. It is also notable that the general 'conversion' of Level 1 skills into Level 2 skills between 2003 and 2011 is stronger with the younger generations than with the older generations. Nevertheless, it is significant for all.

Most generations display a small decline in numeracy skills between 2003 and 2011. This is most noticeable with the oldest generation (aged 53-62 in 2011) but not dramatic.

The language profile of some younger generations has changed substantially since 2003 and this obscures some of the emergent trends. Acknowledgment of this change in composition is an important requirement of generational analysis.

# 7 Education

## 7.1 Key Findings

This chapter explores the relationship between formal education and basic skills.

- Terminal education age has increased since 2003 with respondents tending to participate in education longer. Older respondents were still more likely to have left education earlier than younger respondents.
- Terminal education age was linked to literacy, numeracy and ICT skills, with respondents with higher terminal education ages tending to score higher on the skills assessments.
- For numeracy, a decline in the proportion achieving Entry Level 3 or below was only evident amongst respondents who left education between the ages of 15 to 21 (however, the majority of respondents completed their education between these ages).
- More respondents held qualifications than in 2003, with only 11 per cent not holding any qualifications. In terms of the qualifications held, there has been an increase in the proportion possessing a degree level or above qualification from 19 per cent to 24 per cent. Possession of qualifications was linked to employment status and gender.
- In line with 2003, generally the higher the qualification held, the more highly respondents tended to score on the literacy, numeracy and ICT assessments.
- Respondents aged 16-24 whose highest qualification was at Level 3 had particularly strong literacy, when compared both against their older counterparts and against 16-24 year-olds who held a different highest qualification (both at lower and higher levels, i.e. Level 2 and below or Level 4 and above).
- Highest qualifications were linked with employment and frequency of computer use. However, even when controlling for this, variation in ICT performance was still apparent suggesting that qualifications held do have an impact on ICT skills.
- Unsurprisingly, possession of an English Language GCSE (or equivalent) at grade C or above was linked to stronger performance on the literacy assessment. Those who held a Maths GCSE (or equivalent) grade C or above qualification were more likely than others to perform well in the numeracy assessment.
- Respondents' education was found to play a larger role in relation to literacy, numeracy and ICT skills than parental education. However, parental education appeared to play a role in literacy and numeracy (but not ICT skills) in the presence of low or no qualifications.

## 7.2 Introduction

This chapter explores the relationship between formal education and basic skills. It presents information about the formal educational histories of respondents, including terminal education age, possession of qualifications (focusing predominately on the highest qualification achieved, and possession of English Language and Maths GCSEs) and parental education. It then examines each of these in relation to literacy, numeracy and ICT skills. The information explored here was collected in the background questionnaire questions 'Etermed' to 'Parsch3' (the background questionnaire is shown in Annex 3).

## 7.3 When left education

Respondents were asked when they first left full time education. Some respondents had left education but returned to full time education within two years of leaving. Therefore in looking at terminal education age, the age when respondents left this second period has been used where applicable.

Three in ten respondents (31 per cent) completed their education at the age of 15 or 16, and a further quarter (23 per cent) by the age of 18. Thirty five per cent of respondents stayed in education past the age of 19. As can be seen in Table 7.1, respondents of the Skills for Life 2011 Survey (SfL2011) remained in education longer than their counterparts from the Skills for Life 2003 Survey (SfL2003). In 2003 just over two fifths (42 per cent) of respondents had left education when they were 15 or 16, with 29 per cent staying on in education past 18.

**Table 7.1 Terminal education age in 2003 and 2011**

| | 2003 | 2011 |
|---|---|---|
| | % | % |
| 10-14 | 2 | 2 |
| 15-16 | 42 | 31 |
| 17-18 | 21 | 23 |
| 19-21 | 16 | 18 |
| 22 or above | 13 | 17 |
| Still in education | 6 | 9 |
| Never went to school | * | * |
| Don't Know | * | * |
| Unweighted | 8730 | 7230 |

Base: SfL2003 All aged 16-65 / SfL2011 All aged 16-65

There were some differences by age (Table 7.2). Reflecting the findings from 2003, older respondents (especially those aged 55-65) were more likely to have left school at 16 or earlier and least likely to have continued into higher education. The youngest respondents were most likely to still be in education at the time of the survey, and were least likely to stay on in education beyond age 21. However, this is because many of these respondents will still be completing their education, and none of the 16-19 year-olds fall into this category.

**Table 7.2 Terminal education age by age (of respondent)**

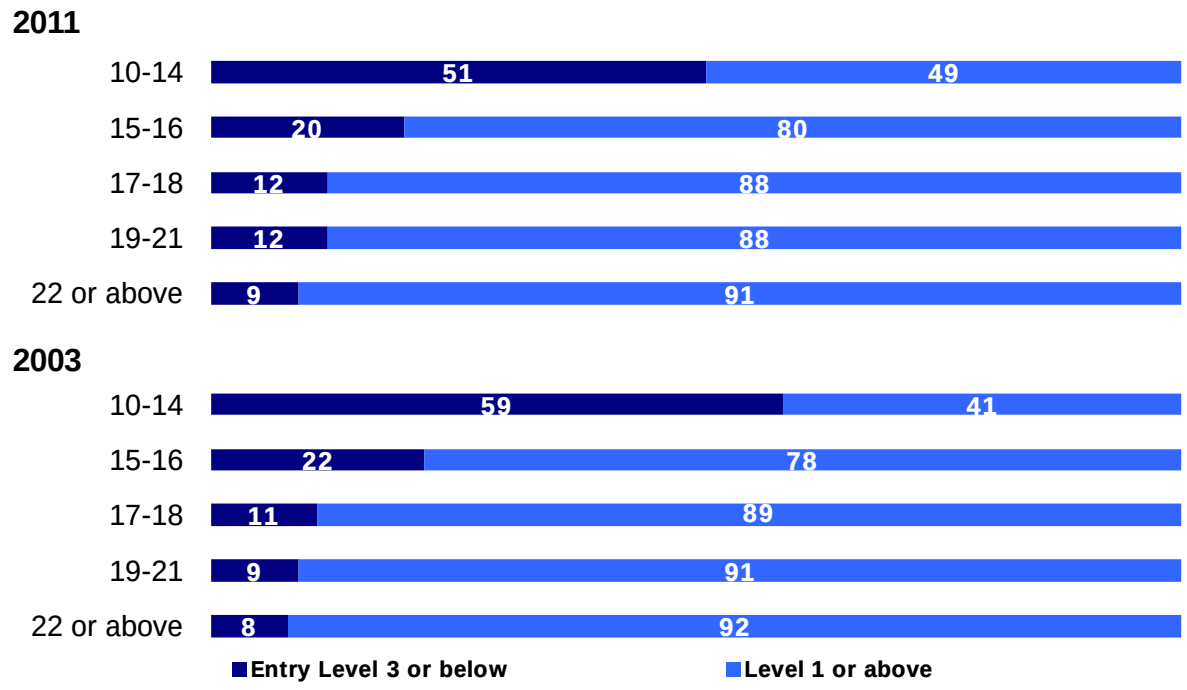
| TERMINAL EDUCATION AGE | 2003 | | | | | | | 2011 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | 16-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-65 | All | 16-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-65 |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| 10-14 | 2 | 1 | 1 | 1 | 1 | 3 | 4 | 2 | 1 | 2 | 1 | 1 | 1 | 3 |
| 15-16 | 42 | 24 | 23 | 32 | 47 | 49 | 61 | 31 | 10 | 15 | 18 | 29 | 41 | 51 |
| 17-18 | 21 | 20 | 24 | 27 | 23 | 19 | 13 | 23 | 17 | 29 | 24 | 25 | 25 | 18 |
| 19-21 | 16 | 2 | 23 | 19 | 15 | 17 | 12 | 18 | * | 22 | 25 | 21 | 17 | 15 |
| 22 or above | 13 | - | 10 | 19 | 14 | 12 | 10 | 17 | - | 6 | 28 | 22 | 16 | 12 |
| Still in education | 6 | 52 | 19 | 1 | * | - | - | 9 | 73 | 26 | 4 | 1 | 1 | - |
| Unweighted | 8730 | 498 | 673 | 1925 | 2256 | 1679 | 1696 | 7230 | 386 | 513 | 1397 | 1616 | 1584 | 1731 |

Base: SfL2003 All aged 16-65 / SfL2011 All aged 16-65

### 7.3.1 Literacy and Numeracy

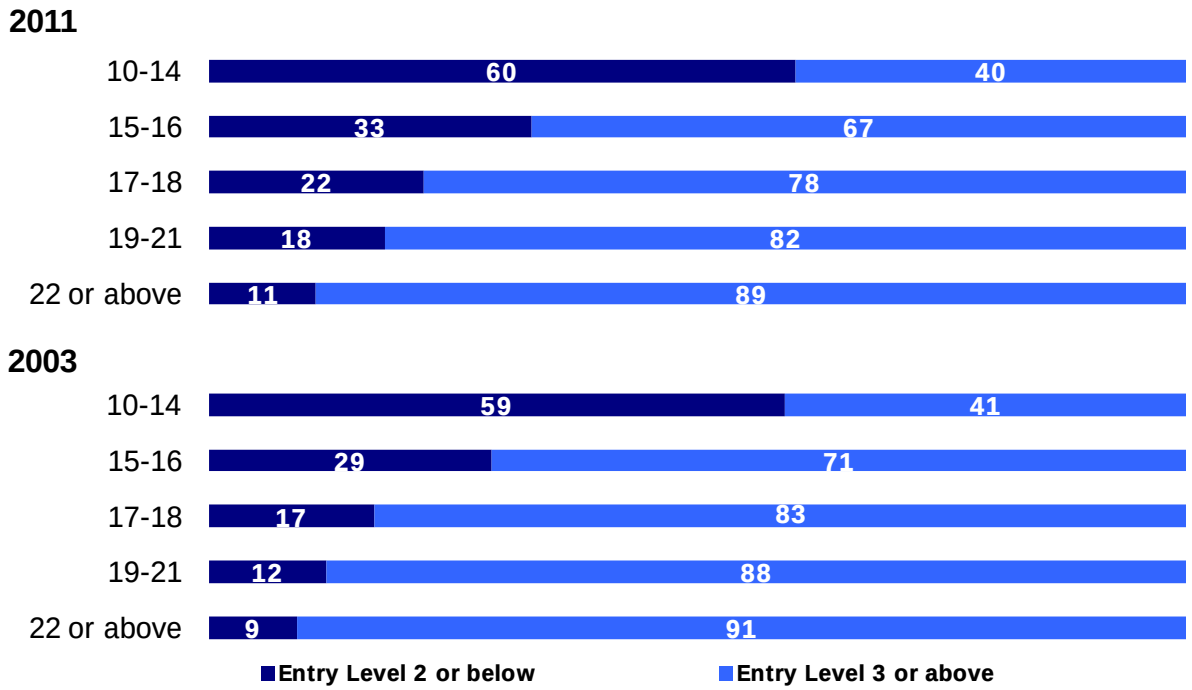
Terminal education age was linked to literacy and numeracy. In line with the pattern observed in 2003, respondents who left school earlier were less likely to achieve Level 1 or above in literacy, and less likely to achieve Entry Level 3 or above in numeracy. This is not to say all respondents who left school early achieved lower scores on the assessments, just under half (49 per cent) of respondents who left by age 14 were classified at Level 1 or above on the literacy assessment, and 40 per cent at Entry Level 3 or above on the numeracy assessment (Figures 7.1 and 7.2).

**Figure 7.1 Literacy Levels by terminal education age in 2003 and 2011 (%)**




Base: SfL2003 All aged 16-65 with literacy score no longer in full time education (7538) / SfL2011 All aged 16-65 with literacy score no longer in full time education (5471)

**Figure 7.2 Numeracy Levels by terminal education age in 2003 and 2011 (%)**




Base: SfL2003 All aged 16-65 with numeracy score no longer in full time education (7688) / SfL2011 All aged 16-65 with numeracy score no longer in full time education (5474)

Within each terminal education age band, there has been little change since 2003 in the proportion of respondents achieving a Level 1 or above score in literacy. Mirroring the headline findings for literacy, in each terminal education age group there has been a decline in the proportion of respondents achieving Level 1, but an increase in the proportion achieving a Level 2 or above. The overall small decline in numeracy since 2003 is evident amongst respondents who left school between the ages of 15 and 21 (the majority of respondents). However, the proportion reaching Entry Level 3 or above has not changed amongst respondents who left school before the age of 15 nor amongst those who left school after the age of 21. The distributions are shown in Tables 7.3 and 7.4.

**Table 7.3 Literacy Levels by terminal education age in 2003 and 2011**

| | 2003 | | | | | | 2011 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | 14 or below | 15-16 | 17-18 | 19-21 | 22 or above | All | 14 or below | 15-16 | 17-18 | 19-21 | 22 or above |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 1 or below | 3 | 19 | 4 | 2 | 2 | 2 | 5 | 19 | 7 | 4 | 4 | 2 |
| Entry Level 2 | 2 | 11 | 3 | 1 | 1 | 1 | 2 | 7 | 4 | 2 | 2 | 1 |
| Entry Level 3 | 11 | 30 | 15 | 8 | 7 | 6 | 8 | 25 | 10 | 5 | 6 | 6 |
| Level 1 | 40 | 32 | 45 | 43 | 34 | 27 | 28 | 30 | 37 | 30 | 25 | 18 |
| Level 2 or above | 44 | 8 | 33 | 46 | 57 | 65 | 57 | 19 | 42 | 58 | 63 | 73 |
| Unweighted | 7874 | 136 | 3537 | 1723 | 1182 | 932 | 5824 | 109 | 1990 | 1347 | 1056 | 949 |

Base: SfL2003 All aged 16-65 with literacy score / SfL2011 All aged 16-65 with literacy score

Note: Respondents who were 'still in education', who 'never went to school', or who didn't report a terminal education age are included in the 'All' column, but are not individually listed in a column.

**Table 7.4 Numeracy Levels by terminal education age in 2003 and 2011**

| | 2003 | | | | | | 2011 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | 14 or less | 15-16 | 17-18 | 19-21 | 22 or above | All | 14 or less | 15-16 | 17-18 | 19-21 | 22 or above |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 1 or below | 5 | 25 | 7 | 3 | 3 | 2 | 7 | 26 | 9 | 6 | 7 | 2 |
| Entry Level 2 | 16 | 34 | 22 | 14 | 9 | 7 | 17 | 34 | 24 | 16 | 11 | 9 |
| Entry Level 3 | 25 | 27 | 30 | 27 | 22 | 14 | 25 | 26 | 31 | 25 | 24 | 17 |
| Level 1 | 28 | 10 | 26 | 28 | 32 | 29 | 29 | 11 | 24 | 34 | 32 | 30 |
| Level 2 or above | 25 | 4 | 15 | 28 | 34 | 48 | 22 | 3 | 12 | 19 | 26 | 41 |
| Unweighted | 8040 | 143 | 3641 | 1728 | 1202 | 944 | 5823 | 105 | 1980 | 1370 | 1053 | 945 |

Base: SfL2003 All aged 16-65 with numeracy score / SfL2011 All aged 16-65 with numeracy score

Note: Respondents who were 'still in education', who 'never went to school', or who didn't report a terminal education age are included in the 'All' column, but are not individually listed in a column.

### 7.3.2 ICT

Table 7.5 illustrates the performance of respondents by terminal education age across the four ICT components.

**Table 7.5 ICT Levels by terminal education age**

| | All | 14 or less | 15-16 | 17-18 | 19-21 | 22 or above |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | % |
| **WORD PROCESSING** | | | | | | |
| Entry Level 2 or below | 43 | 84 | 69 | 41 | 35 | 22 |
| Entry Level 3 or above | 57 | 16 | 31 | 59 | 65 | 78 |
| Unweighted | 2253 | 36 | 768 | 543 | 411 | 357 |
| **EMAIL** | | | | | | |
| Entry Level 2 or below | 31 | 70 | 54 | 26 | 24 | 13 |
| Entry Level 3 or above | 69 | 30 | 46 | 74 | 76 | 87 |
| Unweighted | | | | | | |
| **SPREADSHEET** | | | | | | |
| Entry Level 2 or below | 39 | 84 | 62 | 33 | 30 | 23 |
| Entry Level 3 or above | 61 | 16 | 58 | 67 | 70 | 77 |
| Unweighted | 2228 | 36 | 758 | 539 | 406 | 352 |
| **MULTIPLE CHOICE** | | | | | | |
| Entry Level 2 or below | 9 | 36 | 19 | 5 | 6 | 4 |
| Entry Level 3 or above | 91 | 64 | 81 | 95 | 94 | 96 |
| Unweighted | 2274 | 36 | 772 | 551 | 415 | 362 |

Base: SfL2011 All aged 16-65 who gave a terminal education age with word processing / email / spreadsheet / multiple choice score

Note: Respondents who were 'still in education', who 'never went to school', or who didn't report a terminal education age are included in the 'All' column, but are not individually listed in a column.

In line with the pattern that emerged for literacy and numeracy, respondents who left school later tended to perform at a higher standard across the four ICT components. However, this is again not to say all respondents who stayed on in education past the age of 21 always achieved higher assessment scores. Just under a quarter (23 per cent) of respondents who left school after the age of 22 failed to achieve Entry Level 3 or above on the spreadsheet component, as did 22 per cent on the word processing component.[140]

## 7.4 Highest qualifications

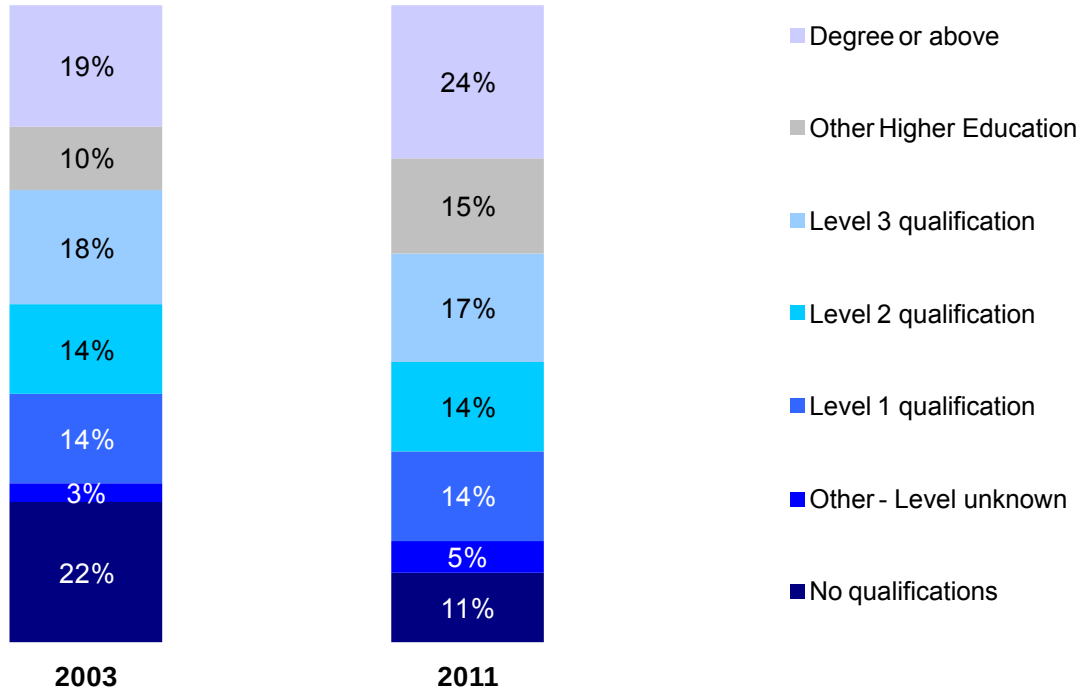
Detailed information about the qualifications held by respondents was collected in the survey. However, in this section analysis concentrates on the highest qualification held. Respondents who were still in education have been excluded as these respondents may be yet to gain what will be their highest qualification. It should be noted that the structure of the relevant questionnaire sections has substantially changed between the two surveys, and comparisons to 2003 should be treated with caution.[141]

[140] For full breakdowns see Appendix Table 7.A1.

[141] This section in the questionnaire was updated to account for changes to education and qualifications since 2003.

Since 2003, the proportion of respondents holding qualifications has increased substantially (Figure 7.3).

**Figure 7.3 Highest qualification amongst those no longer in education in 2003 and 2011 (%)**




Base: SfL2003 All aged 16-65 no longer in full time education (8357) / SfL2011 All aged 16-65 no longer in full time education (6804)

In 2003, just over two in ten (22 per cent) respondents did not hold any qualifications compared to one in ten (11 per cent) in 2011. In line with 2003, the absence of qualifications was more common amongst older respondents (21 per cent of those aged 55 or more, compared to 11 per cent of those aged under 20).

At the other end of the education continuum, one quarter (24 per cent) held a degree level or above qualification, which is an increase from 19 per cent in 2003. Reflecting the findings observed in 2003 this was more common amongst younger respondents (excluding 16-24 year-olds, for whom many will have been too young to obtain a degree level qualification). An increase was apparent in the proportion of respondents holding another (non-degree) higher education qualification (10 per cent to 15 per cent). A breakdown of the highest qualification by age is shown in Table 7.6.

**Table 7.6 Highest qualification by age amongst those no longer in education**

| | All | 16-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-65 |
|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % |
| Degree or above | 24 | * | 17 | 34 | 29 | 21 | 19 |
| Other Higher Education | 15 | 6 | 13 | 13 | 16 | 18 | 15 |
| Level 3 | 17 | 32 | 24 | 20 | 17 | 14 | 13 |
| Level 2 | 14 | 29 | 20 | 13 | 14 | 15 | 9 |
| Level 1 or below | 14 | 21 | 18 | 11 | 14 | 16 | 14 |
| Other qualification – level unknown | 5 | - | 2 | 3 | 3 | 5 | 10 |
| No qualifications | 11 | 11 | 6 | 5 | 7 | 11 | 21 |
| Unweighted | 6804 | 111 | 410 | 1362 | 1605 | 1582 | 1731 |

Base: SfL2011 All aged 16-65 no longer in full time education

The possession of qualifications was strongly linked to employment status. Respondents currently in paid work or self employment were more likely to hold a degree level qualification (29 per cent) than those not in paid work or self employment (12 per cent). Conversely those not in paid work or self employment were more likely to not hold any qualifications at all (six per cent versus 23 per cent).[142]

In 2003 some differences were evident between men and women, with women slightly less likely to hold a degree (17 per cent compared to 20 per cent of men), and more likely to lack any qualifications (23 per cent compared to 20 per cent). In 2011, women were again slightly more likely to lack qualifications (12 per cent versus 10 per cent), but were now equally likely to hold a degree level or above qualification (24 per cent of men and 25 per cent of women).

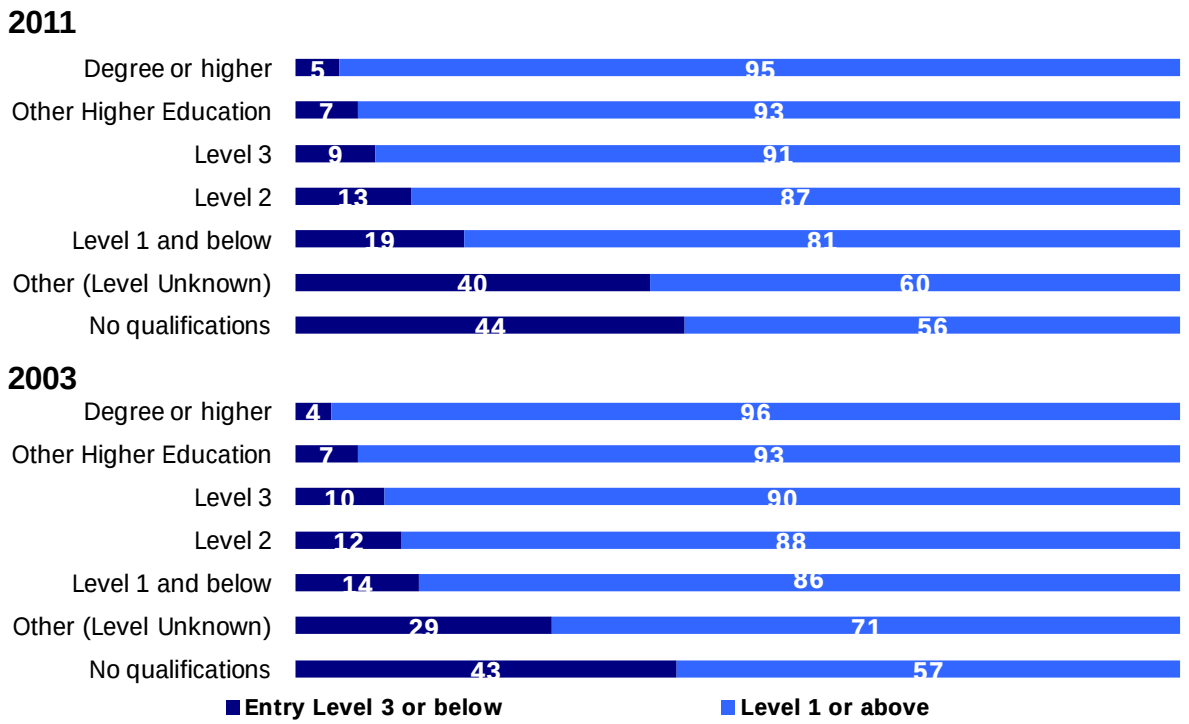
### 7.4.1 Literacy and Numeracy

As shown in regression analysis in Section 6.3, highest qualification is an important predicting factor of 'weak' literacy and numeracy performance. In line with the data from 2003, the higher the qualification held the more strongly respondents tended to perform on the literacy and the numeracy assessment. This is illustrated in Figures 7.4 and 7.5.[143]

[142] See Appendix Table 7.A2.

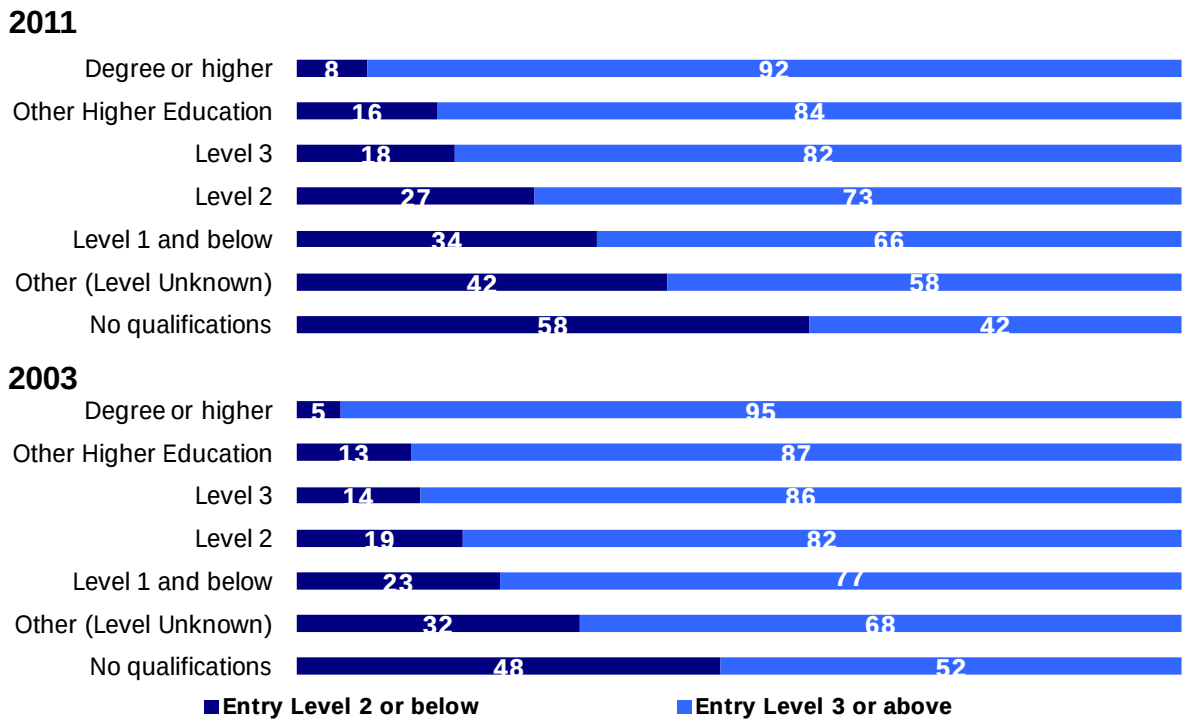
[143] For full literacy breakdowns see Appendix Table 7.A3. For full numeracy breakdowns see Table 7.8.

**Figure 7.4 Literacy Levels by highest qualification amongst those no longer in education in 2003 and 2011 (%)**




Base:SfL2003 All aged 16-65 no longer in full time education with literacy score (7538) / SfL2011 All aged 16-65 no longer in full time education with literacy score (5471)

**Figure 7.5 Numeracy Levels by highest qualification amongst those no longer in education in 2003 and 2011 (%)**




Base: SfL2003 All aged 16-65 no longer in full time education with numeracy score (7688) / SfL2011 All aged 16-65 no longer in full time education with numeracy score (5474)

Despite this increase in qualifications held, the overall proportion of respondents achieving Level 1 or above in literacy or Entry Level 3 or above in numeracy has not increased. Among respondents whose highest qualification was at Level 1 there has actually been a small decline in the proportion achieving a Level 1 or above score in literacy (86 per cent in 2003 to 81 per cent in 2011). This potentially unexpected finding may in part be due to the differing correlation between highest qualification and skills across different age groups. Whilst highest qualification correlates with both literacy and numeracy skills, the strength of the correlation decreases with age. This suggests that the skills premium of qualifications changes with age.[144]

Since 2003, there has been an increase in the proportion of respondents achieving a Level 2 or above literacy score and a decrease in the proportion achieving a Level 1 score. As illustrated in Table 7.7 this pattern is evident amongst all groups.[145] For numeracy, the overall small decline in the proportion achieving Entry Level 3 or above was evident across all groups (Table 7.8).

[144] See Appendix Table 7.A4.

[145] For full breakdowns see Appendix Table 7.A3.

## Table 7.7 Literacy Levels by highest qualification amongst those no longer in education in 2003 and 2011

| | ALL | | DEGREE OR HIGHER LEVEL QUALIFICATION | | OTHER HE QUALIFICATION | | LEVEL 3 QUALIFICATION | | LEVEL 2 QUALIFICATION | | LEVEL 1 QUALIFICATION | | OTHER QUALIFICATION (LEVEL UNKNOWN) | | NO QUALIFICATION | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2003 % | 2011 % | 2003 % | 2011 % | 2003 % | 2011 % | 2003 % | 2011 % | 2003 % | 2011 % | 2003 % | 2011 % | 2003 % | 2011 % | 2003 % | 2011 % |
| Entry Level 3 or below | 17 | 15 | 4 | 5 | 7 | 7 | 10 | 9 | 12 | 13 | 14 | 19 | 29 | 40 | 43 | 44 |
| Level 1 | 40 | 29 | 26 | 16 | 38 | 29 | 43 | 30 | 44 | 38 | 50 | 39 | 42 | 33 | 40 | 34 |
| Level 2 or above | 44 | 56 | 70 | 79 | 55 | 64 | 48 | 61 | 44 | 49 | 36 | 42 | 28 | 27 | 17 | 22 |
| Unweighted | 7538 | 5471 | 1348 | 1328 | 847 | 817 | 1316 | 877 | 1055 | 722 | 1131 | 794 | 245 | 267 | 1596 | 666 |

Base:SfL2003 All aged 16-65 no longer in full time education with literacy score / SfL2011 All aged 16-65 no longer in full time education with literacy score

## Table 7.8 Numeracy Levels by highest qualification amongst those no longer in education in 2003 and 2011

| | ALL | | DEGREE OR HIGHER LEVEL QUALIFICATION | | OTHER HE QUALIFICATION | | LEVEL 3 QUALIFICATION | | LEVEL 2 QUALIFICATION | | LEVEL 1 QUALIFICATION | | OTHER QUALIFICATION (LEVEL UNKNOWN) | | NO QUALIFICATION | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2003 % | 2011 % | 2003 % | 2011 % | 2003 % | 2011 % | 2003 % | 2011 % | 2003 % | 2011 % | 2003 % | 2011 % | 2003 % | 2011 % | 2003 % | 2011 % |
| Entry Level 1 or below | 6 | 7 | * | 2 | 2 | 4 | 2 | 4 | 4 | 6 | 4 | 9 | 8 | 18 | 17 | 23 |
| Entry Level 2 | 16 | 17 | 5 | 6 | 11 | 12 | 12 | 14 | 15 | 20 | 19 | 25 | 23 | 24 | 32 | 34 |
| Entry Level 3 | 26 | 25 | 12 | 16 | 24 | 28 | 25 | 26 | 30 | 28 | 34 | 33 | 30 | 30 | 30 | 28 |
| Level 1 | 27 | 29 | 30 | 35 | 33 | 33 | 32 | 33 | 30 | 29 | 27 | 25 | 28 | 21 | 17 | 11 |
| Level 2 or above | 25 | 22 | 52 | 41 | 31 | 24 | 29 | 23 | 22 | 16 | 16 | 8 | 11 | 7 | 5 | 4 |
| Unweighted | 7688 | 5474 | 1357 | 1316 | 844 | 800 | 1327 | 924 | 1072 | 724 | 1144 | 819 | 257 | 263 | 1687 | 628 |

Base: SfL2003 All aged 16-65 no longer in full time education with numeracy score / SfL2011 All aged 16-65 no longer in full time education with numeracy score

Overall, these findings suggest education is an important factor in how well respondents perform on the literacy and numeracy assessments. However, it is important to explore the data further, particularly in relation to age. As identified earlier, age is closely linked with qualifications, with younger respondents tending to stay in education longer and hold more qualifications. We explore this separately for literacy and numeracy.

### *Literacy*

Data for respondents in all groups generally reflected the overall pattern found, with respondents with higher qualifications tending to score more highly than less qualified people on the literacy assessment (Table 7.9). However, there were a few exceptions to this, most notably in the youngest age group (16-24), where those with a Level 3 qualification tended to have very strong literacy performance. This group had the highest performance in the literacy assessment, with 97 per cent being classified at Level 1 or above.[146]

**Table 7.9 Literacy Levels within age, by highest qualification amongst those no longer in education**

| | All | Degree or higher qualification | Other HE qualification | Level 3 qualification | Level 2 qualification | Level 1 qualification | Other qualification (Level unknown) | No qualification |
|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % |
| **16-24 year-olds** | | | | | | | | |
| Entry Level 3 or below | 15 | 14 | 15 | 3 | 16 | 18 | 29 | 46 |
| Level 1 or above | 85 | 86 | 85 | 97 | 84 | 82 | 71 | 54 |
| Unweighted | 416 | 49 | 43 | 100 | 98 | 81 | 7 | 38 |
| **25-54 year-olds** | | | | | | | | |
| Entry Level 3 or below | 15 | 5 | 6 | 10 | 13 | 21 | 50 | 49 |
| Level 1 or above | 85 | 95 | 94 | 90 | 87 | 79 | 50 | 51 |
| Unweighted | 3644 | 1020 | 570 | 604 | 507 | 519 | 124 | 320 |
| **55-65 year-olds** | | | | | | | | |
| Entry Level 3 or below | 16 | 2 | 9 | 12 | 9 | 13 | 29 | 37 |
| Level 1 or above | 84 | 98 | 91 | 88 | 91 | 87 | 71 | 63 |
| Unweighted | 1388 | 258 | 204 | 173 | 117 | 193 | 136 | 307 |

Base: SfL2011 All aged 16-65 no longer in full time education with literacy score

[146] For full breakdowns see Appendix Table 7.A5.

Across all groups there were no differences by age in terms of achieving a Level 1 or above score.[147] The only exception to this was amongst those whose highest qualification was at Level 3. In this group, respondents aged 16-24 were more likely than respondents aged 25-54 and 55-65 to achieve a Level 1 or above literacy score (Table 7.9).

Both of these findings suggest that 16-24 year-olds who hold a Level 3 qualification have stronger literacy than either 16-24 year-olds who hold a different highest qualification (both at higher and lower levels), or their older counterparts who hold the same highest qualification. It is difficult to offer an explanation for this change, and the small base sizes of this group must be borne in mind when interpreting this finding. The majority of 16-24 year old group will have completed their Level 3 qualification relatively recently, and it may be that this recent tuition for these qualifications, in particular A Levels and AS Levels (which account for 74 per cent of the Level 3 qualifications of this group) may have aided the completion of the literacy assessment.

### *Numeracy*

Similar to the literacy findings, across each of the three age groups (16-24 year-olds, 25-54 year-olds and 55-65 year-olds), respondents with higher qualifications generally performed better in the numeracy assessment, with such respondents more likely to achieve an Entry Level 3 or above score (Table 7.10). The main exception to this again seems to be amongst those in the youngest group (16-24), where respondents holding another HE (non-degree) qualification tended to perform less well. This finding should, however, be treated with caution due to the small base size of this group.[148]

[147] Whilst differences are apparent between 16-24 year-olds and their older counterparts amongst those whose highest qualification is a 'Degree or higher qualification', or an 'Other HE (non degree) qualification', these are not statistically significant (at the five percent confidence level) due to the small base sizes.

[148] For full breakdowns see Appendix Table 7.A6.

**Table 7.10 Numeracy Levels within age by highest qualification amongst those no longer in education**

| | All | Degree or higher qualification | Other HE qualification | Level 3 qualification | Level 2 qualification | Level 1 qualification | Other qualification (Level unknown) | No qualification |
|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % |
| **16-24 year-olds** | | | | | | | | |
| Entry Level 2 or below | 29 | 11 | 37 | 18 | 34 | 40 | 8 | 65 |
| Entry Level 3 or above | 71 | 89 | 63 | 82 | 66 | 60 | 92 | 35 |
| Unweighted | 420 | 51 | 45 | 107 | 101 | 76 | 6 | 34 |
| **25-54 year-olds** | | | | | | | | |
| Entry Level 2 or below | 22 | 7 | 14 | 19 | 26 | 34 | 41 | 61 |
| Entry Level 3 or above | 78 | 93 | 86 | 81 | 74 | 66 | 59 | 39 |
| Unweighted | 3655 | 1006 | 560 | 635 | 498 | 542 | 120 | 294 |
| **55-65 year-olds** | | | | | | | | |
| Entry Level 2 or below | 26 | 6 | 15 | 14 | 21 | 27 | 45 | 52 |
| Entry Level 3 or above | 74 | 94 | 85 | 86 | 79 | 73 | 55 | 48 |
| Unweighted | 1396 | 258 | 195 | 182 | 125 | 200 | 137 | 299 |

Base: SfL2011 All aged 16-65 no longer in full time education with numeracy score

For most groups in Table 7.10 there were few differences between the three age groups in terms of achieving an Entry Level 3 or above score. The exceptions to this were amongst those whose highest qualification was an 'other HE Level (non degree) qualification' or a Level 1 qualification, where 16-24 year-olds were less likely than those aged 55-65 to achieve an Entry Level 3 or above score. Moreover, amongst those without any qualifications, respondents aged 55-65 were more likely to achieve an Entry Level 3 or above score than those age 25-54.[149]

### 7.4.2 ICT

The possession of qualifications was closely related to performance across the four components of the ICT assessment. Respondents educated to degree level tended to perform best and were most likely to achieve a Level 2 or above score across all four ICT components. Performance amongst respondents educated to HE Level (non-degree), Level 3 and Level 2 was similar, with these respondents tending to perform at a lower standard than those educated to degree level, but higher than those educated to Level 1 or below. The full distributions are shown in Table 7.11.

[149] These findings again should be treated with caution due to small base sizes. It should be noted that the other apparent differences between the 16-24 year old group and the 55-65 group do not reach levels of statistical significance as the 5 per cent level due to the small base size of the 16-24 year group.

**Table 7.11 ICT Levels by highest qualification amongst those no longer in education**

| | All | Degree or higher qualification | Other HE qualification | Level 3 qualification | Level 2 qualification | Level 1 qualification | Other qualification (Level unknown) | No qualification |
|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % |
| **WORD PROCESSING** | | | | | | | | |
| Entry Level 2 or below | 46 | 16 | 38 | 34 | 51 | 68 | 86 | 92 |
| Entry Level 3 | 17 | 17 | 19 | 23 | 21 | 17 | 9 | 3 |
| Level 1 | 15 | 22 | 22 | 17 | 11 | 9 | 4 | 3 |
| Level 2 or above | 22 | 45 | 21 | 27 | 17 | 6 | 1 | 2 |
| Unweighted | 2122 | 472 | 354 | 344 | 293 | 296 | 111 | 252 |
| **EMAIL** | | | | | | | | |
| Entry Level 2 or below | 33 | 9 | 24 | 24 | 35 | 44 | 64 | 82 |
| Entry Level 3 | 9 | 5 | 9 | 10 | 13 | 16 | 8 | 4 |
| Level 1 | 7 | 8 | 8 | 8 | 7 | 10 | 9 | 4 |
| Level 2 or above | 50 | 78 | 59 | 58 | 45 | 29 | 19 | 10 |
| Unweighted | 2115 | 470 | 352 | 344 | 295 | 293 | 110 | 251 |
| **SPREADSHEET** | | | | | | | | |
| Entry Level 2 or below | 42 | 19 | 36 | 30 | 42 | 52 | 73 | 88 |
| Entry Level 3 | 28 | 25 | 31 | 32 | 34 | 34 | 24 | 8 |
| Level 1 | 15 | 21 | 18 | 20 | 16 | 10 | 4 | 4 |
| Level 2 or above | 10 | 35 | 16 | 18 | 9 | 3 | - | - |
| Unweighted | 2098 | 466 | 347 | 343 | 288 | 293 | 110 | 251 |
| **MULTIPLE CHOICE** | | | | | | | | |
| Entry Level 2 or below | 10 | 1 | 4 | 3 | 7 | 13 | 27 | 40 |
| Entry Level 3 | 13 | 4 | 10 | 11 | 15 | 17 | 27 | 22 |
| Level 1 | 26 | 12 | 26 | 24 | 31 | 41 | 33 | 28 |
| Level 2 or above | 52 | 83 | 60 | 61 | 48 | 29 | 12 | 10 |
| Unweighted | 2143 | 475 | 358 | 348 | 298 | 299 | 111 | 254 |

Base: SfL2011 All aged 16-65 no longer in full time education with word processing / email / spreadsheet / multiple choice score

These differences are closely linked to patterns of employment. Respondents educated to a higher level, were more likely to work in jobs that required them to use a computer (90 per of respondents educated to degree level used a computer at work, compared to only 43 per cent of those educated to Level 1). Unsurprisingly, these respondents were also more likely to be 'frequent'[150] computer users, with 98 per cent of respondents educated to degree level using a computer daily or at least two to four times a week, compared to 72 per cent educated to Level 1. When focusing analysis solely on respondents who are frequent computers users, there is still variation by highest qualification held, although it is less marked. This is illustrated in Table 7.12.

[150] Frequent users are defined as respondents who use a computer either daily or at least two to four times a week either at work or at home.

Overall these data suggest that the highest qualification held does have an impact on ICT skills.[151]

**Table 7.12 ICT Level 2 or above by highest qualification amongst 'frequent' computer users who are no longer in education**

| | All | Degree or higher qualification | Other HE qualification | Level 3 qualification | Level 2 qualification | Level 1 qualification | Other qualification (Level unknown) | No qualification |
|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % |
| **WORD PROCESSING** | | | | | | | | |
| Level 2 or above | 30 | 47 | 23 | 40 | 25 | 11 | 2 | 5 |
| Unweighted | 1817 | 485 | 336 | 345 | 258 | 223 | 65 | 105 |
| **EMAIL** | | | | | | | | |
| Level 2 or above | 62 | 80 | 61 | 71 | 55 | 41 | 28 | 25 |
| Unweighted | 1815 | 483 | 334 | 347 | 260 | 221 | 65 | 105 |
| **SPREADSHEET** | | | | | | | | |
| Level 2 or above | 20 | 37 | 17 | 25 | 12 | 5 | - | - |
| Unweighted | 1796 | 479 | 329 | 345 | 254 | 219 | 65 | 105 |
| **MULTIPLE CHOICE** | | | | | | | | |
| Level 2 or above | 61 | 83 | 63 | 70 | 55 | 35 | 12 | 23 |
| Unweighted | 1837 | 488 | 339 | 349 | 263 | 227 | 65 | 106 |

Base: SfL2011 All aged 16-65 who are frequent computer users and no longer in full time education, with Level 2 word processing / email / spreadsheet / multiple choice score

## 7.5 Specific English and Maths qualifications

### 7.5.1 English Language GCSE

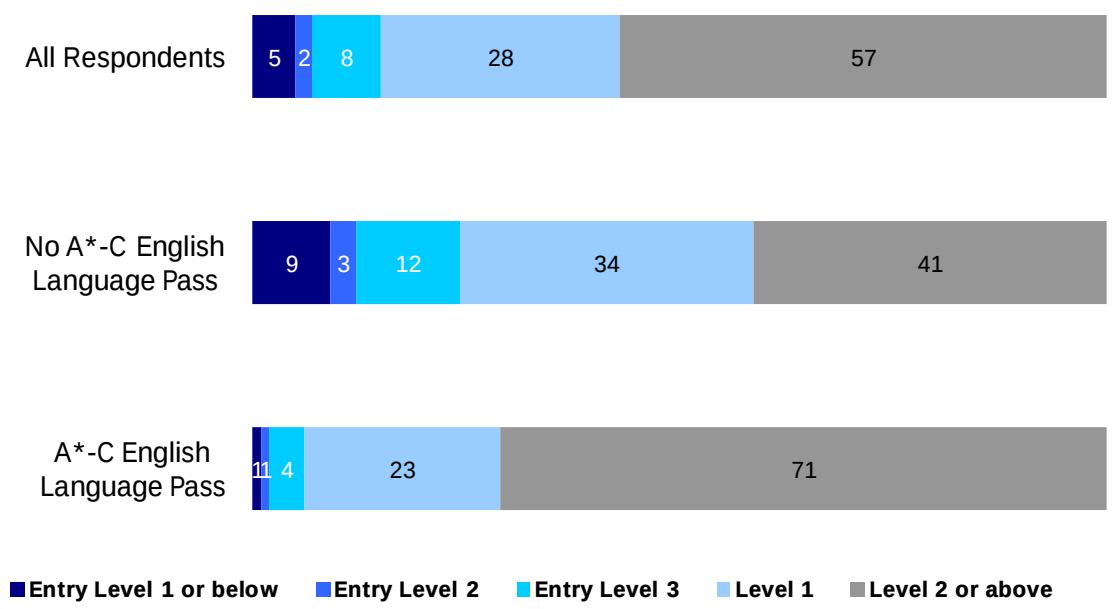
Half of all respondents (51 per cent) held an English language GCSE (or equivalent) at grade C or above. This has remained unchanged from 2003. As with qualifications in general, older respondents were less likely to be qualified to this level (37 per cent of 55-65 year-olds compared to 63 per cent of 16-19 year-olds). Results varied by gender, with men less likely to hold this qualification (48 per cent compared to 54 per cent of women). Respondents born outside of the UK were unsurprisingly less likely than average to hold this qualification (29 per cent).[152]

As would be expected, respondents who held an English Language GCSE (or equivalent) at grade C or above were more likely to be classified at Level 1 or above in literacy than those who did not (94 per cent versus 75 per cent) (Figure 7.6). However, it is interesting to note that six per cent of respondents who held this qualification achieved an Entry Level score. This difference is evident across all age groups, so is unlikely to be a function of the time since the exam was taken or due to any changes in exam content or level. This mirrors the findings from 2003.

[151] For full breakdowns see Appendix Table 7.A7.

[152] See Appendix Table 7.A8.

**Figure 7.6 Literacy Levels by whether hold English Language GCSE (or equivalent) at grades A*-C (%)**




Base:SfL2011 All aged 16-65 with literacy score (5824)

As discussed earlier (in Section 5.5.2), women tended to perform slightly better on the literacy assessment than men. This, however, does not hold true amongst men and women who hold an English Language (or equivalent) GCSE at grade C or above, with both performing at very similar standards.[153]

In comparison to 2003, the performance of those holding an A*-C English Language GCSE, mirrors the overall findings, with no change in the proportion of this group achieving Level 1 or above, an increase in the proportion reaching Level 2 or above, and a decrease in the proportion at Level 1. This is illustrated in Table 7.13.

[153] See Appendix Table 7.A9.

**Table 7.13 Literacy Levels by whether hold English Language GCSE (or equivalent) at A*-C**

| | 2003 | | | 2011 | | |
|---|---|---|---|---|---|---|
| | All | Holds English Language GCSE A*-C (or equivalent) | Does NOT hold English Language GCSE A*-C (or equivalent) | All | Holds English Language GCSE A*-C (or equivalent) | Does NOT hold English Language GCSE A*-C (or equivalent) |
| | % | % | % | % | % | % |
| Entry Level 1 or below | 3 | * | 7 | 5 | 1 | 9 |
| Entry Level 2 | 2 | * | 4 | 2 | 1 | 3 |
| Entry Level 3 | 11 | 4 | 18 | 8 | 4 | 12 |
| Level 1 | 40 | 36 | 43 | 28 | 23 | 34 |
| Level 2 or above | 44 | 60 | 28 | 57 | 71 | 41 |
| | | | | | | |
| Entry Level 3 or below | 16 | 5 | 29 | 15 | 6 | 25 |
| Level 1 or above | 84 | 95 | 71 | 85 | 94 | 75 |
| Unweighted | 7874 | 4007 | 3867 | 5824 | 2957 | 2867 |

Base: SfL2011 All aged 16-65 with literacy score / SfL2011 All aged 16-65 with literacy score

### 7.5.2 Maths GCSE

Just over four in ten (44 per cent) had achieved a GCSE (or equivalent) grade C or above in Maths; fewer than had achieved the same qualification in English Language. In line with English Language and the equivalent findings in 2003, holding a Maths GCSE (or equivalent) at grade C or above varied by age, with older respondents less likely to be qualified at this level (28 per cent of 55-65 year-olds versus 60 per cent of 16-19 year-olds). This variation is, however, more marked in Maths than in English Language: there is a difference of 32 percentage points between the proportion of 16-19 year-olds and 55-65 year-olds who hold the qualification in Maths, compared to 25 percentage points in English Language.[154]

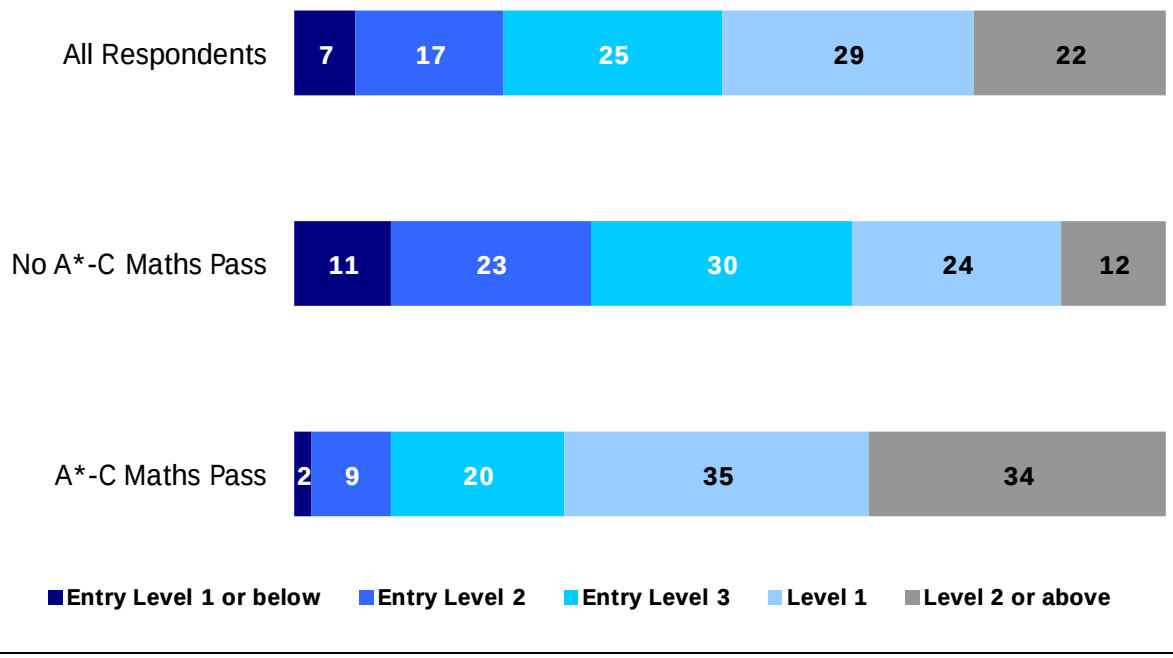
Unlike holding an English Language GCSE (or equivalent) at grade C or above, there were no differences between the proportions of men and women holding a Maths GCSE (or equivalent) at this level. This is a change from 2003, where a difference between genders was evident (45 per cent of men compared with 39 per cent of women).[155]

Unsurprisingly, respondents qualified to this level tended to perform at a higher standard on the numeracy assessment; 89 per cent of those holding this qualification achieved an Entry Level 3 or above numeracy score, compared to 66 per cent of those who did not hold this qualification. However, it is possible to hold a Maths GCSE (or equivalent) at grade C or above, but perform at a lower standard on the numeracy assessment; as illustrated in Figure 7.7, one in ten (11 per cent) of these respondents failed to reach Entry Level 3 or above.

[154] See Appendix Table 7.A10.

[155] See Appendix Table 7.A10.

**Figure 7.7 Numeracy Levels by whether hold Maths GCSE (or equivalent) at grades A*-C (%)**




Base: SfL2011 All aged 16-65 numeracy scores (5823)

Mirroring the pattern from 2003, amongst respondents who held a Maths GCSE (or equivalent) at grade C or above there were found to be differences in numeracy performance by age. Respondents aged below 25 with a Maths GCSE at grade C or above tended to achieve a lower score on the numeracy assessment than similarly qualified respondents aged 25 or over (84 per cent of those aged under 25 achieved Entry Level 3 or above, compared to 91 per cent of those 25 or over).[156]

Table 7.14 illustrates the performance of those holding a Maths GCSE (or equivalent) at grade C or above between 2003 and 2011. The performance of this group has declined, from 94 per cent achieving Entry Level 3 or above in 2003 to 89 per cent in 2011. This is primarily driven by a drop in the proportion of respondents achieving Level 2 or above (from 43 per cent in 2003 to 34 per cent 2011), with the proportion at Level 1 remaining relatively unchanged. Whilst this pattern mirrors that of all respondents, the drop in performance is larger amongst those with a Maths (or equivalent pass) GCSE at grade C or above; a drop of nine percentage points at Level 2 or above, compared to a drop of four percentage points amongst all respondents.

[156] See Appendix Table 7.A11.

**Table 7.14 Numeracy Levels by whether hold Maths GCSE (or equivalent) at A*-C**

| | 2003 | | | 2011 | | |
|---|---|---|---|---|---|---|
| | All | Holds Maths GCSE A*-C (or equivalent) | Does NOT hold Maths GCSE A*-C (or equivalent) | All | Holds Maths GCSE A*-C (or equivalent) | Does NOT hold Maths GCSE A*-C (or equivalent) |
| | % | % | % | % | % | % |
| Entry Level 1 or below | 5 | 1 | 9 | 7 | 2 | 11 |
| Entry Level 2 | 16 | 5 | 24 | 17 | 9 | 23 |
| Entry Level 3 | 25 | 18 | 31 | 25 | 20 | 30 |
| Level 1 | 28 | 33 | 24 | 29 | 35 | 24 |
| Level 2 or above | 25 | 43 | 13 | 22 | 34 | 12 |
| | | | | | | |
| Entry Level 2 or below | 21 | 6 | 33 | 24 | 11 | 34 |
| Entry Level 3 or above | 79 | 94 | 67 | 76 | 89 | 66 |
| Unweighted | 8040 | 3267 | 4773 | 5823 | 2481 | 3342 |

Base: SfL2003 All aged 16-65 with numeracy scores / SfL2011 All aged 16-65 with numeracy scores

## 7.6 Parental education

The link between parental education and children's educational outcomes is well documented (e.g. Carnerio et al. (2010),[157] De Coulon et al. (2008),[158] Chevailer (2004)[159]). Therefore it would be expected that respondents' with more qualified parents would perform better on the literacy and numeracy assessments.

Just under three in ten (28 per cent) respondents reported at least one parent stayed on in education beyond the age of 16, with 65 per cent reporting that neither parent stayed on beyond the age of 16 (Table 7.15). Younger respondents were more likely to have a parent who had stayed on in education beyond the age of 16.[160]

Parental education was found to be linked to the terminal education age of the respondent, with respondents who had at least one parent staying on in education beyond 16 tending to stay on in education themselves longer. Focusing solely on respondents who had completed their education, only 12 per cent of respondents who had at least one parent who stayed on in education beyond 16 left school by the age of 16 themselves, compared to 88 per cent who stayed on in education beyond the age of 18.

[157] Carneiro, P., C. Meghir and M. Parey (2010) *Maternal Education, Home Environments and the Development of Children and Adolescents*. The Institute of Fiscal Studies, Cemmap Working Paper (CWP39/10), available online at: http://ftp.iza.org/dp3072.pdf, accessed on 28/03/12.

[158] De Coulon, A., Meschi, E. and Vignoles, A. (2008) *Parents' Basic Skills and Children's Cognitive Outcomes.* Centre for the Economics of Education Discussion Paper 104, available online at: http://eprints.lse.ac.uk/23653/1/ceedp104.pdf, accessed on 28/03/12.

[159] Chevalier, A. (2004) *Parental Education and Child's Education: A Natural Experiment*. Centre for the Economics of Education Discussion Paper 40, available online at: http://ftp.iza.org/dp1153.pdf, accessed on 28/03/12.

[160] See Appendix Table 7.A12.

| Table 7.15 Whether parent stayed in education past 16 | |
|---|---|
| | 2011 |
| | % |
| At least one parent stayed on in education past 16 | 28 |
| No parents stayed on in education past 16 | 65 |
| No female or male guardian | * |
| Don't Know | 7 |
| Refused | * |
| Unweighted | 7230 |
| Base: SfL2011 All aged 16-65 | |

Parental education was also found to be linked to the qualifications held by respondents. For example, respondents who held an English Language GCSE (or equivalent) at grade C or above) were more likely to have at least one parent who stayed on in education past 16 (34 per cent compared to 21 per cent), as were those who held a Maths GCSE (or equivalent) at grade C or above (35 per cent versus 22 per cent). Respondents who held no qualifications were more likely than average to report that neither parent stayed on in education beyond 16 (84 per cent).[161]

### 7.6.1 Literacy and Numeracy

As highlighted in the regression analysis presented in Chapter 6, not having parents who stayed on in education was associated with 'weak' literacy and 'weak' numeracy. When examining the data in detail, respondents with at least one parent who stayed on in education beyond the age of 16 were more likely to be classified at Level 1 or above in literacy than respondents whose parents did not remain in education beyond that age (90 per cent versus 84 per cent). The same was true for achieving Entry Level 3 or above in numeracy: 85 per cent of respondents with at least one parent who stayed on in education beyond 16 achieved Entry Level 3 or above in the numeracy assessment, compared to 74 per cent of respondents where no parent remained in education beyond that age.

It is important to examine whether this relationship is still found when controlling for the respondent's education. For literacy, when examining only respondents who held an English GCSE (or equivalent) at grade C or above, there was no difference in literacy performance between respondents with a parent who stayed on in education beyond 16 versus those without such a parent. However, the difference was still apparent amongst respondents who did not hold such a qualification, as illustrated in Table 7.16. This suggests that the respondent's education plays a larger role in determining skills standards than parental education level. However, it seems that parental education is an important factor in the presence of lower or no qualifications.

[161] See Appendix Table 7.A13.

**Table 7.16 Literacy Levels by parental education**

| | ALL | | | HAVE ENGLISH GCSE (OR EQUIVALENT) AT GRADE C OR ABOVE | | DO NOT HAVE AN ENGLISH GCSE (OR EQUIVALENT) AT GRADE C OR ABOVE | |
|---|---|---|---|---|---|---|---|
| | All | At least one parent remained in education beyond 16 | Neither parent remained in education beyond 16 | At least one parent remained in education beyond 16 | Neither parent remained in education beyond 16 | At least one parent remained in education beyond 16 | Neither parent remained in education beyond 16 |
| | % | % | % | % | % | % | % |
| Entry Level 3 or below | 15 | 10 | 16 | 5 | 5 | 18 | 27 |
| Level 1 or above | 85 | 90 | 84 | 95 | 95 | 82 | 73 |
| Unweighted | 5824 | 1449 | 3983 | 913 | 1881 | 536 | 2102 |

Base: SfL2011 All aged 16-65 with literacy score

For numeracy the same pattern was evident when controlling for whether the respondent held a Maths GCSE (or equivalent) at grade C or above. The findings are shown in Table 7.17.[162]

**Table 7.17 Numeracy Levels by parental education**

| | ALL | | | HAVE MATHS GCSE (OR EQUIVALENT) AT GRADE C OR ABOVE | | DO NOT HAVE A MATHS GCSE (OR EQUIVALENT) AT GRADE C OR ABOVE | |
|---|---|---|---|---|---|---|---|
| | All | At least one parent remained in education beyond 16 | Neither parent remained in education beyond 16 | At least one parent remained in education beyond 16 | Neither parent remained in education beyond 16 | At least one parent remained in education beyond 16 | Neither parent remained in education beyond 16 |
| | % | % | % | % | % | % | % |
| Entry Level 2 or below | 24 | 15 | 26 | 9 | 11 | 24 | 36 |
| Entry Level 3 or above | 76 | 85 | 74 | 91 | 89 | 76 | 64 |
| Unweighted | 5823 | 1459 | 3954 | 821 | 1529 | 638 | 2425 |

Base: SfL2011 All aged 16-65 with numeracy score

It is difficult to draw direct comparisons to SfL2003, as the questions around parental education are not consistent between the two surveys. However, broadly speaking a similar pattern was observed.

### 7.6.2 ICT

For ICT, a consistent pattern to that regarding literacy and numeracy was evident, with respondents who had at least one parent who stayed on in education beyond the age of 16 tending to achieve higher scores on the ICT components. This is shown in Table 7.18.[163]

[162] For full breakdowns see Appendix Tables 7.A14 and 7.A15.

[163] See Appendix Tables 7.A16.

**Table 7.18 ICT Levels by parental education**

| | WORD PROCESSING | | | EMAIL | | | SPREADSHEET | | | MULTIPLE CHOICE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | At least one parent remained in education beyond 16 | Neither parent remained in education beyond 16 | All | At least one parent remained in education beyond 16 | Neither parent remained in education beyond 16 | All | At least one parent remained in education beyond 16 | Neither parent remained in education beyond 16 | All | At least one parent remained in education beyond 16 | Neither parent remained in education beyond 16 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 2 or below | 43 | 23 | 50 | 31 | 15 | 36 | 39 | 22 | 45 | 9 | 4 | 11 |
| Entry Level 3 or above | 57 | 77 | 50 | 69 | 85 | 64 | 61 | 78 | 55 | 91 | 96 | 89 |
| Unweighted | 2253 | 562 | 1515 | 2247 | 557 | 1513 | 2228 | 551 | 1500 | 2274 | 565 | 1530 |

Base: SfL2011 All aged 16-65 with word processing / email / spreadsheet / multiple choice score

When controlling for the qualifications held by respondents, there were fewer differences in ICT performance between those respondents who had at least one parent who stayed on in education beyond 16, and those who did not.

# 8 Literacy, numeracy and ICT skills in everyday life and work

## 8.1 Key findings

**Skills in everyday life**

- The population's confidence in their literacy and numeracy has risen since 2003. Respondents who gave themselves a positive rating in these skills tended to score higher in the literacy and numeracy assessments.
- Alongside this growth in confidence, 2011 saw a rise in the numbers achieving Level 2 or above in the literacy assessment. The population's increased self-assurance in its maths skills, however, was not accompanied by any improvement in numeracy standards, but instead came about as a result of respondents misjudging or misrepresenting their true abilities in working with numbers (more so than their SfL2003 counterparts).
- The proportion of 16-65 year-olds who read on a daily or near-daily basis has fallen since 2003, as has the proportion who own 25 books or more. Frequency of reading was linked to Literacy Levels, with those who read the most in their everyday lives achieving the highest scores and those who never read achieving the lowest. The same was true with regards to the frequency of writing (whether on paper, or using email or texts), while those who checked their bills and bank statements more often tended to perform better in the numeracy assessment.
- More than half of the respondents who felt they had weaknesses in their reading (60 per cent) or writing (51 per cent), and two fifths of those who felt they had weak maths skills (42 per cent) believed that their shortcomings affected their job prospects. Across the population, it was more common to feel that poor writing abilities (rather than poor reading abilities) posed a hindrance to job prospects. Those with the very lowest skills were the most likely to feel their shortcomings had limited their opportunities.

**Skills in work**

- Economically active respondents tended to have stronger literacy, numeracy and ICT skills than those who were economically inactive. In the literacy assessment, part-time workers performed just as well as full-time workers, while those in search of employment performed just as well as those who were not seeking jobs. In the numeracy assessment, however, there was a sharp divide between those in full time employment and the rest.
- Occupation was linked to literacy, numeracy and ICT skills, with respondents in higher occupation categories generally achieving better scores in the three assessments. Since 2003 there has been an improvement in the standard of literacy across all occupations, with more people from every group achieving Level 2 or above, though those in Semi-routine occupations were also more likely than their 2003 counterparts to achieve Level 1 or above. Over the same period numeracy has declined amongst

people in managerial and professional occupations.

- Industry sector also had an impact, with a tendency for those engaged in Education, Information and communication, and Public administration to possess higher than average literacy and numeracy skills. The same groups, along with those who worked in Finance and Professional, scientific and technical industries, had strong ICT skills.
- In general, people with higher gross personal earnings had better literacy, numeracy and ICT skills.
- As in 2003, receipt of working age benefits was associated with lower skill standards. This probably reflects the demographic and socio-economic characteristics of benefit recipients, who were commonly unemployed or disabled, or had finished their education before the age of 16.

## 8.2 Introduction

A person's abilities in reading, writing, using numbers, and ICT potentially impacts on the activities they choose to carry out on a day-to-day basis, their employment options and their earning potential. This chapter examines respondents' perceptions of their skills standards, as well as the relationship between their skills Levels - actual and perceived – and various aspects of their daily lives, both within and outside of work.

The Skills for Life 2011 Survey (SfL2011) asked respondents to evaluate their own abilities and the chapter begins by measuring their perceptions of their skills against their performance in the assessments in order to build a picture of the population's levels of confidence and self-awareness of their skills. The chapter goes on to explore the extent to which respondents use literacy and numeracy in their everyday lives and view their weaknesses as potential barriers to job opportunities. It also assesses how people's abilities relate to their work circumstances, level of earnings and dependence on benefits.

The data presented in this chapter is derived from questions bqread through to qnews; qwork through to hwhenlft; and qxben through to qxseearn2 in the Background Questionnaire, which can be found in Annex 3.

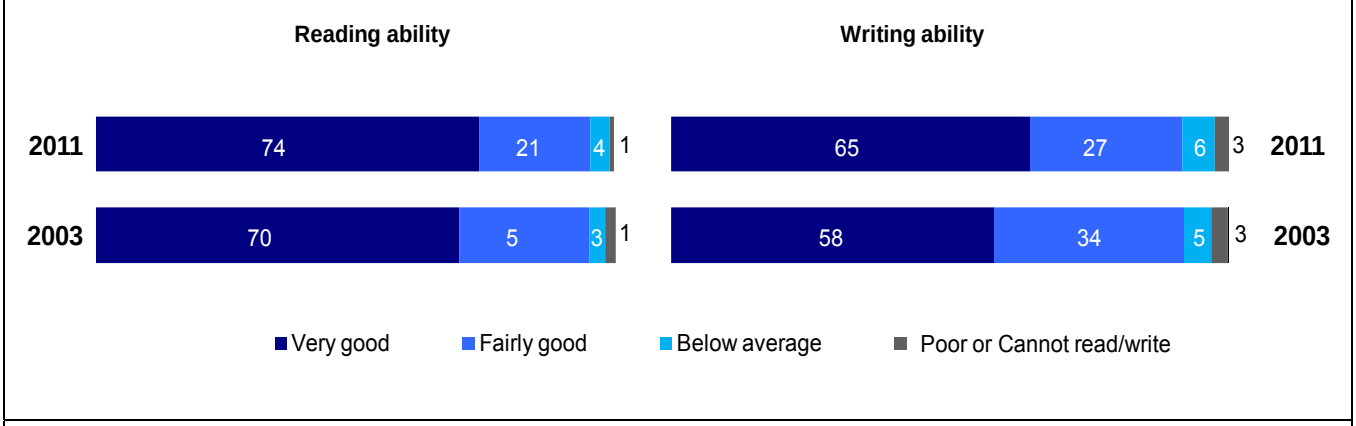
## 8.3 Self-assessment of everyday literacy and numeracy skills

In both 2003 and 2011, survey respondents were asked to rate their abilities in everyday reading, writing, maths and ICT. Respondents' self-assessment of their ability to use computers is reported in Chapter 9. This section focuses on the self-assessment of literacy and numeracy.

### 8.3.1 Self-assessment of literacy skills

Figure 8.1 illustrates how respondents from SfL2003 and SfL2011 rated their ability to read and write in English for everyday purposes.[164]

**Figure 8.1 Self-assessed reading and writing skills in 2003 and 2011 (%)**




Base: SfL2003 All aged 16-65 (8730); SfL2011 All aged 16-65 (7230)

At both points in time, over nine in ten respondents gave at least one of their literacy skills a positive rating. Writing was once again seen to be the harder of the two skills, with more people giving a positive self-assessment of their reading ability than their writing ability. In 2011, four per cent of 16-65s rated their reading positively but their writing negatively. Less than one per cent said they could neither read nor write in English.

Despite the similarities between the results from SfL2003 and SfL2011, the last eight years have seen a rise in the population's self-confidence with regards to literacy skills. Higher proportions rated their reading or writing ability as 'very good' (up from 70 per cent to 74 per cent for reading, and up from 58 per cent to 65 per cent for writing), while the proportion who felt that both their reading and writing were 'very good' rose to 63 per cent in 2011 (up from 59 per cent in 2003).

Several socio-demographic groups were more likely than others to give a very positive self-assessment of their reading skills.[165] The same groups also gave a very positive self-assessment of their writing skills,[166] demonstrating a high degree of correlation between the two skills. For the purposes of sub-group analysis, therefore, the two skills have been combined.[167]

More women than men gave themselves a positive rating for both reading and writing (94 per cent versus 88 per cent); similarly, people in work were more likely than those out of work to say they were 'very' or 'fairly' good at both skills (92 per cent versus 87 per cent). Meanwhile, a negative rating at both reading and writing ('below average', 'poor' or inability to read and write) was more common amongst people from Black and Minority Ethnic (BME) backgrounds, those with a limiting disability, and people who left education aged 16 or below (eight per cent, seven

[164] For a full breakdown, see Appendix Tables 8.A1 and 8.A2.

[165] See Appendix Table 8.A1.

[166] See Appendix Table 8.A2.

[167] See Appendix Table 8.A3.

per cent, and five per cent, respectively, compared with four per cent overall). The group most likely to be unable to read and write were people who had a limiting disability (one per cent).

Various groups also stood out for their likelihood of rating their reading skills positively but their writing abilities negatively. Respondents with a limiting disability were twice as likely as other respondents to do this (nine per cent, compared with four per cent amongst the whole population), though people with a learning difficulty were by far the most likely to believe they were good at reading but not at writing (16 per cent). Those who finished their education before they turned 17 (seven per cent), men (six per cent) and people who were not in work (six per cent) also had a higher than average likelihood of giving this appraisal of their skills.

In general, respondents who described their ability at reading or writing in a positive way tended to perform better in the literacy assessment than those who felt they had weaknesses in these two areas (Table 8.1).[168]

**Table 8.1 Literacy Levels by self-assessed reading and writing skills**

| | | READING | | WRITING | |
|---|---|---|---|---|---|
| | All | Negative self-assessment | Positive self-assessment | Negative self-assessment | Positive self-assessment |
| | % | % | % | % | % |
| Entry Level 1 or below | 5 | 40 | 3 | 30 | 3 |
| Entry Level 2 | 2 | 7 | 2 | 8 | 2 |
| Entry Level 3 | 8 | 15 | 7 | 17 | 7 |
| Level 1 | 29 | 22 | 29 | 29 | 28 |
| Level 2 or above | 57 | 17 | 59 | 17 | 60 |
| | | | | | |
| Entry Level 3 or below | 15 | 62 | 13 | 55 | 11 |
| Level 1 or above | 85 | 38 | 87 | 45 | 89 |
| Unweighted | 5824 | 252 | 5572 | 453 | 5369 |

Base: SfL2011 All aged 16-65 with literacy scores

One in eight respondents (13 per cent) over-estimated their abilities, giving themselves a positive rating for their reading or their writing but then falling short of Level 1 in the literacy assessment.[169] Overall, 41 per cent of those who scored Entry Level 3 or below over-claimed on their reading ability, describing it as 'very good'. This is identical to the proportion who did the same in 2003, and suggests that the rise in self-confidence between the two years does not result from an increase in the proportion of respondents who over-claim. The rise in self-confidence may instead be an indication of stronger literacy within some sections of the population, a possibility also suggested by the expansion over the same period in the numbers achieving Level 2 or above in Literacy.

People aged 55 or above were more likely than average to make an over-claim regarding their reading skills (53 per cent, compared to 41 per cent overall) or regarding their writing skills (39 per cent, compared to 32 per cent overall). In contrast to 2003, women in 2011 were no more

[168] For Literacy Levels by the full ratings for reading and writing, and the equivalent figures from 2003, see Appendix Tables 8.A4 and Table 8.A5.

[169] See Appendix Table 8.A6.

likely to do this than men about reading (43 per cent versus 39 per cent); however in both years women were more inclined than men to over-claim when it came to writing (37 per cent of women did this in both years, compared to 28 per cent of men in SfL2011 and 23 per cent of men in SfL2003).

It is worth looking separately at the self-assessed literacy skills of people whose first language was not English (ENFL), as a poor knowledge of English may have hampered the comprehension and conversational abilities, and perhaps also the reading and writing abilities, of a large proportion of this group.

Of course, not all respondents with ENFL had trouble understanding or speaking in English. Although a quarter (26 per cent) were unable to hold a conversation in English, two thirds (68 per cent) rated their spoken English as 'very good' or 'fairly good'. The remaining six per cent could speak in English but felt their conversational abilities were 'below average' or 'poor'.

The relationship between conversational ability and perception of literacy skills amongst people with ENFL was not completely straightforward (Table 8.2). While respondents with ENFL who rated their conversational skills positively were the most likely to rate their literacy skills positively, and those unable to converse in English were the most likely to be unable to read and write in English, conversational ability was not a reliable indicator of literacy skills. This is apparent from the fact that 59 per cent of those who could not hold a conversation in English felt that their ability to read and write was 'very' or 'fairly' good.

**Table 8.2 Self-assessed reading and writing skills of respondents with ENFL, by self-assessed ability to speak in English**

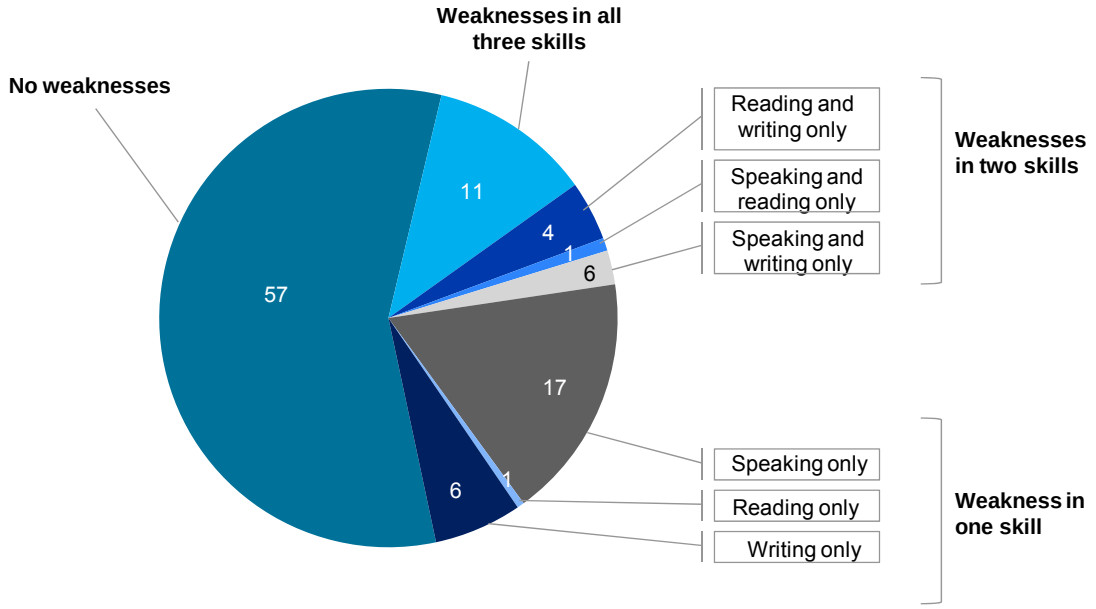
| | | SELF-ASSESSED ENGLISH SPEAKING SKILLS | | |
|---|---|---|---|---|
| | All | Very/fairly good | Below average/poor | Cannot have a conversation |
| | % | % | % | % |
| Reading and writing both very/fairly good | 74 | 84 | 32 | 59 |
| Reading very/fairly good but writing below average/poor | 9 | 9 | 8 | 7 |
| Writing very/fairly good but reading below average/poor | 1 | 1 | 3 | 3 |
| Reading and writing both below average/poor | 14 | 6 | 57 | 23 |
| Unable to read and write | 2 | 0 | 0 | 8 |
| Unweighted | 610 | 407 | 37 | 165 |

Base: SfL2011 All aged 16-65 with ENFL

Note: small base size

The reading, writing, and English speaking abilities of respondents with ENFL can be broken down further to show where their perceived weaknesses in English tend to lie (Figure 8.2). Almost three fifths (57 per cent) felt they had no substantial weaknesses in any of these three skills. A quarter (24 per cent) felt they had only one weakness, most commonly their conversational skills (17 per cent), and a further eight per cent felt they had two weaknesses, most commonly reading and writing (four per cent). Around one in eight (11 per cent) rated all three of their abilities negatively.

**Figure 8.2 Weaknesses in reading, writing and English speaking skills amongst people with ENFL (%)**




Base: SfL2011 All aged 16-65 with ENFL (610)

People with ENFL who believed themselves to have shortcomings in all three skills were far more likely than other respondents with ENFL to be categorised as Entry Level 1 or below in the literacy assessment (Table 8.3). Compared to this group, performance in the literacy assessment was marginally better for those who felt that at least their conversational abilities were 'very' or 'fairly' good. Performance was strongest amongst respondents with ENFL who felt they had sound reading and writing skills, regardless of their English speaking abilities. The absence of any distinction between the performance of those who could or could not speak well in English can be explained by the fact that the literacy assessment focused only on reading and writing and did not cover speaking or listening.

**Table 8.3 Literacy Levels of respondents with ENFL, by self-assessed reading, writing and speaking skills**

| | | SELF-ASSESSED READING, WRITING AND ENGLISH SPEAKING SKILLS | | | |
|---|---|---|---|---|---|
| | All | Very/fairly good at all three skills | Very/fairly good reading and writing but below average/poor speaking | Very/fairly good speaking but below average/poor reading or writing | Below average/poor at all three skills |
| | % | % | % | % | % |
| Entry Level 1 or below | 21 | 8 | 10 | 42 | 75 |
| Entry Level 2 | 5 | 3 | 3 | 16 | 2 |
| Entry Level 3 | 17 | 15 | 20 | 25 | 13 |
| Level 1 | 27 | 34 | 30 | 12 | 9 |
| Level 2 or above | 31 | 41 | 37 | 8 | 2 |
| Unweighted | 479 | 280 | 85 | 45 | 51 |

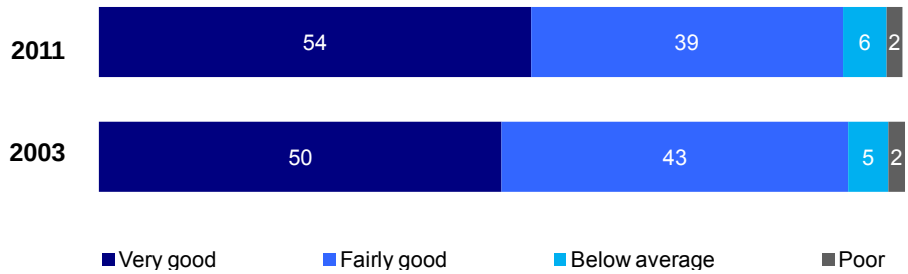
Base: SfL2011 All aged 16-65 with ENFL and literacy score

Note: small base size

### 8.3.2 Self-assessment of numeracy

The picture with regards to numeracy is similar to that regarding literacy, with nine in ten judging their abilities favourably at both points in time. In the same way that self-confidence in reading and writing has risen since 2003, so too has self-confidence in numeracy: 54 per cent now described their ability to work with numbers as 'very good', up from 50 per cent in 2003 (Figure 8.3).

**Figure 8.3 Self-assessed maths skills in 2003 and 2011 (%)**




Base: SfL2003 All aged 16-65 (8730); SfL2011 All aged 16-65 (7230)

The parallels between literacy and numeracy ratings can partly be attributed to the fact that people who rate their literacy positively also tend to rate their numeracy positively: 95 per cent of people who said they were 'very' or 'fairly' good at both reading and writing were also positive about their skills with numbers in daily life. Conversely, people who saw themselves as having one or more weaknesses in their literacy skills were more likely than others to report below average or poor maths skills (Table 8.4).

**Table 8.4 Self-assessed maths skills by self-assessed reading and writing skills**

| SELF-ASSESSED MATHS SKILLS | All | SELF-ASSESSED LITERACY | | | | |
|---|---|---|---|---|---|---|
| | | Reading and writing both very/fairly good | Reading very/fairly good but writing below average/poor | Writing very/fairly good but reading below average/poor | Reading and writing both below average/poor | Unable to read and write |
| | % | % | % | % | % | % |
| Very/ fairly good | 92 | 95 | 73 | 74 | 64 | 66 |
| Below average/ poor | 7 | 5 | 25 | 24 | 34 | 29 |
| No opinion/Don't know | * | * | 2 | 3 | 2 | 5 |
| Unweighted | 7230 | 6594 | 325 | 59 | 235 | 17 |

Base: SfL2011 All aged 16-65

Note: small base size

There was also a link between people's perceived competence in working with numbers and the ability to speak in English. Amongst respondents with ENFL, those with the greatest likelihood of judging their maths skills to be 'very good' were people who felt their conversational abilities to be 'very' or 'fairly' good (57 per cent, compared with 54 per cent of all respondents with ENFL). Meanwhile, people with ENFL who could not hold a conversation in English had a greater

probability – compared to other respondents with ENFL – of rating their numeracy as 'poor' (five per cent, compared with two per cent overall). [170]

Looking across the entire population of 16-65s, a 'very good' rating for the ability to work with numbers was more likely to be given by men (59 per cent, compared with 49 per cent of women), people in the labour market (57 per cent, compared with 45 per cent of those out of work) and people who left education aged 19 or above (65 per cent, compared with an average of 54 per cent overall). The age group least likely to describe their skills as 'very good' were 20-24 year-olds (45 per cent).[171]

On the other end of the rating scale, a 'poor' rating was disproportionately likely amongst people who finished their education aged 16 or younger and people who were not employed (four per cent each, compared with two per cent across the whole population). People with limiting disabilities were the most likely to describe their maths skills as 'poor' (five per cent, compared with one per cent of those without such a disability). In contrast to literacy skills, respondents from BME backgrounds did not judge their abilities in maths any differently to White respondents.

People who described their maths skills as 'very good' were more likely than other respondents to achieve Level 2 or above in the numeracy assessment (Table 8.5). Over one in ten (14 per cent) in this group over-estimated their abilities, describing them as 'very good' despite achieving Entry Level 2 or below.[172]

**Table 8.5 Numeracy Levels by self-assessed maths skills**

| | | SELF-ASSESSED MATHS SKILLS | | | |
|---|---|---|---|---|---|
| | All | Very good | Fairly good | Below average | Poor |
| | % | % | % | % | % |
| Entry Level 1 or below | 7 | 4 | 8 | 21 | 38 |
| Entry Level 2 | 17 | 10 | 22 | 39 | 37 |
| Entry Level 3 | 25 | 21 | 32 | 27 | 17 |
| Level 1 | 29 | 35 | 25 | 10 | 6 |
| Level 2 or above | 22 | 31 | 13 | 3 | 1 |
| Unweighted | 5823 | 3082 | 2270 | 332 | 126 |

Base: SfL2011 All aged 16-65 with numeracy score

Three in ten (31 per cent) of those who achieved Entry Level 2 or below in the numeracy assessment over-estimated their skills, claiming to be 'very good' at maths. The incidence of over-claims of this type increased between 2003 and 2011 (from 24 per cent to 31 per cent).[173] At the same time, Numeracy Levels across the population showed no improvement. This suggests that the rise noted earlier in the population's self-assurance in its maths skills partly

[170] See Appendix Table 8.A7.

[171] See Appendix Table 8.A8.

[172] See Appendix Table 8.A9.

[173] See Appendix table 8.A10.

came about because more SfL2011 respondents misjudged or misrepresented their true abilities in working with numbers, rather than being founded on any real improvement in skills.

## 8.4 Using literacy and numeracy in everyday life

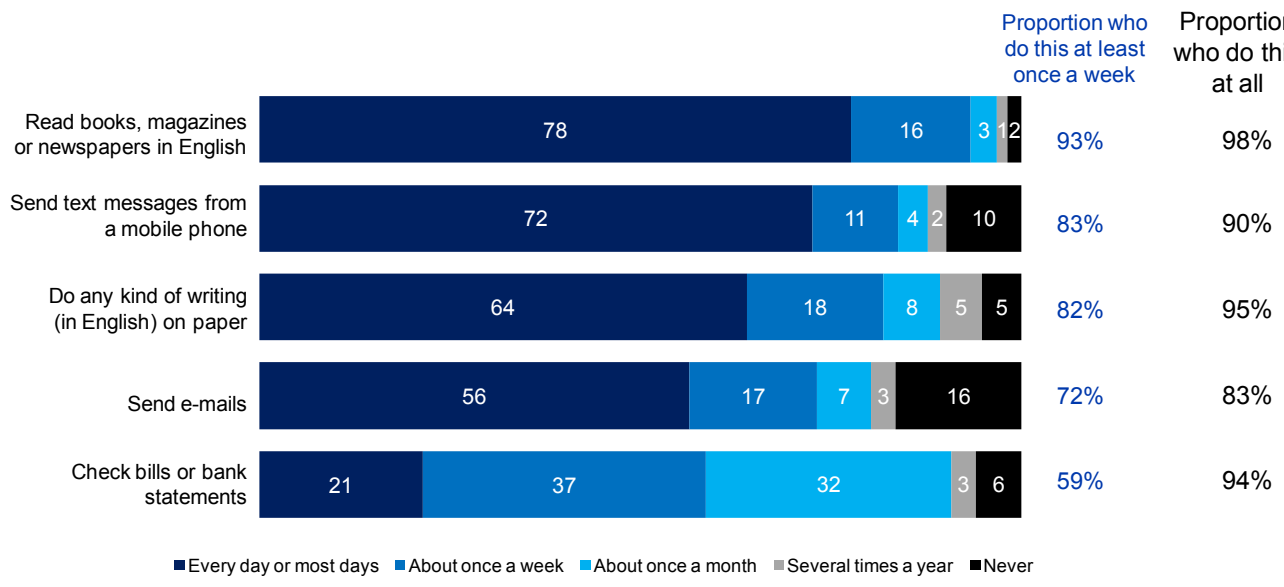
In order to gauge how literacy, numeracy and ICT skills impact on people's daily lives, respondents were asked how frequently they carried out various commonplace activities. The frequency of computer and internet-related activities is reported in Chapter 9, while the frequency of tasks involving reading, writing or maths is presented below.

In 2011, respondents reported how often they performed the following activities:

- Reading books, magazines or newspapers in English
- Sending text messages from a mobile phone
- Sending emails
- Doing any kind of writing (in English) on paper
- Checking bills or bank statements

The results are displayed in Figure 8.4.

**Figure 8.4 Frequency of five commonplace activities (%)**

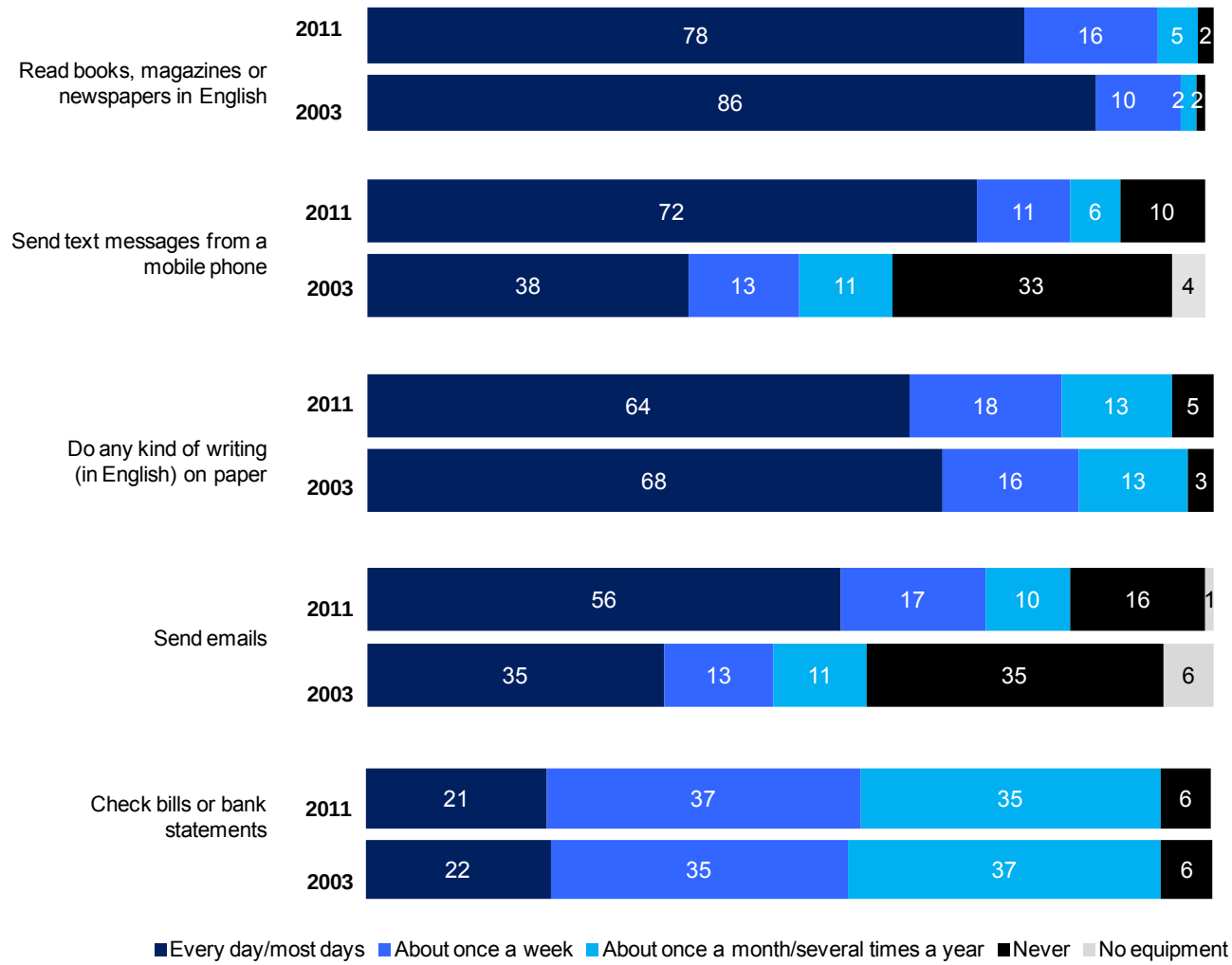



Base: SfL2011 All aged 16-65 (7230)

Reading was the most frequently performed activity out of the five: four fifths of respondents read books, magazines or newspapers every day or on most days (78 per cent). A similar proportion said that they texted or wrote on paper once a week or more; of the two activities, however, texting was more likely to be undertaken on a daily or near-daily basis (72 per cent for texting versus 64 per cent for writing on paper). Almost three quarters (72 per cent) wrote emails once a week or more, and three fifths (59 per cent) checked bills or bank statements with the same level of frequency.

The frequency of these activities was also collected in SfL2003, allowing comparisons to be drawn over time (Figure 8.5). Overall there is remarkable stability in how regularly 16-65 year-olds read, write on paper, and check their bills or bank statements. The incidence of daily emailing and texting has grown dramatically over the past eight years, and few in 2011 still lack the equipment to carry out these activities. The everyday reading of books, magazines and newspapers is the only activity that has undergone a substantial decline since 2003 (down from 86 per cent in SfL2003 to 78 per cent in SfL2011).

**Figure 8.5 Frequency of five commonplace activities in 2003 and 2011 (%)**




Base: SfL2003 All aged 16-65 (8730); SfL2011 All aged 16-65 (7230)

### 8.4.1 Reading in everyday life

On the whole, reading was undertaken more regularly than the other activities respondents were asked about. The most frequent readers were women and people who left education aged 19 or above, four fifths of whom read every day or almost every day (80 per cent and 83 per cent, respectively, compared with an average of 78 per cent).

A small minority of 16-65s (two per cent) did not read English books or the English press at all. People who rated their reading skills negatively or who stated that they could not read were far more likely than average to avoid reading these materials (19 per cent). The groups most likely

to avoid any reading were therefore identical to those who rated their reading abilities negatively: namely, people from BME backgrounds (three per cent), who left education aged 16 or below (three per cent), or who had a limiting disability (four per cent). In addition, employment status made a difference to how often people read. People who were out of work were more likely to avoid reading than people in work (three per cent versus one per cent), while those who were actively looking for employment were less likely than anyone else to read on a daily or near-daily basis (67 per cent, compared with 78 per cent overall).[174]

Respondents who never undertook any reading were much less likely than those who did to reach Level 2 or above in the literacy assessment, and much more likely to achieve Entry Level 1 or below (Table 8.6). There was almost no difference in performance between people who read once a month and people who read less frequently, but respondents who read on a daily or almost daily basis outperformed all other readers, as was also the case in SfL2003.[175]

**Table 8.6 Literacy Levels by frequency of reading books, magazines or newspapers in English**

| | All | FREQUENCY OF READING | | | | READS AT ALL | NEVER READS |
|---|---|---|---|---|---|---|---|
| | | Every day or most days | About once a week | About once a month | Several times a year | | |
| | % | % | % | % | % | % | % |
| Entry Level 1 or below | 5 | 3 | 9 | 8 | 14 | 4 | 41 |
| Entry Level 2 | 2 | 2 | 4 | 1 | 2 | 2 | 6 |
| Entry Level 3 | 8 | 7 | 12 | 14 | 17 | 8 | 13 |
| Level 1 | 29 | 27 | 32 | 36 | 36 | 28 | 29 |
| Level 2 or above | 57 | 61 | 44 | 40 | 31 | 57 | 13 |
| Unweighted | 5824 | 4608 | 857 | 185 | 74 | 5724 | 98 |

Base: SfL2011 All aged 16-65 with literacy score

Two more questions were used to add further context to people's reading habits in everyday life (BBooksN and QNews in the Background Questionnaire). The results reveal that groups with a tendency to read more frequently were more likely to own an extensive book collection, and more likely to read multiple sections of a newspaper.

In the first of the two questions, respondents were asked whether they owned 25 books or more in English in their home. Three quarters (76 per cent) said that they did. The people who were most likely to own this number of books were people who read every day or most days (82 per cent); hence, the decline in everyday reading over time which was noted above is reflected also in a decrease in the proportion of the population who own an extensive book collection (dropping from 88 per cent in 2003 to 76 per cent in 2011).[176]

Book ownership was also related to a variety of other socio-demographic variables. For example, 55-65 year-olds would have had the most time to accrue books and so were

[174] See Appendix Table 8.A11.

[175] See Appendix Table 8.A12.

[176] The question was phrased slightly differently in the two surveys, so results should be compared with caution. In 2003, respondents were asked whether they had 'more than 25 books in English in your home', whereas in 2011 the response options were 'less than 25 books' or '25 or more books'.

disproportionately more likely to own 25 or more when compared to young adults (83 per cent of 55-65 year-olds and 68 per cent of 20-34 year-olds owned this number of books). People in work were more likely than those not in work to live in a household that had 25 or more books (79 per cent versus 69 per cent), and this may in part be due to the cost of buying the books in the first place.[177]

In addition, book ownership was linked to self-assessed reading skills.[178] Respondents who felt they had 'very' or 'fairly' good reading skills were over twice as likely as those who rated their skills negatively to own 25 books or more (78 per cent versus 37 per cent). Accordingly, the sub-groups with the lowest likelihood of owning books in large numbers were once again those who felt that their reading skills were poor: people from BME backgrounds, who finished their education aged 16 or below, or who had a limiting disability (61 per cent, 70 per cent, and 72 per cent, respectively, compared to an average of 76 per cent).

A correlation was evident between number of books owned and performance in the literacy assessment (Table 8.7). This is not surprising, given the overlap in the composition of the groups that felt more confident about their reading, read more often, and owned more books.

**Table 8.7 Literacy Levels by number of books owned**

| | All | Under 25 | 25 or more |
|---|---|---|---|
| | % | % | % |
| Entry Level 1 or below | 5 | 12 | 3 |
| Entry Level 2 | 2 | 5 | 1 |
| Entry Level 3 | 8 | 16 | 5 |
| Level 1 | 29 | 35 | 26 |
| Level 2 or above | 57 | 31 | 64 |
| Unweighted | 5824 | 1338 | 4467 |

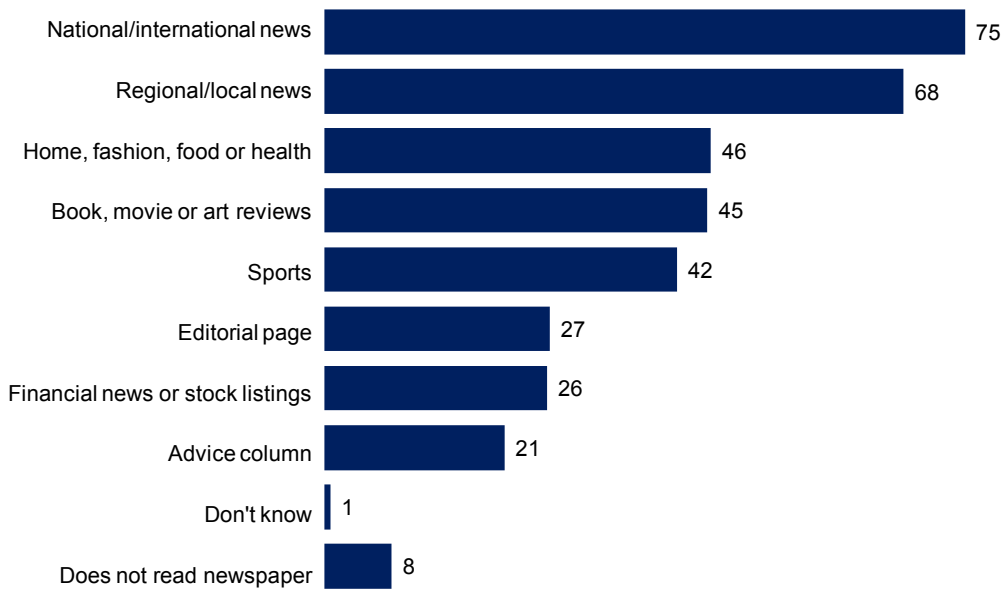
Base: SfL2011 All aged 16-65 with literacy score

A second question asked in relation to reading concerned the parts of a newspaper that people generally read. Note that this question was addressed only to those people who said that they read books, magazines or newspapers, and who were selected to complete the ICT assessment, rather than to all respondents.

[177] See Appendix Table 8.A13.

[178] See Appendix Table 8.A14.

**Figure 8.6 Proportions who read each newspaper section (%)**




Base: SfL2011 All aged 16-65 who read books, magazines or newspapers and were selected to complete the ICT assessment (2358)

Note: Multiple responses permitted

As shown in Figure 8.6, the most commonly read newspaper section was on national or international news (75 per cent), though this was closely followed by the regional news section (68 per cent). On average, people who read a newspaper at all read 3.8 sections of it, though the most common practice was to read just three sections.

Generally speaking, those who judged themselves to be less competent at reading, together with those who read less frequently than other people, had a tendency to read fewer newspaper sections (Table 8.8).

**Table 8.8 Number of newspaper sections read by self-assessed reading skills and frequency of reading**

| | | SELF-ASSESSED READING ABILITY | | | | FREQUENCY OF READING | | | |
|---|---|---|---|---|---|---|---|---|---|
| NUMBER OF NEWSPAPER SECTIONS READ | All | Very Good | Fairly Good | Below average | Poor/ cannot read | Every day/ Most days | About once a week | About once a month | Several times a year |
| | % | % | % | % | % | % | % | % | % |
| 1-3 | 45 | 40 | 60 | 70 | 82 | 41 | 60 | 72 | 93 |
| 4 or more | 55 | 60 | 40 | 30 | 18 | 60 | 40 | 28 | 7 |
| Unweighted | 2150 | 1642 | 443 | 51 | 14 | 1721 | 334 | 78 | 17 |

Base: SfL2011 All aged 16-65 who read a newspaper and were selected to complete the ICT assessment

Note: small base sizes

Three sections was the upper limit for more than half of those with a BME background (54 per cent), people who ended their education aged 16 or below (53 per cent), and people with a limiting disability (52 per cent, compared with 45 per cent across all respondents). Meanwhile, extensive reading that covered four or more sections of the newspaper was more common amongst the two subgroups that tended to read on a daily or near-daily basis: women (59 per

cent, compared to 51 per cent of men) and people in work (58 per cent, compared to 47 per cent of those out of work).[179]

### 8.4.2 Writing in everyday life

In everyday life, people may choose to write either on paper or with the use of an electronic medium. Despite the proliferation of mobile phones and computers in recent years, writing on paper remains more prevalent (95 per cent) than either texting (90 per cent) or emailing (83 per cent).

Nevertheless, a small minority of 16-65s (five per cent) avoided writing on paper. Respondents who felt their writing skills were 'below average' or 'poor', or who stated that they were unable to write, had a greater tendency than other respondents to avoid writing in any medium (Table 8.9).

**Table 8.9 Whether writes, texts or emails by self-assessed writing skills**

| | | SELF-ASSESSED WRITING ABILITY | | | | |
|---|---|---|---|---|---|---|
| | All | Very good | Fairly good | Below average | Poor | Cannot write |
| | % | % | % | % | % | % |
| Never writes on paper | 5 | 2 | 6 | 23 | 29 | 75 |
| Never texts | 10 | 7 | 12 | 19 | 35 | 58 |
| Never emails | 16 | 10 | 24 | 35 | 53 | 81 |
| Never writes in any medium | 1 | - | 1 | 6 | 13 | 41 |
| Unweighted | 7230 | 4713 | 1940 | 380 | 160 | 34 |

Base: SfL2011 All aged 16-65

Note: small base size

In view of this, the subgroups most likely to avoid all three types of writing were those inclined to give a negative self-assessment of their writing skills: people from BME backgrounds (with the exception of email, which was used by similar proportions of BME and White respondents), people who left education aged 16 or below, and people with limiting disabilities.[180]

Respondents' perception of their writing abilities was not the only factor that had a bearing on writing frequency. If it had been, then writing in any medium would be more widespread among women and people in employment – since these were the subgroups most likely to profess themselves to have good writing skills – but this was actually true only with regards to writing on paper (66 per cent of women and 72 per cent of people in work wrote on paper on most days, compared with 64 per cent across the whole population).

In fact, men were more likely than women to send emails on a daily or near-daily basis (57 per cent versus 54 per cent), a fact that is not altogether surprising given that men were more likely to be daily internet users (see Section 9.6). Meanwhile, texting frequency was highest amongst 16-19 year-olds and fell with age, dropping from 93 per cent daily texting amongst the youngest group to 44 per cent amongst 55-65 year-olds. One possible inference that may be drawn from this is that the frequency with which people write emails and texts is associated, amongst other

[179] See Appendix Table 8.A15.

[180] See Appendix Tables 8.A16, Table 8.A17 and Table 8.A18.

things, with how competent and comfortable they feel using the technology entailed by these forms of writing.

People who used each of the media tended to perform better in the literacy assessment than people who never used them, though scores were lower amongst respondents who carried out the activities on an occasional basis (Table 8.10). The likelihood of achieving Level 2 or above was particularly high for those who wrote emails every day or most days (69 per cent), and marginally lower for respondents who texted or wrote on paper with the same frequency.

**Table 8.10 Literacy Levels by frequency of writing in different media**

| **Doing any kind of writing (in English) on paper** | All | FREQUENCY | | | | **DOES THIS** | **NEVER DOES THIS** |
|---|---|---|---|---|---|---|---|
| | | Everyday or most days | About once a week | About once a month | Several times a year | | |
| | % | % | % | % | % | % | % |
| Entry Level 1 or below | 5 | 2 | 6 | 10 | 8 | 4 | 30 |
| Entry Level 2 | 2 | 1 | 3 | 3 | 4 | 2 | 7 |
| Entry Level 3 | 8 | 6 | 9 | 13 | 11 | 7 | 15 |
| Level 1 | 29 | 26 | 33 | 32 | 36 | 28 | 29 |
| Level 2 or above | 57 | 64 | 49 | 41 | 42 | 59 | 20 |
| Unweighted | 5824 | 3710 | 1031 | 468 | 330 | 5539 | 282 |

| **Sending text messages from a mobile phone** | All | Everyday or most days | About once a week | About once a month | Several times a year | **DOES THIS** | **NEVER DOES THIS** |
|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % |
| Entry Level 1 or below | 5 | 3 | 5 | 7 | 2 | 3 | 19 |
| Entry Level 2 | 2 | 2 | 2 | 4 | 5 | 2 | 5 |
| Entry Level 3 | 8 | 7 | 7 | 10 | 15 | 7 | 13 |
| Level 1 | 29 | 28 | 28 | 35 | 31 | 29 | 28 |
| Level 2 or above | 57 | 61 | 58 | 44 | 47 | 59 | 35 |
| Unweighted | 5824 | 4131 | 666 | 246 | 149 | 5192 | 599 |

| **Sending emails** | All | Everyday or most days | About once a week | About once a month | Several times a year | **DOES THIS** | **NEVER DOES THIS** |
|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % |
| Entry Level 1 or below | 5 | 2 | 3 | 5 | 8 | 2 | 17 |
| Entry Level 2 | 2 | 1 | 2 | 2 | 4 | 1 | 6 |
| Entry Level 3 | 8 | 5 | 8 | 10 | 11 | 6 | 16 |
| Level 1 | 29 | 24 | 33 | 35 | 32 | 27 | 35 |
| Level 2 or above | 57 | 69 | 54 | 48 | 45 | 63 | 26 |
| Unweighted | 5824 | 3144 | 960 | 411 | 181 | 4696 | 1045 |

Base: SfL2011 All aged 16-65 with literacy score

The performance patterns noted above are very similar to those seen in SfL2003.[181] However the disparity in performance of those who sent texts and emails daily or weekly and those who never or hardly ever did so has grown since that time. While frequent users of the two media

[181] See Appendix Tables 8.A19, Table 8.A20 and Table 8.A21.

performed equally well across the two surveys, the performance of occasional users and non-users declined, with fewer managing to reach Literacy Level 1 in SfL2011. This may be because the characteristics of those who make little or no use of texts or emails nowadays are different to the characteristics of their much more prevalent counterparts from 2003. Thus, low usage or avoidance of text or email is more closely associated with weak literacy now than it had been in 2003. At the same time, the gap in performance between those who did and those who did not write on paper diminished.

### 8.4.3 Maths in everyday life

Three fifths of respondents (59 per cent) put their maths skills to practice by checking their bills or statements once a week or more. People who felt they were 'very' or 'fairly' good at working with numbers in daily life were more likely than those with less confidence in their maths skills to perform these checks on a weekly or more frequent basis (60 per cent versus 39 per cent). Conversely, people who gave their maths skills a negative rating were more likely than average to avoid performing these checks: thus, nine per cent of those who left education aged 16 or below or who had a limiting disability, and 11 per cent of people who were not in employment *never* checked bills or statements from banks.[182]

The relationship between maths skills and the frequency of checking bills and bank statements was evidenced in respondents' performance in the numeracy assessment. People who never checked their bills and statements, or who only checked them a few times a year, had a tendency to score lower in the numeracy assessment than those who performed checks more frequently (Table 8.11). This repeats the pattern seen in 2003 (with the sole difference that SfL2003 respondents who checked their finances on a daily or near-daily basis were more likely than their 2011 counterparts to reach or surpass Entry Level 3).[183]

**Table 8.11 Numeracy Levels by frequency of checking bills or bank statements**

| | | FREQUENCY OF CHECKING | | | | CHECKS AT ALL | NEVER CHECKS |
|---|---|---|---|---|---|---|---|
| | All | Every day or most days | About once a week | About once a month | Several times a year | | |
| | % | % | % | % | % | % | % |
| Entry Level 1 or below | 7 | 5 | 5 | 8 | 13 | 6 | 15 |
| Entry Level 2 | 17 | 15 | 15 | 19 | 23 | 16 | 24 |
| Entry Level 3 | 25 | 25 | 25 | 26 | 28 | 25 | 27 |
| Level 1 | 29 | 33 | 30 | 28 | 24 | 30 | 21 |
| Level 2 or above | 22 | 24 | 25 | 19 | 13 | 22 | 13 |
| Unweighted | 5824 | 1216 | 2161 | 1929 | 183 | 5489 | 323 |

Base: SfL2011 All aged 16-65 with numeracy score

That is not to say that numeracy was the only factor associated with how frequently people checked their finances. Respondents aged between 16 and 19, for example, were just as likely as other age groups to rate their maths skills positively, but were the most likely to avoid checking bills and statements (17 per cent, compared to six per cent overall). A lack of interest in

[182] See Appendix Table 8.A22.

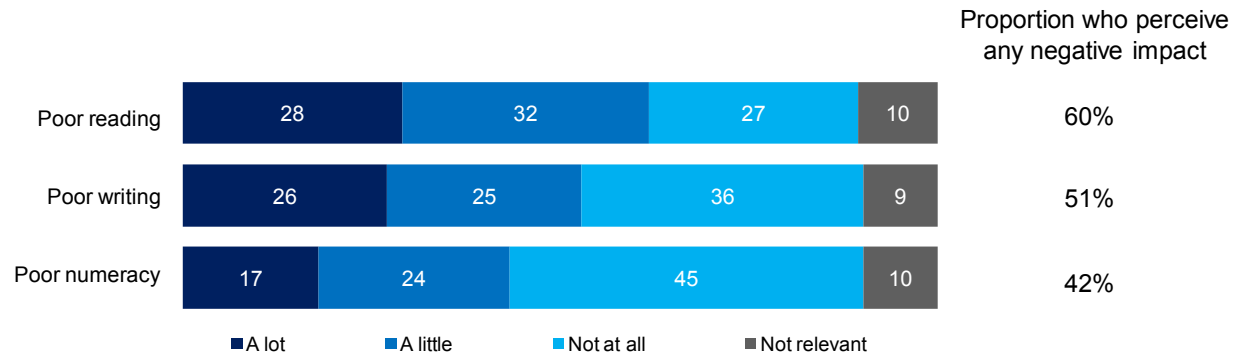
[183] See Appendix Table 8.A23.

personal finances and a relatively low level of dealings with banks may lie behind this, and similar reasons may partly explain why less than half of those who were out of work checked their bills or statements weekly (47 per cent, compared to 64 per cent of people in work).

## 8.5 Basic skills and job prospects

People's perception of their abilities had an impact not only on the ways they used basic skills in their day-to-day lives, but also on the way they viewed their job prospects. After rating their abilities in reading, writing and working with numbers in everyday life, respondents who assessed themselves as having 'below average' or 'poor' skills (or who could not read or write) were asked whether they felt this had limited their job opportunities. As illustrated in Figure 8.7, one in ten felt that having such a weakness was not relevant to their job prospects, either because they did not work, had never worked, had never sought a different job or a promotion, or for other reasons. However, substantial proportions felt that their perceived shortcomings in literacy or numeracy had had a negative impact with regards to work.

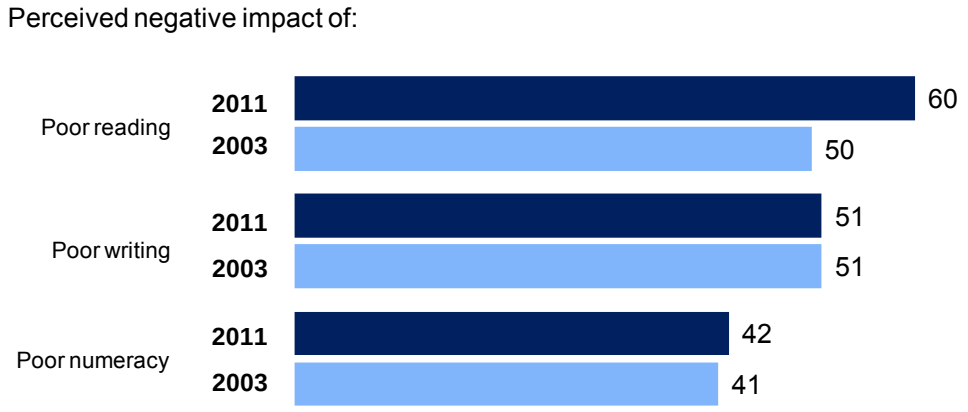
**Figure 8.7 Proportions who felt that a weakness in basic skills had impacted on their job opportunities (%)**




Base: SfL2011 All aged 16-65 who gave a negative rating of their reading skills (311), writing skills ( 574) or numeracy ( 585)

A comparison between SfL2003 and SfL2011 shows that respondents in 2011 were more likely to believe that a weakness in their reading skills has harmed their job opportunities. There was no equivalent rise in the proportion who felt that weak writing or numeracy impacted on job prospects (Figure 8.8).

**Figure 8.8 Proportions who felt that a weakness in basic skills had impacted on their job opportunities in 2003 and 2011(%)**




Base: SfL2003 All aged 16-65 who gave a negative rating of their reading skills (349), writing skills negatively (654) or numeracy (710) /SfL2011 All aged 16-65 who gave a negative rating of their reading skills (311), writing skills ( 574) or numeracy ( 585)

### 8.5.1 Self-assessed literacy and impact on job prospects

Three fifths (60 per cent) of those who judged themselves to have weak reading skills felt that this had affected their job prospects, and half (51 per cent) of the respondents who judged themselves to have weak writing skills felt the same regarding their writing. Across the whole population, however, there were more people who assessed their writing skills negatively. Consequently, the proportion of the adult population in England (aged 16-65) who felt that poor writing abilities posed a hindrance to their job prospects (four per cent) was higher than the proportion who felt that poor reading abilities posed a hindrance (three per cent). In total, an estimated 1.4 million people with a perceived weakness in writing and one million people with a perceived weakness in reading felt that their weakness had limited their job opportunities.

The respondents who answered these questions were evenly split between those who felt their reading or writing weakness limited their opportunities 'a lot' and those who felt they did so 'a little'. Women were more likely than men to believe that poor literacy standards had impacted their prospects 'a lot': 36 per cent of women said this with regard to reading (compared with 24 per cent of men), and 32 per cent of women said it with regards to writing (compared with 23 per cent of men). Respondents from BME backgrounds who rated their writing skills unfavourably were more likely than White respondents in the same position to feel this limited their job opportunities 'a lot' (35 per cent versus 23 per cent).[184]

Notably, people who felt their reading or writing standards limited their job prospects 'a lot' were no more likely to be unemployed than anyone else who rated their literacy skills negatively.[185] Half of those who gave a negative self-assessment of their reading or writing abilities and claimed that this had a considerable impact on their job opportunities (48 per cent for reading and 52 per cent for writing) were, in fact, currently in work. Perhaps the limitations these respondents had in mind related to advancement or finding alternative employment, rather than obtaining or maintaining a job.

[184] See Appendix Tables 8.A24 and Table 8.A25.

[185] See Appendix Tables 8.A26.

Their perceived weaknesses may also have hindered them from obtaining *full-time* work. Respondents who believed their 'below average' or 'poor' reading skills had hindered their job prospects 'a lot' were less likely than other people who judged their reading to be poor to be in full time work (28 per cent, compared to 40 per cent overall). The same was true of those who believed they had weak writing skills and complained this had a significant impact on their job prospects (35 per cent worked full-time, compared with an average of 43 per cent). It is not known whether these respondents had ever sought full-time jobs, but one possible reason why they were not in full time work at the time of the survey was because they faced limitations in job opportunities which stemmed from their poor skills.

Respondents who believed that weaknesses in reading or writing had a great deal of influence on their job prospects were more likely to achieve Entry Level 1 or below in the literacy assessment, compared with those who felt the impact was only 'a little' or who felt no impact at all (Table 8.12).

**Table 8.12 Literacy Levels amongst people who gave a negative rating of their reading and writing skills, by perceived impact of weak literacy on job opportunities**

| | NEGATIVE SELF-ASSESSMENT IN READING | | | | NEGATIVE SELF-ASSESSMENT IN WRITING | | | |
|---|---|---|---|---|---|---|---|---|
| | All | Impact on job opportunities | | | All | Impact on job opportunities | | |
| | | A lot | A little | Not at all | | A lot | A little | Not at all |
| | % | % | % | % | % | % | % | % |
| Entry Level 1 or below | 40 | 45 | 36 | 32 | 30 | 37 | 33 | 18 |
| Entry Level 2 | 7 | 6 | 8 | 6 | 8 | 10 | 12 | 4 |
| Entry Level 3 | 15 | 14 | 15 | 15 | 18 | 19 | 14 | 19 |
| Level 1 | 22 | 26 | 25 | 18 | 29 | 25 | 26 | 38 |
| Level 2 or above | 17 | 10 | 16 | 29 | 17 | 9 | 15 | 21 |
| | | | | | | | | |
| Entry Level 3 or below | 62 | 65 | 59 | 53 | 55 | 66 | 59 | 41 |
| Level 1 or above | 38 | 35 | 41 | 47 | 45 | 34 | 41 | 59 |
| Unweighted | 252 | 75 | 74 | 75 | 453 | 127 | 117 | 156 |

Base: SfL2011 All aged 16-65 who said they were 'below average' or 'poor' at reading or writing

### 8.5.2 Self-assessed numeracy and impact on job prospects

As with weak reading and writing skills, weak maths skills were thought to hinder job opportunities. Two fifths (42 per cent) of respondents who gave their maths skills a negative rating – the equivalent of three per cent of all people aged between16 and 65, or an estimated total of one million people – felt their weakness in working with numbers had had a negative impact on their job prospects. The majority amongst them felt it had only limited their opportunities 'a little'. However, those who felt it had limited their prospects 'a lot' were more likely than average to be out of work (60 per cent, compared with 50 per cent of all respondents

who gave a negative self-assessment of their maths skills), suggesting that their (perceived) shortcomings may partly account for their lack of employment.[186]

Around three fifths of people from BME backgrounds who felt their ability to work with numbers was weak (60 per cent) believed that this had limited their job opportunities. A similar proportion of 35-44 year-olds who felt they had weak maths (56 per cent) likewise believed that his had undermined their job opportunities. A quarter in each group held that the impact of this disadvantage was substantial.[187]

The respondents most likely to have experienced situations in which their abilities hindered their job prospects where those with the weakest numeracy (as measured by the numeracy assessment). Around half (47 per cent) of 16-65 year-olds who believed that their 'below average' or 'poor' maths skills had impacted on their job prospects 'a lot' achieved no more than Entry Level 1 in the numeracy assessment (Table 8.13).

**Table 8.13 Numeracy Levels amongst people who gave a negative rating of their maths skills, by perceived impact of weak maths skills on job opportunities**

| | All | IMPACT ON JOB OPPORTUNITIES | | |
|---|---|---|---|---|
| | | A lot | A little | Not at all |
| | % | % | % | % |
| Entry Level 1 or below | 26 | 47 | 27 | 13 |
| Entry Level 2 | 39 | 29 | 40 | 41 |
| Entry Level 3 | 25 | 17 | 31 | 27 |
| Level 1 | 9 | 7 | 1 | 13 |
| Level 2 or above | 2 | - | - | 5 |
| | | | | |
| Entry Level 2 or below | 64 | 76 | 67 | 55 |
| Entry Level 3 or above | 36 | 24 | 33 | 45 |
| Unweighted | 458 | 91 | 103 | 214 |

Base: SfL2011 All aged 16-65 who said they were 'below average' or 'poor' at working with numbers

## 8.6 Basic skills and economic activity

In 2011, 70 per cent of 16-65 years olds were working. This figure includes people in paid work (67 per cent) as well as people in a variety of other circumstances, such as on a government-funded employment training scheme.[188] While the overall proportion of workers has barely changed since 2003 (when 71 per cent were in work), the proportion of full-time workers fell in the intervening period from 54 per cent to 51 per cent.

Part-time workers were in the minority (20 per cent), yet over a quarter of the population (27 per cent) had worked on a part time basis either in the past or at the time of the survey. Women

[186] See Appendix Tables 8.A26.

[187] See Appendix Tables 8.A27.

[188] For a full distribution of those in work, see Table 3.8.

were almost three times as likely as men to have done this (40 per cent versus 14 per cent). Part time work was also more common than average amongst the highest and lowest age bands (35 per cent of 16-24s and 31 per cent of 55-65s). It was least common amongst people who left education aged 19 or above (22 per cent).[189]

The distribution of people outside of the labour market has remained stable since 2003, as shown in Table 8.14.

**Table 8.14 Distributions of those not in employment in 2003 and 2011**

| | 2003 % | 2011 % |
|---|---|---|
| In work | 71 | 70 |
| Not in work | 29 | 30 |
| *Looking after the family home* | *9* | *7* |
| *Retired* | *6* | *6* |
| *Long-term sick or disabled* | *4* | *4* |
| *Full time education* | *4* | *5* |
| *Actively looking for work* | *4* | *5* |
| *Not in work for other reasons* | *2* | *2* |
| Unweighted | 8730 | 7230 |

Base: SfL2003 All aged 16-65 / SfL2011 All aged 16-65

Seven per cent of 16-65 year-olds had never had a job, apart from holiday or casual work. Women were more likely than men to be in this category (eight per cent, compared with six per cent of men) as were respondents from BME backgrounds when compared with White respondents (16 per cent versus five per cent). Particularly high proportions of people who have never worked could be found amongst Asian or Asian British Pakistanis (23 per cent) or Bangladeshis (33 per cent), and Black or Black British Africans (22 per cent). The difference between respondents from BME or White backgrounds held true across both genders and all age groups. It was also common for younger respondents to never have held a job: this applied to 14 per cent of 20-24 year-olds, and three times as many 16-19 year-olds (45 per cent).[190]

### 8.6.1 Performance in the assessments by economic activity

People who were economically active tended to perform much better than those who were not, both in the literacy and the numeracy assessments (Table 8.15). This was also the case in SfL2003.[191]

[189] See Appendix Tables 8.A28.

[190] See Appendix Tables 8.A29.

[191] See Appendix Tables 8.A30 and Table 8.A31.

**Table 8.15 Literacy and Numeracy Levels by working status**

| | LITERACY | | | NUMERACY | | |
|---|---|---|---|---|---|---|
| | All | In work | Not in work | All | In work | Not in work |
| | % | % | % | % | % | % |
| Entry Level 1 or below | 5 | 3 | 9 | 7 | 5 | 12 |
| Entry Level 2 | 2 | 2 | 3 | 17 | 14 | 25 |
| Entry Level 3 | 8 | 6 | 12 | 25 | 24 | 28 |
| Level 1 | 29 | 28 | 30 | 29 | 32 | 21 |
| Level 2 or above | 57 | 61 | 46 | 22 | 25 | 14 |
| Unweighted | 5824 | 3962 | 1862 | 5823 | 3966 | 1857 |

Base: SfL2011 All aged 16-65 with literacy score / numeracy score

In the literacy assessment, there was a fairly clear distinction between the performance of respondents who were in work and those who were not in work. While three fifths of those in employment (61 per cent) reached Level 2 in the literacy assessment, less than a half of respondents out of work (46 per cent) did the same. Amongst respondents who were in employment, part-time workers performed just as well as full-time workers; meanwhile, amongst the unemployed, those in search of employment performed just as well as those who were not seeking jobs.[192]

The relationship between working status and Numeracy Levels was less clear-cut. More employed than unemployed respondents were classified as Entry Level 3 or above. However, the high performance of employed respondents was mostly driven by the strong numeracy of full-time workers, over a quarter of whom achieved Numeracy Level 2 or above (28 per cent). People who worked part time performed less well than their counterparts in full-time positions, and had an equal likelihood of reaching Level 2 as unemployed respondents. Thus, as in SfL2003, the sharpest dividing line in numeracy performance was between those undertaking full time work and the rest.[193]

Since 2003 there has been an increase in the proportions reaching Level 2 in the literacy assessment across both employed and unemployed groups. The most marked change in numeracy performance, on the other hand, was a decrease in the proportions reaching Level 2. While most respondents contributed to this decline, respondents who were not actively seeking work did not: the distribution of their numeracy scores remains unchanged between 2003 and 2011.

Performance in the ICT assessment followed a similar pattern as in the other assessments, with employed people more likely to score highly than the unemployed in all four components (Table 8.16).

[192] See Appendix Table 8.A30.

[193] See Appendix Table 8.A31.

**Table 8.16 ICT Levels by working status**

| | WORD PROCESSING | | | EMAIL | | | SPREADSHEET | | | MULTIPLE CHOICE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | In work | Not in work | All | In work | Not in work | All | In work | Not in work | All | In work | Not in work |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 2 or below | 43 | 38 | 56 | 31 | 26 | 44 | 39 | 33 | 52 | 9 | 6 | 17 |
| Entry Level 3 | 16 | 17 | 15 | 9 | 9 | 8 | 27 | 29 | 25 | 12 | 9 | 20 |
| Level 1 | 15 | 17 | 11 | 8 | 8 | 7 | 17 | 18 | 14 | 26 | 25 | 27 |
| Level 2 or above | 25 | 28 | 18 | 52 | 57 | 41 | 17 | 20 | 10 | 53 | 59 | 37 |
| Unweighted | 2253 | 1530 | 723 | 2247 | 1527 | 720 | 2228 | 1511 | 717 | 2274 | 1547 | 727 |

Base: SfL2011 All aged 16-65 with word processing / email / spreadsheet / multiple choice score

## 8.7 Basic skills and occupation

The eight-class version of the National Statistics Socio-economic Classification (NS-SEC) [194] can be used to categorise the types of work undertaken by SfL2011 respondents, and provide a comparison with SfL2003. The NS-SEC is an occupationally based classification which aims to differentiate positions within labour markets and production units in terms of their typical 'employment relations'. The eight NS-SEC categories distinguish different positions (not people) as defined by social relationships in the workplace, i.e. by how employees are regulated by employers through employment contracts.

As Table 8.17 shows, there have been no substantial changes since 2003 in the distribution of occupations.

**Table 8.17 Distribution of occupations in 2003 and 2011**

| | 2003 | 2011 |
|---|---|---|
| | % | % |
| **A.** Higher managerial and professional occupations | 8 | 11 |
| **B.** Lower managerial and professional occupations | 26 | 26 |
| **C.** Intermediate occupations | 11 | 9 |
| **D.** Small employers and own account workers | 8 | 9 |
| **E.** Lower supervisory and technical occupations | 10 | 11 |
| **F.** Semi-routine occupations | 14 | 14 |
| **G.** Routine occupations | 12 | 11 |
| **H.** Never worked and long-term unemployed | 3 | 3 |
| Others, including full time students and those who did not provide sufficient information for classification | 9 | 6 |
| Unweighted | 8730 | 7230 |

Base: SfL2003 All aged 16-65 / SfL2011 All aged 16-65

[194] For details see http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/soc2010/soc2010-volume-3-ns-sec--rebased-on-soc2010--user-manual/index.html, accessed on 28/03/12.

In both years, a quarter of respondents (26 per cent) were in Lower managerial and professional occupations, and similar proportions were in Routine or Semi-routine occupations. A minority of around one in ten respondents were outside the labour market or unclassifiable (with the proportion from SfL2011 slightly lower than that from SfL2003), while the rest of the population was distributed fairly evenly across the remaining four NS-SEC classes.

A closer look at respondents who were either currently employed or had been employed in the past reveals that gender and age have a bearing on the type of work people do. While men and women had an even chance of employment in Routine jobs (13 per cent and 12 per cent, respectively), more women than men had experience of Lower managerial, Intermediate and Semi-routine occupations, and more men than women had experience of the remaining types of job. Younger respondents were more likely to have worked in Intermediate, Semi-routine and Routine occupations, and older ones in professional occupations or as Small employers or own account workers.[195]

In addition, people who had a limiting disability were more likely than other respondents to have a Routine occupation (20 per cent, compared to 12 per cent overall) or a Semi-routine occupation (19 per cent, compared to 16 per cent overall), while respondents from BME backgrounds had a higher than average likelihood of being in Semi-routine occupations (19 per cent, compared with 15 per cent among White respondents).

The work that people were in was also linked to the age they were when they finished their education. Those who continued their education past the age of 18 were more likely than others to be in managerial occupations; meanwhile, people who ceased their education when they were 16 or younger were more likely to be in every other type of occupation, with the exception of Intermediate occupations which were most likely to be staffed by people who left education aged 17 or 18.

Finally, there was a link between respondents' occupation and their perception of their abilities in reading and writing, working with numbers, and using computers (Table 8.18). People who rated their literacy positively were more likely than others to have worked in managerial or intermediate occupations, and less likely to be in alternative types of work. People who described their numeracy as 'very good' were the most likely to be in managerial or professional jobs; the same people were the least likely to be in Lower supervisory and technical, Semi-routine or Routine occupations. Similarly, people who felt they were 'very good' with computers had a higher likelihood of being in managerial positions, and a lower likelihood than anyone else of being in most other types of work. It should be pointed out that it is not necessarily the case that people's employment equipped them to improve or view their skills positively; the direction of causation is unclear, and it is possible that high job status and a positive perception of skills are mutually reinforcing characteristics.

[195] See Appendix Table 8.A32 for the occupations of people who have ever been in work, and Appendix Table 8.A33 for the occupations of people who are currently in work, broken down by demographics.

**Table 8.18 Occupations amongst those who have ever been in work, by self-assessed abilities in literacy, numeracy and ICT**

| | LITERACY SELF-ASSESSMENT | | NUMERACY SELF-ASSESSMENT | | ICT SELF-ASSESSMENT | |
|---|---|---|---|---|---|---|
| | Negative (both skills) | Positive (both skills) | Negative | Positive | Negative | Positive |
| | % | % | % | % | % | % |
| **A.** Higher managerial and professional | 5 | 13 | 4 | 13 | 3 | 15 |
| **B.** Lower managerial and professional | 8 | 31 | 14 | 30 | 19 | 32 |
| **C.** Intermediate | 6 | 11 | 10 | 10 | 7 | 12 |
| **D.** Small employers and own account workers | 11 | 9 | 8 | 10 | 15 | 8 |
| **E.** Lower supervisory and technical | 16 | 11 | 15 | 11 | 17 | 10 |
| **F.** Semi-routine | 25 | 15 | 23 | 15 | 21 | 14 |
| **G.** Routine | 30 | 11 | 26 | 11 | 18 | 9 |
| Unweighted | 193 | 6174 | 511 | 6202 | 1141 | 5057 |

Base: SfL2011 All aged 16-65 who have ever been in work and who gave a rating for their reading, writing, maths and ICT skills

### 8.7.1 Performance in the assessments by occupation

The following analysis is based only on those people who were in employment at the time of the interview (70 per cent of all respondents). The Literacy Levels achieved by each occupational group are illustrated in Table 8.19.

**Table 8.19 Literacy Levels amongst those who work, by occupation**

| | | OCCUPATION | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | All | A Higher managerial and professional | B Lower managerial and professional | C Intermediate | D Small employers and own account workers | E Lower supervisory and technical | F Semi routine | G Routine |
| | % | % | % | % | % | % | % | % |
| Entry Level 1 or below | 3 | 2 | 1 | 1 | 5 | 7 | 4 | 7 |
| Entry Level 2 | 2 | * | * | * | 3 | 2 | 4 | 4 |
| Entry Level 3 | 6 | 3 | 4 | 6 | 4 | 8 | 9 | 13 |
| Level 1 | 28 | 14 | 24 | 28 | 37 | 33 | 36 | 33 |
| Level 2 or above | 61 | 81 | 71 | 65 | 51 | 50 | 48 | 42 |
| | | | | | | | | |
| Entry Level 3 or below | 11 | 5 | 5 | 7 | 12 | 17 | 16 | 24 |
| Level 1 or above | 89 | 95 | 95 | 93 | 88 | 83 | 84 | 76 |
| Unweighted | 3936 | 515 | 1229 | 424 | 388 | 426 | 588 | 366 |

Base: SfL2011 All aged 16-65 who work and have literacy score

Respondents in managerial and professional positions and Intermediate occupations were more likely than average to achieve a Level 1 or above score, with just over nine in ten respondents from each of categories A, B and C achieving this. However, within these three categories,

respondents from category A were more likely than those from B and C to achieve a Level 2 or above score.

Respondents working as Small employers and own account workers (D), in Lower Supervisory and technical occupations (E) and Semi-routing occupations (F) performed at a similar standard, with between 83 and 88 per cent of respondents achieving Level 1 or above. Those in Routine occupations (G) had the poorest performance with only three quarters of those respondents (76 per cent) classified as Level 1 or above. This broadly reflects the pattern from SfL2003.

The largest gap in performance at Level 1 or above was between those in Semi-routine and Routine occupations (F and G). This marks a change from SfL2003, where the largest gaps was between those in Intermediate occupations and Small employer and own account workers (C and D). However, in 2011 there was still a sizable gap between these two groups.

Only 27 per cent of employed respondents with Entry Level 3 or below literacy were employed in managerial, professional and intermediate positions (categories A, B and C), despite the fact that over half (54 per cent) of all employed respondents were in these occupational categories. This finding is in line with the SfL2003 data and again suggests that a higher standard of literacy is required for these sorts of occupations.

The proportion classified as Level 2 or above has increased across all occupational categories since 2003. Amongst respondents employed in Semi-routine occupations (F), the proportion reaching or surpassing Level 1 has also increased (from 77 per cent to 84 per cent).[196]

In the numeracy assessment, scores were highest amongst respondents in Higher managerial and professional occupations (A) and lowest amongst those in Routine occupations (G ). Numeracy performance by occupational category is shown in Table 8.20.

**Table 8.20 Numeracy Levels amongst those who work, by occupation**

| | | OCCUPATION | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G |
| | All | Higher managerial and professional | Lower managerial and professional | Intermediate | Small employers and own account workers | Lower supervisory and technical | Semi routine | Routine |
| | % | % | % | % | % | % | % | % |
| Entry Level 1 or below | 5 | 1 | 3 | 2 | 6 | 9 | 6 | 12 |
| Entry Level 2 | 14 | 5 | 9 | 14 | 16 | 19 | 22 | 18 |
| Entry Level 3 | 24 | 15 | 20 | 28 | 29 | 26 | 29 | 33 |
| Level 1 | 33 | 36 | 36 | 37 | 29 | 28 | 30 | 25 |
| Level 2 or above | 25 | 42 | 32 | 19 | 20 | 19 | 14 | 13 |
| | | | | | | | | |
| Entry Level 2 or below | 18 | 6 | 12 | 16 | 22 | 28 | 28 | 30 |
| Entry Level 3 or above | 82 | 94 | 88 | 84 | 78 | 73 | 72 | 70 |
| Unweighted | 3937 | 516 | 1227 | 437 | 403 | 427 | 554 | 373 |

Base: SfL2011 All aged 16-65 who work and have numeracy score

[196] See Appendix Table 8.A34.

Respondents in Higher managerial and professional occupations (A) were the most likely to achieve Entry Level 3 or above (94 per cent). They also had the greatest likelihood of reaching Level 2 or above (42 per cent), followed by those from category B (32 per cent). The proportions of respondents achieving Level 2 or above in categories C to G were broadly consistent, although respondents in Routine occupations (G) were slightly less likely than those in Lower supervisory and technical occupations (E) to reach this standard. These findings suggest that numeracy is particularly important for respondents in managerial and professional occupations.

Since 2003, there has been a reduction in the proportion of respondents who achieved Entry Level 3 or above in managerial and professional occupations (A and B). The reduction for category A was from 98 per cent 94 per cent, and for category B from 92 per cent to 88 per cent. The proportion reaching Entry Level 3 or above in the other five categories remains unchanged.[197]

Although people with better numeracy (and better literacy) were more likely to be found in higher occupation categories, this was not always true. As in 2003, there were sizable proportions of highly skilled respondents in occupations where lower basic skills might be expected, as well as some with weak numeracy working in occupations where one would expect higher requisite skills. Whilst a number of reasons might account for this, it could be due to educational achievement. Exam failure at 16 may restrict the career options of those with potentially higher skills, whereas people with weaker skills may sometimes achieve exam passes.

Of those respondents who currently worked in Routine occupations (G) and achieved a Level 2 or above score on the numeracy assessment, a quarter (24 per cent) held a pass GCSE at grade C or above (or equivalent) in Maths. However, twice as many respondents (50 per cent) working in Higher managerial and professional occupations (A) who achieved this level held a Maths GCSE at grade C or above (or equivalent). The converse was also true; only 30 per cent of those working in Routine occupations who held a maths GCSE at grade C or above (or equivalent) achieved a Level 2 score, compared to 52 per cent in Higher managerial and professional qualifications. This may also suggest that people may lose their maths skills if they are employed in occupations which do not utilise them.

Finally, a relationship was apparent between ICT performance and occupation (Table 8.21).

[197] See Appendix Table 8.A35.

**Table 8.21 ICT Levels amongst those who work, by occupation**

| | All | OCCUPATION | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G |
| | | Higher managerial and professional | Lower managerial and professional | Intermediate | Small employers and own account workers | Lower supervisory and technical | Semi routine | Routine |
| | % | % | % | % | % | % | % | % |
| **WORD PROCESSING** | | | | | | | | |
| Entry Level 2 or below | 38 | 20 | 25 | 27 | 60 | 53 | 48 | 59 |
| Entry Level 3 or above | 62 | 80 | 75 | 73 | 40 | 48 | 52 | 41 |
| Unweighted | 1524 | 215 | 478 | 167 | 144 | 173 | 210 | 137 |
| **EMAIL** | | | | | | | | |
| Entry Level 2 or below | 26 | 13 | 13 | 13 | 45 | 38 | 34 | 50 |
| Entry Level 3 or above | 74 | 87 | 87 | 87 | 55 | 62 | 66 | 50 |
| Unweighted | 1521 | 214 | 477 | 167 | 144 | 174 | 209 | 136 |
| **SPREADSHEET** | | | | | | | | |
| Entry Level 2 or below | 33 | 20 | 23 | 22 | 48 | 47 | 41 | 55 |
| Entry Level 3 or above | 67 | 80 | 77 | 78 | 52 | 53 | 59 | 45 |
| Unweighted | 1505 | 213 | 469 | 166 | 140 | 174 | 208 | 135 |
| **MULTIPLE CHOICE** | | | | | | | | |
| Entry Level 2 or below | 6 | 1 | 3 | 3 | 10 | 10 | 9 | 18 |
| Entry Level 3 or above | 94 | 100 | 97 | 97 | 90 | 90 | 91 | 82 |
| Unweighted | 1540 | 217 | 483 | 168 | 146 | 178 | 210 | 138 |

Base: SfL2011 All aged 16-65 who work and have word processing / email / spreadsheet / multiple choice score

For the three practical components, there seemed to be a distinction in the performance of respondents in occupation categories A to C and those in D to G. Respondents in managerial, professional and intermediate positions (A, B and C) were more likely than average to achieve Entry Level 3 or above in the three practical components of the ICT assessment, and performance between these three categories was broadly consistent. Respondents in all other occupational categories (D to G) were less likely than average to achieve Entry Level 3 or above (Table 8.21). This indicates that word processing, email and spreadsheet skills are particularly important for managerial and professional occupations and Intermediate occupations.[198]

[198] For the full distribution of ICT Levels by occupation, see Appendix Table 8.A36.

## 8.8 Basic skills and industry sector

The 2007 Standard Industry Classification (SIC) was used to classify the industries in which respondents worked.[199] The classification system consists of 21 top-level groupings, but sectors can be grouped together for the purposes of analysis: for example, several of the declining industries (A and B) can be pooled together, as can sectors that were clustered together in the 1992 version of SIC (though such groupings do not form precise equivalents to those from 1992).[200]

The distribution of respondents who were currently employed across the different sectors is shown in Table 8.22. This is broadly line with the national population distribution.[201]

**Table 8.22 Distribution of industry categories**

| | | 2011 |
|---|---|---|
| | | % |
| **A/B** | Agriculture, forestry, fishing and mining | 1 |
| **C** | Manufacture | 9 |
| **D/E** | Utilities supply, sewage and waste management | 1 |
| **F** | Construction | 7 |
| **G** | Wholesale, retail and repairs | 14 |
| **H** | Transport and storage | 5 |
| **I** | Accommodation and food service | 6 |
| **J** | Information and communication | 4 |
| **K** | Finance | 4 |
| **L** | Real estate | 1 |
| **M** | Professional, scientific and technical | 6 |
| **N** | Administration and support | 5 |
| **O** | Public administration | 7 |
| **P** | Education | 10 |
| **Q** | Health and social work | 13 |
| **R/S/T/U** | Other activities | 5 |
| Unweighted | | 4911 |
| Base: SfL2011 All aged 16-65 who work | | |

[199] For details see http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/standard-industrial-classification/index.html, accessed on 28/03/12.

[200] For details see: Office for National Statistics (1992) UK Standard Industrial Classification 1992, available online at: http://www.ons.gov.uk/ons/guide-method/classifications/archived-standard-classifications/uk-standard-industrial-classification-1992--sic92-/uk-standard-industrial-classification-1992.pdf, accessed on 28/03/12.

[201] As recorded in the Annual Population Survey (April 2010 to March 2011) for England of16-64 years on in employment.

As one might expect, men were more likely to be employed in some industries (such as Manufacture or Construction) and women in others (such as Education or Health and social work). There were also differences by ethnicity, with respondents from BME backgrounds more likely than White respondents to be working in Wholesale, retail and repairs, Accommodation and food services or Health and social work, but less likely to be involved in Manufacture, Construction or Education.[202]

Moreover, a relationship was apparent between respondents' age and the industry they worked in. People under the age of 25 were more likely than older respondents to be involved in Wholesale, retail and repairs, or Accommodation and food service; at the same time, they were less likely than their older counterparts to be working in Manufacture, in Public administration, or in the Professional, scientific and technical sectors. Other industries attracted a disproportionately high number of people in a particular age range: for instance, 20-24 year-olds in the Construction industry, and 35-44 year-olds in the Information and communication industry. In addition, the likelihood of working in the Education sector rose with age (from three per cent amongst 16-19 year-olds, to 12 per cent amongst 55-65 year-olds).

Direct comparisons cannot be drawn between the distribution of industry sectors in 2011 and 2003, since data from SfL2003 was classified according to the 1992 version of SIC in which groupings were differently defined. Broad comparisons between the two years reveal some changes over time, such as a decrease in the proportion of 16-65 year-olds engaged in Manufacture, and a slight increase in those employed in Education. [203]

### 8.8.1 Performance in the assessments by industry sector

There was substantial variation in performance in the literacy assessment between the SIC groups.[204] Almost all respondents (98 per cent) who worked in Education achieved Level 1 or above, whilst only three quarters (76 per cent) of those who worked in Accommodation and food service performed at this standard (Table 8.23).[205]

[202] See Appendix Table 8.A37.

[203] See Appendix Table 8.A38.

[204] The 2009 National Employer Skills Survey also found variation in reported literacy skills between SIC groups: Shury, J., M. Winterbotham, K. Oldfield, M. Spilsbury, and S. Constable (2010) *National Employer Skills Survey for England 2009: Main Report.* UK Commission for Employment and Skills Evidence Report 23, available online at: http://www.ukces.org.uk/assets/bispartners/ukces/docs/publications/evidence-report-23-ness-main-report-2009.pdf, accessed 28/03/12.

[205] For the full distribution of Literacy Levels by industry, see Appendix Table 8.A39.

## Table 8.23 Literacy Levels amongst people who work by industry

| | All | A/B Agriculture forestry, fishing and mining | C Manufacture | D/E Utilities supply sewage and waste management | F Construction | G Wholesale retail and repairs | H Transport and storage | I Accom-modation and food service | J Information and communication | K Finance | L Real estate | M Professional scientific and technical | N Administration and support | O Public administration | P Education | Q Health and social work | R-U Other activities |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 3 or below | 11 | 10 | 13 | 13 | 19 | 14 | 13 | 24 | 5 | 9 | - | 7 | 16 | 3 | 3 | 10 | 5 |
| Level 1 or above | 89 | 90 | 87 | 87 | 81 | 87 | 87 | 76 | 95 | 91 | 100 | 93 | 84 | 97 | 98 | 91 | 95 |
| Unweighted | 3849 | 39 | 365 | 32 | 247 | 529 | 175 | 200 | 146 | 135 | 37 | 245 | 201 | 268 | 442 | 574 | 214 |

Base: SfL2011 All aged 16-65 who work and have a SIC code and literacy score

Note: small base sizes

## Table 8.24 Numeracy Levels amongst people who work by industry

| | All | A/B Agriculture forestry, fishing and mining | C Manufacture | D/E Utilities supply sewage and waste management | F Construction | G Wholesale retail and repairs | H Transport and storage | I Accom-modation and food service | J Information and communication | K Finance | L Real estate | M Professional scientific and technical | N Administration and support | O Public administration | P Education | Q Health and social work | R-U Other activities |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 2 or below | 18 | 17 | 15 | 16 | 23 | 25 | 21 | 30 | 8 | 4 | 7 | 11 | 26 | 11 | 9 | 23 | 21 |
| Entry Level 3 or above | 82 | 83 | 85 | 84 | 77 | 75 | 79 | 70 | 92 | 96 | 93 | 89 | 74 | 89 | 91 | 77 | 79 |
| Unweighted | 3857 | 41 | 362 | 34 | 233 | 514 | 186 | 199 | 138 | 140 | 37 | 251 | 200 | 296 | 448 | 558 | 220 |

Base: SfL2011 All aged 16-65 who work and have a SIC code and numeracy score

Note: small base sizes

Respondents working in the Education, Public administration, and Information and communication sectors, together with those engaged in Other activities (R/S/T/U), were more likely than average to achieve a Level 1 or above score. Respondents in the Construction and Accommodation and food service sectors were less likely than average to reach or surpass Level 1, with respondents from all other groups tending to perform in line with the average (89 per cent at Level 1 or above).[206]

There was also substantial variation in performance in the numeracy assessment between the SIC groupings (Table 8.24). The same industries which performed well in the literacy assessment – Education, Public administration, Professional, scientific and technical, and Information and communication – also tended to have above average numeracy (82 per cent at Entry Level 3 or above).[207]

In addition, almost all respondents (96 per cent) who worked in Finance achieved Entry Level 3 or above, while only seven in ten (70 per cent) who worked in Accommodation and food service reached this standard.

Tables 8.25-8.28 display the ICT Levels of the SIC groups.[208] Respondents working in five of the sectors (Information and communication, Finance, Professional, scientific and technical, Public administration, and Education) were more likely than average to achieve Entry Level 3 or above in the three practical elements of the ICT assessment. Conversely, people employed in Transport and storage and in Health and social work were more likely than the rest of the population to fall short of Entry Level 3 in the three practical components; the same applied to those in Construction and the Agriculture, forestry, fishing and mining industries with regards to all four components of the ICT assessment. A more surprising finding is that people who worked in Administration and support, who might be expected to have sound ICT skills, had a greater likelihood than the overall population of scoring Entry Level 2 or below in the word processing, email and multiple choice components.

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[206] The findings from the 2009 National Employer Skills Survey (NESS 2009) suggest that the three sectors where employers were most likely to report insufficient literacy skills amongst staff were: Transport, storage and communications; Health and social work; and Education (Shury et al. 2010, Table 5.15). Note that NESS 2009 classified industries according to the 2003 SIC classification, so that categories do not correspond precisely with those used in the present report. Respondents in these three industries, and particularly in Education, did not perform particularly poorly in the Skills for Life literacy assessment, suggesting that employers were not reporting weak skills *per se* but a mismatch between employees' skills and the level of skill demanded by their job roles. This is also the case regarding Numeracy and ICT skills. For this reason, there is limited scope for comparison between NESS 2009 and SfL2011.

[207] For the full distribution of Numeracy Levels by industry, see Appendix Table 8.A40.

[208] For the full distribution of ICT Levels by industry, see Appendix Tables 8.A41to 8.A44.

## Table 8.25 Word Processing Levels amongst people who work by industry

| | All | A/B Agriculture forestry, fishing and mining | C Manufacture | D/E Utilities supply sewage and waste management | F Construction | G Wholesale retail and repairs | H Transport and storage | I Accom-modation and food service | J Information and communication | K Finance | L Real estate | M Professional scientific and technical | N Administration and support | O Public administration | P Education | Q Health and social work | R-U Other activities |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 2 or below | 38 | 74 | 37 | 32 | 53 | 42 | 63 | 41 | 7 | 10 | 13 | 15 | 50 | 21 | 18 | 50 | 56 |
| Entry Level 3 or above | 62 | 26 | 63 | 68 | 48 | 58 | 37 | 59 | 93 | 90 | 87 | 85 | 50 | 79 | 82 | 50 | 44 |
| Unweighted | 1498 | 11 | 160 | 14 | 93 | 224 | 56 | 88 | 53 | 57 | 16 | 94 | 72 | 115 | 133 | 239 | 73 |

Base: SfL2011 All aged 16-65 who work and have a SIC code and word processing score

Note: small base sizes

## Table 8.26 Email Levels amongst people who work by industry

| | All | A/B Agriculture forestry, fishing and mining | C Manufacture | D/E Utilities supply sewage and waste management | F Construction | G Wholesale retail and repairs | H Transport and storage | I Accom-modation and food service | J Information and communication | K Finance | L Real estate | M Professional scientific and technical | N Administration and support | O Public administration | P Education | Q Health and social work | R-U Other activities |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 2 or below | 26 | 64 | 24 | 19 | 39 | 29 | 43 | 27 | 5 | 6 | - | 8 | 41 | 13 | 15 | 34 | 35 |
| Entry Level 3 or above | 74 | 36 | 76 | 81 | 61 | 71 | 57 | 73 | 96 | 94 | 100 | 92 | 59 | 87 | 85 | 66 | 65 |
| Unweighted | 1495 | 11 | 160 | 14 | 92 | 223 | 56 | 88 | 53 | 58 | 17 | 93 | 71 | 115 | 132 | 238 | 74 |

Base: SfL2011 All aged 16-65 who work and have a SIC code and email score

Note: small base sizes

## Table 8.27 Spreadsheet Levels amongst people who work by industry

| | All | A/B Agriculture forestry, fishing and mining | C Manufacture | D/E Utilities supply sewage and waste management | F Construction | G Wholesale retail and repairs | H Transport and storage | I Accom-modation and food service | J Information and communication | K Finance | L Real estate | M Professional scientific and technical | N Administration and support | O Public administration | P Education | Q Health and social work | R-U Other activities |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 2 or below | 33 | 73 | 31 | 25 | 44 | 33 | 47 | 35 | 13 | 15 | 10 | 15 | 40 | 22 | 23 | 49 | 40 |
| Entry Level 3 or above | 67 | 27 | 69 | 75 | 56 | 67 | 53 | 65 | 87 | 85 | 90 | 85 | 60 | 78 | 77 | 51 | 60 |
| Unweighted | 1479 | 11 | 159 | 14 | 90 | 222 | 56 | 87 | 53 | 56 | 16 | 93 | 71 | 115 | 128 | 235 | 73 |

Base: SfL2011 All aged 16-65 who work and have a SIC code and spreadsheet score

Note: small base sizes

## Table 8.28 Multiple Choice Levels amongst people who work by industry

| | All | A/B Agriculture forestry, fishing and mining | C Manufacture | D/E Utilities supply sewage and waste management | F Construction | G Wholesale retail and repairs | H Transport and storage | I Accom-modation and food service | J Information and communication | K Finance | L Real estate | M Professional scientific and technical | N Administration and support | O Public administration | P Education | Q Health and social work | R-U Other activities |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Entry Level 2 or below | 6 | 29 | 7 | 11 | 11 | 4 | 8 | 10 | - | 3 | - | 2 | 12 | 4 | 3 | 8 | 5 |
| Entry Level 3 or above | 94 | 71 | 93 | 89 | 89 | 96 | 92 | 90 | 100 | 98 | 100 | 98 | 88 | 96 | 97 | 92 | 95 |
| Unweighted | 1514 | 11 | 162 | 14 | 94 | 224 | 57 | 88 | 53 | 58 | 17 | 95 | 72 | 116 | 137 | 242 | 74 |

Base: SfL2011 All aged 16-65 who work and have a SIC code and multiple choice score

Note: small base sizes

## 8.9 Basic skills and earnings

All respondents who were in work, whether they were self-employed or working for someone else, were asked to state what their usual earnings were before any deductions were made from their pay. Respondents who had not yet earned anything in their job were asked how much they expected to earn. The data collected made it possible to calculate respondents' gross annual earnings. The distribution of annual earnings across the population is shown in Table 8.29.

**Table 8.29 Gross annual earnings**

| | 2011 |
|---|---|
| | % |
| Working but not earning | 1 |
| Above £0 but less than £5,200 | 7 |
| £5,200 up to £10,399 | 8 |
| £10,400 up to £15,599 | 9 |
| £15,600 up to £20,799 | 8 |
| £20,800 up to £25,999 | 6 |
| £26,000 up to £31,199 | 5 |
| £31,200 up to £36,399 | 3 |
| £36,400 or more | 9 |
| Irregular earnings | * |
| Does not know | 2 |
| Refused | 14 |
| No earnings received yet and does not know or refused to state amount expected | * |
| Not working (neither in work, in government scheme or temporarily away from job) | 29 |
| Unweighted | 7230 |
| Base: SfL2011 All aged 16-65 | |

Differences between demographic subgroups can be explored by excluding people who were not currently in work. This reveals the existence of clear differences between the earnings of men and women: women were more likely to be earning below £13,520 per year (38 per cent, compared with 19 per cent of men) and less likely to be earning £26,000 or above (16 per cent, compared with 32 per cent of men), though roughly equal proportions of men and women were earning amounts in between. Fewer respondents from BME backgrounds (16 per cent) than White respondents (26 per cent) were earning £26,000 a year or above. The age group most likely to be in the highest annual earnings band, earning £36,400 or more annually, consisted of people aged between 35 and 54 (17 per cent, compared with 12 per cent overall).[209]

In part, such differences may be accounted for by variations in the respondents' working hours. However working hours were not fully responsible for the differences. Further analysis based solely on respondents who were working full-time shows that, even when people with similar

[209] See Appendix Tables 8.A45 and 8.A46.

working hours are compared, disparities in gross earnings between genders, age-bands and ethnic groups remain. Women dominated the lower end of the pay scale, with 32 per cent of female full-time workers earning less than £16,640 a year, compared with just 20 per cent male full-time workers; men were predominant at the higher end of the pay scale, with almost a quarter in receipt of £33,800 or more (23 per cent of men, compared with 15 per cent of women). Fewer full time workers from BME backgrounds were earning a gross salary of £26,000 or above (22 per cent, compared with 33 per cent of White respondents), while 35-54 year-olds were the highest earning full-time workers (21 per cent in this age range earned £36,400 or above, compared with 16 per cent overall).[210]

### 8.9.1 Performance in the assessments by earnings

In 2011, higher earnings were linked with higher literacy skills (Table 8.30), as was also the case in 2003.[211]

**Table 8.30 Literacy Levels amongst full-time workers by gross annual earnings**

| | All | Less than £5,000 | £5,000 to £9,999 | £10,000 to £14,999 | £15,000 to £19,999 | £20,000 to £29,999 | £30,000 or more |
|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % |
| Entry Level 1 or below | 3 | 3 | 2 | 7 | 5 | 1 | 1 |
| Entry Level 2 | 1 | 1 | * | 3 | 1 | 1 | 1 |
| Entry Level 3 | 5 | 14 | 4 | 11 | 7 | 4 | 2 |
| Level 1 | 27 | 29 | 37 | 32 | 32 | 29 | 19 |
| Level 2 or above | 64 | 53 | 57 | 48 | 56 | 66 | 77 |
| | | | | | | | |
| Entry Level 3 or below | 9 | 18 | 6 | 20 | 12 | 6 | 4 |
| Level 1 or above | 91 | 82 | 94 | 80 | 88 | 95 | 96 |
| Unweighted | 2179 | 91 | 96 | 326 | 383 | 529 | 754 |

Base: SfL2011 All aged 16-65 in full time work with literacy score who gave a value for their gross earnings

Four fifths of full-time workers who earned less than £5,000 per year (82 per cent) achieved Level 1 or above in literacy, compared to 96 per cent of full time workers who earned £30,000 or more a year. The exception to this pattern was amongst respondents who earned between £5,000 and £9,999. A surprisingly high proportion of this group (94 per cent) achieved Level 1 or above, though this finding should be treated with caution given the small base size of the group.

Table 8.31 shows the earnings of full-time workers in 2011 broken down by Literacy Levels. Three in ten full time working respondents (30 per cent) who achieved Entry Level 3 or below earned £20,000 or more. However, those who achieved Level 1 or above were over twice as likely to earn this amount (62 per cent).

[210] See Appendix Tables 8.A47 and 8.A48.

[211] See Appendix Table 8.A49. The 2003 figures were collected as income bands rather than raw values, so no adjustment has been applied to account for inflation over the past eight years. For this reason, no comparisons have been drawn between the data from 2003 and 2011.

**Table 8.31 Gross annual earnings amongst full-time workers by Literacy Levels**

| | All | Entry Level 3 or below | Level 1 or above |
|---|---|---|---|
| | % | % | % |
| Less than £5,000 | 4 | 8 | 4 |
| £5,000 to £9,999 | 5 | 3 | 5 |
| £10,000 to £14,999 | 16 | 36 | 14 |
| £15,000 to £19,999 | 17 | 23 | 17 |
| £20,000 to £29,999 | 25 | 16 | 26 |
| £30,000 or more | 34 | 14 | 36 |
| Unweighted | 2179 | 174 | 2005 |

Base: SfL2011 All aged 16-65 in full time work with literacy score who gave a value for their gross earnings

Earnings were also higher amongst those with stronger numeracy (Table 8.32). However, there was again one exception: the skills of respondents who earned less than £5,000 in the last 12 months were similar to those of higher earners. This group did not stand out in SfL2003, when there was a consistent positive correlation between earnings and numeracy.[212]

**Table 8.32 Numeracy Levels amongst full-time workers by gross annual earnings**

| | All | Less than £5,000 | £5,000 to £9,999 % | £10,000 to £14,999 | £15,000 to £19,999 | £20,000 to £29,999 | £30,000 or more |
|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % |
| Entry Level 1 or below | 4 | 3 | 10 | 11 | 3 | 2 | 1 |
| Entry Level 2 | 11 | 16 | 18 | 18 | 17 | 10 | 6 |
| Entry Level 3 | 23 | 28 | 33 | 30 | 29 | 22 | 15 |
| Level 1 | 33 | 24 | 19 | 27 | 34 | 37 | 36 |
| Level 2 or above | 29 | 30 | 21 | 15 | 17 | 29 | 43 |
| | | | | | | | |
| Entry Level 2 or below | 15 | 19 | 28 | 29 | 20 | 12 | 7 |
| Entry Level 3 or above | 85 | 81 | 72 | 71 | 80 | 88 | 94 |
| Unweighted | 2200 | 98 | 98 | 323 | 376 | 545 | 760 |

Base: SfL2011 All aged 16-65 in full time work with numeracy score who gave a value for their gross earnings

Table 8.33 shows earnings broken down by Numeracy Levels, revealing a similar pattern to that regarding literacy. A third (34 per cent) of full time workers who achieved Entry Level 2 or below earned £20,000 or more in the last 12 months. However, amongst those who achieved an Entry Level 3 or above score, nearly double the proportion (63 per cent) earned this amount. At the other end of the scale, only eight per cent of these respondents earned less than £10,000 compared to 14 per cent who achieved Entry Level 3 or below.

[212] See Appendix Table 8.A50. The 2003 figures were collected as income bands rather than raw values, so no adjustment has been applied to account for inflation over the past eight years. For this reason, direct comparisons between the data from SfL2003 and SfL2011 have not been drawn in this report.

**Table 8.33 Gross annual earnings amongst full-time workers by Numeracy Levels**

| | All | Entry Level 2 or below | Entry Level 3 or above |
|---|---|---|---|
| | % | % | % |
| Less than £5,000 | 4 | 5 | 4 |
| £5,000 to £9,999 | 5 | 9 | 4 |
| £10,000 to £14,999 | 15 | 30 | 13 |
| £15,000 to £19,999 | 17 | 22 | 16 |
| £20,000 to £29,999 | 25 | 19 | 26 |
| £30,000 or more | 35 | 15 | 38 |
| Unweighted | 2200 | 329 | 1871 |

Base: SfL2011 All aged 16-65 in full time work with numeracy score who gave a value for their gross earnings

Computer skills were likewise linked with earnings. As earnings increased so did scores in the three practical components of the ICT assessment (Table 8.34).[213] Respondents who earned less than £5,000 in the last 12 months were once again the exception, performing better than might be expected and broadly in line with respondents who earned £30,000 or more (though note that base sizes are small and should be treated with caution).

**Table 8.34 ICT Levels amongst full-time workers by gross annual earnings**

| | All | Less than £5,000 | £5,000 to £9,999 % | £10,000 to £14,999 | £15,000 to £19,999 | £20,000 to £29,999 | £30,000 or more |
|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % |
| **WORD PROCESSING** | | | | | | | |
| Entry Level 2 or below | 34 | 23 | 55 | 50 | 43 | 32 | 23 |
| Entry Level 3 or above | 66 | 77 | 45 | 50 | 57 | 68 | 77 |
| Unweighted | 834 | 28 | 36 | 132 | 139 | 206 | 293 |
| **EMAIL** | | | | | | | |
| Entry Level 2 or below | 21 | 9 | 41 | 35 | 30 | 24 | 9 |
| Entry Level 3 or above | 79 | 91 | 59 | 65 | 70 | 77 | 91 |
| Unweighted | 832 | 28 | 35 | 130 | 139 | 208 | 292 |
| **SPREADSHEET** | | | | | | | |
| Entry Level 2 or below | 29 | 25 | 45 | 43 | 38 | 27 | 20 |
| Entry Level 3 or above | 71 | 75 | 55 | 57 | 62 | 73 | 80 |
| Unweighted | 824 | 27 | 35 | 130 | 138 | 203 | 291 |
| **MULTIPLE CHOICE** | | | | | | | |
| Entry Level 2 or below | 5 | 3 | 12 | 14 | 5 | 2 | 1 |
| Entry Level 3 or above | 96 | 97 | 88 | 86 | 95 | 98 | 99 |
| Unweighted | 845 | 28 | 37 | 133 | 141 | 211 | 295 |

Base: SfL2011 All aged 16-65 in full time work with word processing / email / spreadsheet / multiple choice score who gave a value for their gross earnings

Note: small base sizes

[213] For the full distribution of ICT Levels amongst full-time workers by gross annual earnings, see Appendix Table 8.A51.

## 8.10 Basic skills and benefits

Two fifths of 16-65 year-olds (42 per cent) were in receipt of one or more benefits. More than a quarter were in receipt of Child Benefit (28 per cent) and a fifth received Tax Credits (21 per cent). The full breakdown of the types of benefits received is shown in Table 8.35.

**Table 8.35 Distribution of benefits received**

| | 2011 |
|---|---|
| | % |
| **Child Benefit** | **28** |
| **Tax Credits** (Working Tax credit or Child Tax Credit) | **21** |
| With child care element to help pay for childcare expenses | 4 |
| **Housing or Council tax Benefit** | **8** |
| Housing Benefit | 7 |
| Council tax Benefit | 7 |
| **Sickness or Disability Benefits** | **5** |
| Disability Living Allowance | 3 |
| Incapacity Benefit | 3 |
| Employment and Support Allowance | 1 |
| Severe Disablement Allowance | 1 |
| Invalid Care Allowance | * |
| Industrial Injury Disablement Benefit | * |
| Statutory Sick pay | * |
| Attendance Allowance | * |
| **Income Support (not as an unemployed person)** | **4** |
| Lone Parent | 2 |
| Sick person | 2 |
| Any other form or premium of income support | 1 |
| Pensioner | * |
| **State Pension** | **4** |
| Retirement or Old Person's Pension | 4 |
| Widowed Parents' Allowance | * |
| Bereavement Allowance or Widow's Pensions | * |
| War Disablement Pension or War Widows Pensions including any related allowances | * |
| **Unemployment related benefits or National Insurance Credits** | **3** |
| Jobseekers Allowance | 3 |
| - Contributory JobSeekers Allowance | 1 |
| - Income based Jobseekers Allowance | 1 |
| National Insurance Credits | * |
| **Family related benefits** | **2** |
| Guardian's Allowance | * |
| Maternity Allowance | * |
| Statutory Maternity Pay | * |
| **Other** | **2** |
| Don't know | * |
| Refused | * |
| Unweighted | 7230 |

Base: SfL2011 All aged 16-65

Income Support was the most common type of working age benefit, followed by Incapacity Benefit and Job-seekers Allowance, each of which was claimed by fewer than one in twenty respondents.

Apart from people who were unemployed or disabled, the subgroup most likely to be in receipt of working age benefits consisted of people who finished their education when they were 16 or younger (14 per cent, compared to nine per cent overall). People aged 25-34 had a higher than average likelihood of receiving one of the four working age benefits (11 per cent), whereas 35-44s were the most likely to receive any of the other benefits (53 per cent, compared with 33 per cent overall).[214]

Respondents who gave themselves a negative rating for both their reading and writing or for just one of their literacy skills were more likely than other respondents to be claiming a working age benefit. The proportion in receipt of such benefits was greater amongst those who said they were 'below average' or 'poor' in working with numbers or using computers in everyday life (23 per cent and 14 per cent, respectively, compared with nine per cent across the whole population).[215]

### 8.10.1 Performance in the assessments by benefit receipt

Respondents in receipt of working age benefits tended to achieve lower literacy and numeracy scores than average (Tables 8.36 and 8.37). This was also the case in 2003.[216] This group's performance in the assessments is in keeping with the performance of the socio-economic groups to which many working age benefit recipients belong: the unemployed, those with a limiting disability, and those who left school by the age of 16.

**Table 8.36 Literacy Levels by types of benefit received**

| | All | Receive working age benefits | Receive non working age benefits only | Does not receive any benefits |
|---|---|---|---|---|
| | % | % | % | % |
| Entry Level 1 or below | 5 | 13 | 6 | 3 |
| Entry Level 2 | 2 | 5 | 2 | 2 |
| Entry Level 3 | 8 | 13 | 7 | 7 |
| Level 1 | 29 | 35 | 29 | 27 |
| Level 2 or above | 57 | 33 | 56 | 61 |
| | | | | |
| Entry Level 3 or below | 15 | 32 | 15 | 13 |
| Level 1 or above | 85 | 69 | 85 | 87 |
| Unweighted | 5824 | 654 | 2072 | 3098 |

Base: SfL2011 All aged 16-65 with literacy score

[214] See Appendix Table 8.A52.

[215] See Appendix Table 8.A53.

[216] See Appendix Tables 8.A54 and 8.A55.

**Table 8.37 Numeracy Levels by types of benefit received**

| | All | Receive working age benefits | Receive non working age benefits only | Does not receive any benefits |
|---|---|---|---|---|
| | % | % | % | % |
| Entry Level 1 or below | 7 | 17 | 7 | 5 |
| Entry Level 2 | 17 | 33 | 17 | 15 |
| Entry Level 3 | 25 | 30 | 26 | 25 |
| Level 1 | 29 | 14 | 28 | 32 |
| Level 2 or above | 22 | 7 | 22 | 24 |
| | | | | |
| Entry Level 2 or below | 24 | 49 | 25 | 20 |
| Entry Level 3 or above | 76 | 51 | 76 | 80 |
| Unweighted | 5823 | 644 | 2100 | 3079 |

Base: SfL2011 All aged 16-65 with numeracy score

Since 2003, the literacy of respondents in receipt of working age benefits increased, with achievement of Level 1 or above rising from 62 per cent in SfL2003 to 69 per cent in SfL2011. This rise was driven by a decline in the proportion of respondents at Entry Level 3, and an increase in the proportion achieving Level 2 or above. There has been no corresponding change in Numeracy Levels, with the distribution of scores in SfL2011 broadly in line with that from SfL2003.

Respondents in receipt of working age benefits had a tendency to perform less well than the average across the four components of the ICT assessment (Table 8.38). The largest difference was in Word Processing Levels, with respondents on working age benefits nearly half as likely as the average respondent to be classified at Entry Level 3 or above.[217]

[217] For the full distribution of ICT Levels by types of benefits received, see Appendix Table 8.A56.