



Literacy Changes Lives

An advocacy resource

George Dugdale and Christina Clark
National Literacy Trust

September 2008

Please cite this document as: Dugdale, G. and Clark C. (2008). *Literacy changes lives: An advocacy resource*. London: National Literacy Trust.

If you have any questions or comments relating to the content of this document please contact:

George Dugdale
Policy Advisor
National Literacy Trust
68 South Lambeth Road
London
SW8 1RL
Email: george.dugdale@literacytrust.org.uk
© Copyright 2008
Produced by the National Literacy Trust

Acknowledgements

Our heartfelt thanks to Sam Parsons and John Bynner for making data from the British Cohort Studies available to us and for giving us permission to reproduce their information. As funders of many of the studies described in this document we would also like to extend our thanks to the National Research and Development Centre for Adult Literacy and Numeracy (NRDC) and the Basic Skills Agency. Many thanks also to Amali Gunaratne from CBI for granting us permission to use some of their employer survey data.

Foreword

The National Literacy Trust passionately believes that low literacy levels are a barrier to social justice. They produce social, economic and cultural exclusion that scars communities and undermines social cohesion. Therefore addressing the national literacy challenge is a priority; not just for those with a focus on school standards. Rather, the literacy agenda sits at the heart of the desire to improve personal wellbeing, create safer and stronger communities and the drive to future economic success.

This document gives an overview of the evidence that places literacy so firmly at the heart of social policy. We hope it will act as a resource for all those who champion the needs of learners. Through the 2008 National Year of Reading we have been taking this evidence to policy-makers and opinion-formers to convince them of the wide social benefits of literacy. At the same time we hope that all those who champion literacy in local authorities will be able to use this evidence to demonstrate the pertinence of literacy to a wide range of outcomes. And we hope that it will inspire all those teachers, librarians and other professionals who support literacy by confirming their knowledge that their work transforms lives and builds communities.

2008 is the fifteenth anniversary of the National Literacy Trust's foundation. Over this period literacy has increasingly been acknowledged as a national priority, central to school standards and the economic skills agenda. Over the next fifteen years we will work hard to establish it as central to social justice policy and thinking.

Jonathan Douglas
Director, National Literacy Trust

Table of contents

Acknowledgements	3
Foreword	4
Executive summary	6
Some important notes about this document	9
Technical notes and a warning about causality	10
Introduction.....	12
The picture in the UK.....	14
Economic well-being.....	17
Employment	18
Work-related issues	19
Wages.....	21
Promotion.....	22
Employers' perceptions.....	23
Summing up.....	24
Aspirations.....	24
Attitudes towards education	25
Professional aspirations	26
Attitudes towards children's education	27
Summing up.....	30
Family life	30
Partnerships and marriage.....	30
Children.....	32
Housing.....	33
Summing up.....	35
Health	36
Physical health.....	36
Risk behaviour such as smoking and drinking	37
Mental health	39
Life satisfaction	41
Summing up.....	42
Civic and cultural engagement	42
Political attitudes	43
Voting.....	43
Community participation.....	45
Summing up.....	48
Discussion	48
References	52
Appendix A	55
Appendix B	56

Executive summary

Background to this research

In 2007, an American publication, *To Read or Not to Read*, set out a US perspective on the wider benefits of literacy. The document highlighted many areas familiar to English literacy research. To allow individuals to better understand the wider benefits of literacy, the National Literacy Trust has compiled this equivalent document for England. It draws on a number of sources that make use of longitudinal studies that have tracked their subjects from birth, such as the National Child Development Study (NCDS), which started in 1958, and the British Cohort Study, which began in 1970 (BCS70).

This research presents overwhelming evidence that literacy has a significant relationship with a person's happiness and success. It gives a clear indication of the dangers of poor literacy and also the benefits of improving literacy for the individual, the community, the workforce and the nation.

Reading for pleasure has been revealed as the most important indicator of the future success of a child (OECD, 2002), and improvements in literacy, at any point in life, can have a profound effect on an individual.

The reasons why people from all ages struggle with their literacy are manifold, ranging from severe educational needs to a disaffection from learning and low aspirations. This paper does not give any guidance on how the reasons for low literacy are best addressed. Rather, its purpose is to collect information about the tangible associations between literacy and various aspects of person's life and present it in an accessible form to a wide audience.

Although the relationship between literacy and other variables may not always reflect direct causal connections, the picture that emerges does point to the prominence of poor literacy in the profile of disadvantaged adult lives. This suggests it is part of a vicious cycle of socio-economic factors that lead to economic and personal deprivation.

Socio-economic background and many other factors may be outside the control of an individual. However, what matters is that for many addressing literacy skills is a key first step in beginning to address and helping to overcome other related factors that lock individuals into a cycle of disadvantage.

The impact on an individual

Profile of a person with poor literacy

More likely to live in a non-working household

22% of men and 30% of women with literacy below entry level 2 live in non-working households.

Profile of a person with improved literacy

Becomes less likely to be on state benefits

Men who improve their literacy rates see their likelihood of being on state benefits reduced from 19% to 6%.

Less likely to have children

Individuals with low levels of literacy are more likely to lead solitary lives without any children.

More likely to live in overcrowded housing

Individuals with low literacy levels are more likely to live in overcrowded housing with reduced access to technology.

Less likely to vote

Men and women with the poorest literacy or numeracy skills were the least likely to have voted in the 1987 and 1997 general elections.

Becomes more likely to own their own home

A modest rise in literacy level sees the likelihood of a man owning their own house rise from 40% to 78%.

Becomes more likely to use a PC at work

Increased literacy rates improve the chances of using a PC at work from 48% to 65%.

Becomes more involved in democratic processes

16% of men who improved their literacy between the ages of 21 and 34 had contact with government, compared to 0% of those whose literacy remained poor.

Evidence also shows that literate individuals contribute to and are successful in a range of areas, and help create literate families, who live within literate communities, which contribute towards a literate nation. The benefits of these three literate units are listed below:

Profile of a literate family:-**Less likely to experience divorce**

A literate family is less likely to experience divorce, as divorce rates amongst those with high literacy are low, and significantly lower than those with poor literacy.

More likely to live in a working household

Families with high literacy levels are far more likely to live in working households, with only 2% of families with good literacy living in workless households.

More likely to own their own home

Families with high literacy are more likely to own their own houses and not live in overcrowded conditions.

Profile of a literate community:-**Far more likely to participate in community**

Individuals with good literacy are far more likely to participate in their community. Among those with level 2 literacy 21% of men and 29% of women actively participate in community activities.

More likely to trust people in community

Scottish data shows that individuals with good literacy are significantly more likely to trust people in their community, with only 2% of men and 1% of women with good literacy saying they didn't trust people at all.

Perceives community to be safer

Literate residents also consider their communities to be much safer, than those with low literacy. Only 1% of men and women with high literacy levels reported never leaving their houses.

Profile of a literate nation:-**More likely to vote**

Highly literate individuals are more likely to vote and have an interest in politics, therefore participating in the democratic process and holding an interest in the governance of the nation.

Smoke and drink less, better mental health

High literacy levels are associated with lower drinking and smoking, as well as higher levels of good mental health. This takes pressure off the health service and public funds, and contributes to a healthier nation.

Better skilled and more flexible workforce

A literate workforce is advantageous to both employees and employers. Good literacy skills provide an opportunity for flexibility in the workforce across all sectors, as data collected by the CBI show.

To be literate is to become liberated from the constraints of dependency. To be literate is to gain a voice and to participate meaningfully and assertively in decisions that affect one's life. To be literate is to gain self-confidence. To be literate is to become self-assertive. To be literate is to become politically conscious and critically aware, and to demystify social reality. Literacy enables people to read their own world and to write their own history. Literacy makes people aware of their basic human rights and enables them to fight for and protect their rights. Literacy enables people to have a greater degree of control over their own lives. Literacy helps people to become self-reliant and resist exploitation and oppression. Literacy provides access to written knowledge - and knowledge is power. In a nutshell, literacy empowers. Kassam (1994: 33)

Some important notes about this document

In November 2007, the National Endowment for the Arts (NEA) produced a research report entitled *To Read or not To Read: A question of national consequence*, which explored voluntary reading patterns in America, tracking their decline and the impact this would have on American literacy rates. Interestingly, the document also assessed why this decline has put more than reading at risk.

This provided an interesting insight into American research and opinions of the wider benefits of literacy; something that is often talked about by researchers and policy-makers in the UK. As the wider benefits of literacy are often discussed, the National Literacy Trust (NLT) considers the 2008 National Year of Reading to be the perfect time to compile an equivalent document for the UK.

From the outset it should be noted that this is not an exhaustive review of the impact of literacy on an individual's life. Rather, it is an illustration of the power of literacy in five personal areas; economic well-being, aspirations, family life, health, and civic / cultural engagement. We hope that this document will be an eye-opener, which shows that literacy is not just about reading ability but that it is a skill central to the many facets of today's life.

The relationships outlined in this document are not exclusively found in the British context. Rather, they have been replicated in various countries, most notably in the United States. The evidence outlined in this document therefore makes no judgement about British or international educational systems and policies but demonstrates quite clearly the fundamental importance of literacy.

The reasons why people from all ages struggle with their literacy are manifold, ranging from severe educational needs to a disaffection from learning and low aspirations. This paper does not give any guidance on how the reasons for low literacy are best addressed. Rather, as stated above, its purpose is to highlight the many ways with which literacy is a fundamental part of the many facets of today's life.

One area that is not addressed in this document is the relationship between literacy and crime. We felt that a separate document would be needed to do justice to the complex

factors that are at work within this relationship. Such a publication will be available later in the year.

Finally, and most importantly, none of the evidence reported in this document is new. Rather, the purpose of this document has been to collect information about the wider benefits of literacy and present it in an accessible form to a wide audience. As a result, the information has been gathered from already existing publications; most notably those by Sam Parsons and John Bynner. While the data have been taken from already existing resources, the views expressed in this document are the NLT's and do not necessarily reflect those of the original authors.

Technical notes and a warning about causality

The evidence outlined in this document is taken mainly from two longitudinal British cohort studies – the National Child Development Study (NCDS) and the 1970 British Cohort Study (70BCS) as well as the 2003 *Skills for Life* Survey and several other national or international surveys (see **Appendix A** for an outline of the British cohort studies).

Since the evidence in this document has been drawn from a range of sources, the categories by which literacy levels are compared vary. Some studies compare individuals whose literacy skills are categorised into “Very low”, “Low”, “Average” and “Good”. Others categorise skills by referring to qualifications (see **Box 1**) and may compare some or all of the categories. See **Appendix B** for an illustration of the types of skills a person in each of these categories is likely to have.

Box 1 – Literacy levels in this report – clarification of acronyms

Literacy levels in this report

- E2** - Entry Level 2 – equivalent to skills considered to be had by a 7-year-old
- E3** - Entry Level 3 – equivalent to skills of 11-year-old
- L1** - Level 1 – equivalent to the skills of a 16-year-old with GCSE grades D-G
- L2** - Level 2 – skills are those a 16-year-old with GCSEs at grade C or above should have

To confound matters further, we also occasionally make use of Scottish data, which again uses different sorts of comparison (see **Box 2**).

Box 2 – comparison of Scottish and English literacy level

Scottish literacy levels in this report

Access Level 2 – equivalent to E2 – Entry Level 2 – skills equivalent to those of a 7-year-old

Access Level 3 – equivalent to E3 – Entry Level 3 – skills expected of an 11-year-old

Level 4 – equivalent to L1 – Level 1 – equivalent to GCSEs at grade D-G

Level 5 – equivalent to L2 – Level 2 – equivalent to GCSEs at grade C or above

Finally, and most importantly, the report describes relationships between literacy and other variables, which may, or may not, reflect direct causal connections. The outcomes in adult life are often the product of educational and social processes comprising a combination of influences in which literacy plays a part. The picture that emerges points to the prominence of poor literacy in the profile of disadvantaged adult lives.

Introduction

An individual's motivation to read and the effect this has on their achievement and aspirations has long been a source of academic research and discussion. International comparison studies and major policy releases within the UK have focused on the importance not just of reading, but of reading for pleasure on an individual's life chances.

In the UK, the Every Child A Reader programme makes it unequivocally clear that basic literacy is essential to future success. 70% of pupils permanently excluded from school have difficulties in basic literacy skills. Adults with low or very low literacy skills are more likely to be in low-paid jobs, unemployed, or dependent upon state benefits and less likely to have had promotion, or work-related training. Adults with low literacy levels are also more likely to be in poor housing, and to have poor health. They have double the normal risk of being diagnosed as depressed; in women with very low literacy the risk increases five-fold.

There is, as these figures show, a strong connection between early literacy failure and later social exclusion for young people and adults. This relationship extends beyond individuals: in some communities the percentage of children leaving primary school with no useful literacy skills rises to 40 - 45%, with consequent long-term effects on employment levels and social cohesion.

Adult basic skills, and specifically literacy, are also a priority for government. Currently one in six adults cannot read at the level expected of an 11-year-old, and the 2006 Leitch Review stated that unless that number is reduced the UK faces a severe skills shortage in the future. Following Leitch, the government has set the ambitious target that by 2020 95% of adults should achieve functional literacy, a rise of 10% from current levels.

The case for reading for pleasure has been set out in research by bodies such as the Organisation for Economic Co-operation and Development (OECD, 2002), which showed that reading for pleasure is more important for children's educational success than their family's socio-economic status. This 2002 OECD research was followed up by the second round of the Progress in International Reading Literacy Study (PIRLS; Twist et al., 2007), which considered attitudes towards reading to be the biggest single indicator affecting school children's performance in PIRLS.

Studies are accumulating that emphasise the importance of reading for pleasure for personal development as well as educational attainment (for a review see Clark and Rumbold, 2006). For example, research with children has shown that reading for pleasure increases reading attainment and writing ability (OECD, 2000) as well as text comprehension and breadth of vocabulary, even after other relevant abilities such as IQ or text-decoding skills are controlled for (Cunningham and Stanovich, 1998).

There is also evidence that reading for pleasure not only impacts on reading achievement but also increases general knowledge (e.g. Cunningham and Stanovich, 1998), a better understanding of other cultures (Meek, 1991), community participation (e.g. Bus, van Ijzendoorn and Pellegrini, 1995), and a greater insight into human nature and decision-making (Bruner, 1996).

Indeed, research by Book Marketing Ltd in 2000 called *Reading the Situation: Book Reading, Buying and Borrowing in Britain*, established that pleasure and entertainment were the most commonly articulated benefits of reading. A quarter of adults and a fifth of children surveyed said that reading books was a special activity that provided them with something that other leisure activities could not. The social aspect of reading was also found to be important to those who discuss what they read, providing a connection with others and a chance for social interaction. The research findings also indicated that reading books was a way of relieving stress, a form of escapism, a means of finding things out and acquiring information, and of improving knowledge/self-development.

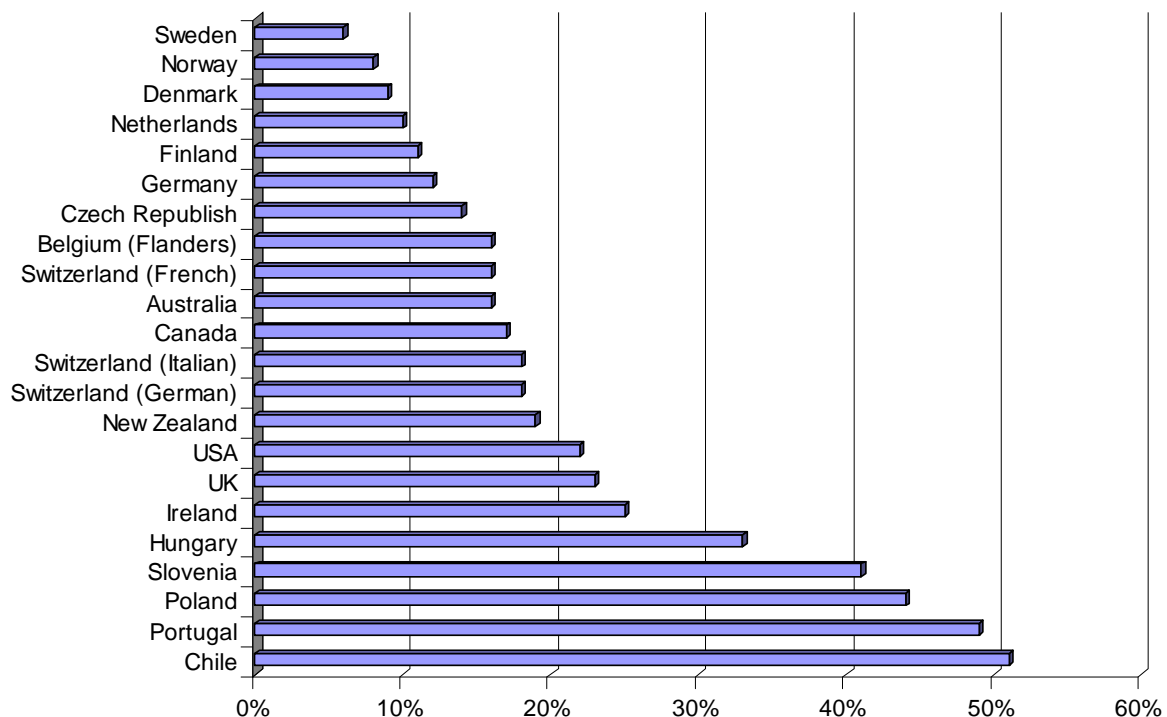
The case for literacy, and particularly the case for reading for pleasure, has, therefore, been developing for some time. There are numerous studies both longitudinal and single-year assessments that have created the case for literacy as possibly the most important indicator of an individual's success in many fields. After assessing the American study by NEA, the National Literacy Trust considered the 2008 National Year of Reading the ideal time to create the first UK-based document that systematically pulls together the wider benefits of literacy.

The importance of reading for pleasure in terms of skills for society and young people's educational attainment is therefore well established. However, this message is not necessarily clear enough to individuals. It is here where the wider benefits of literacy need to be stressed. Literacy is about more than reading fiction and its benefits are far wider than simply passing exams at school. The case for this needs to be made clear if the Leitch agenda is to be realised.

The picture in the UK

In recent years a number of international comparisons, as well as UK documents such as the Leitch Report (2006), have highlighted the relatively high proportion of the UK's population with poor basic skills. **Figure 1** below shows the percentage of the adult population who have the lowest levels of literacy skills.

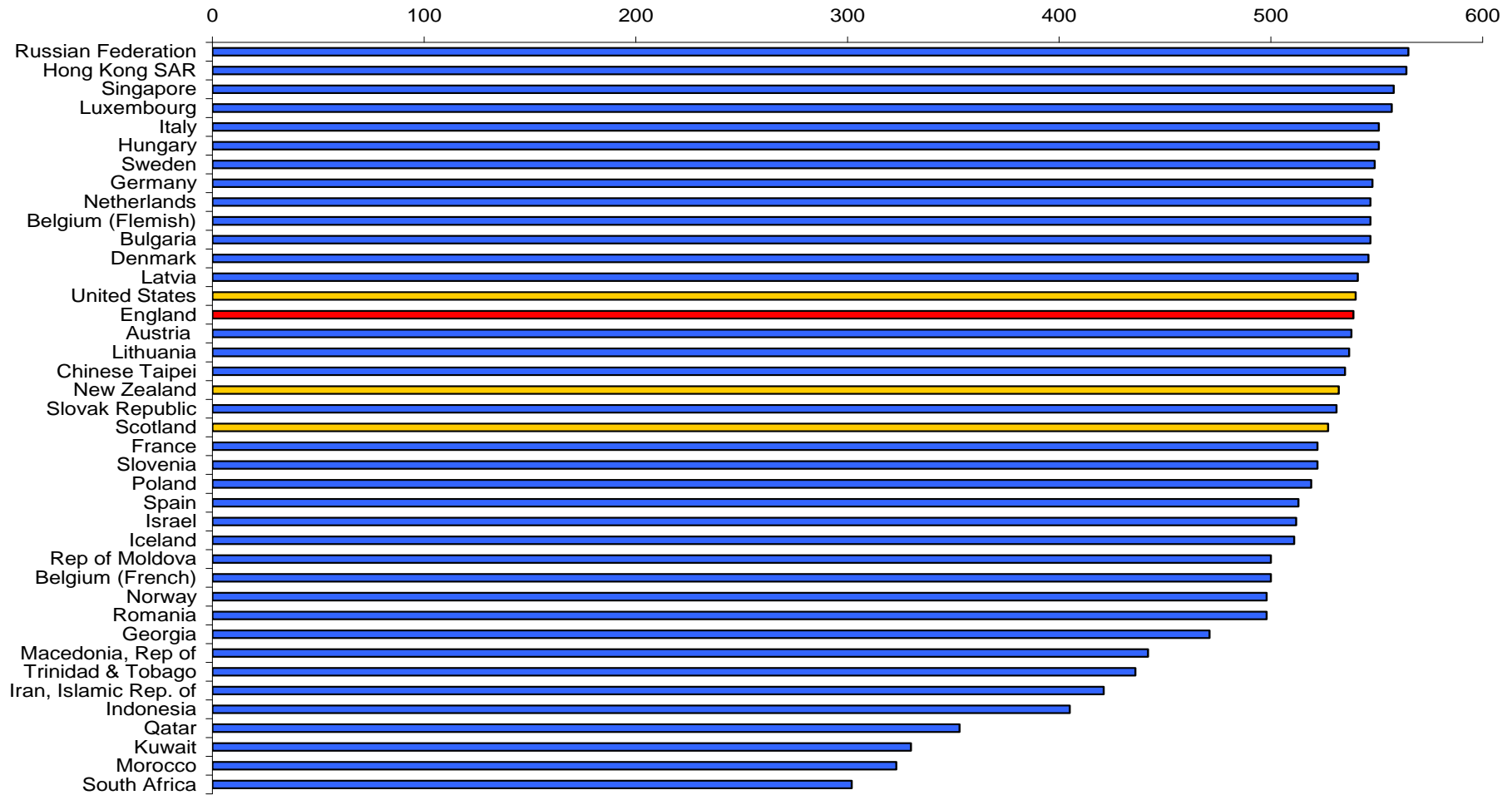
Figure 1: International comparison of the proportion of adults with the lowest levels of literacy skills



From OECD (2000). The data are based on 16 to 65-year-olds with the lowest levels of literacy skills based on a scale devised for this study.

This pattern is also repeated among school children. For example, the most recent round of PIRLS (Twist et al., 2007) found that 7% of 11-year-olds in England were not reaching the lowest benchmark for literacy. While England's overall results were above the international average, they were significantly lower than some other European countries. This is displayed in **Figure 2** below. The numbers in that figure are based on the PIRLS reading achievement scale, which was established in PIRLS 2001 to have a mean of 500 and a standard deviation of 100 (for more details see Twist et al., 2007).

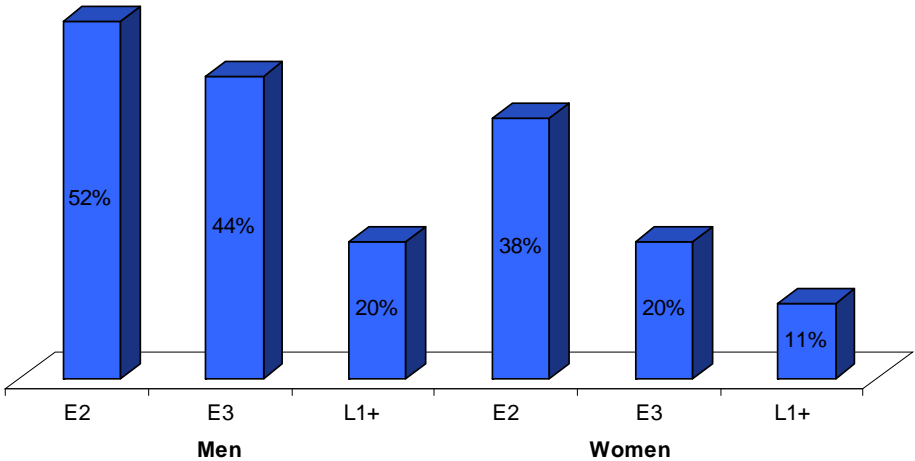
Figure 2: International comparison of literacy attainment of 10-year-olds



From Liz Twist (personal communication, 2008).

Given the importance of reading for pleasure, the additional findings of PIRLS that English school children’s attitudes towards reading are also relatively poor is particularly worrying. Again this trend holds true for both children and adults. This is illustrated in the graph below (**Figure 3**), which highlights the high percentage of adults who never read any books.

Figure 3: Percentage never reading a book by gender and literacy level



From Parsons and Bynner (2007)

Although the UK has a relatively high proportion of adults and children who struggle with basic skills, there are also a large number of children and university-educated adults who score highly in international comparisons, as well as those who read for pleasure. Despite the large proportion of children who failed to reach the lowest benchmark for literacy in PIRLS, England still scored significantly above the international average.

The situation whereby the UK seems to have “a long tail, but also a long nose” with regard to literacy is reflected in the belief and importance that many people place on lifelong learning in the UK. **Table 1** below shows the attitudes of the UK population towards adult learning, which is consistently above the European average.

Table 1: Proportion of UK respondents agreeing with a series of statements about lifelong learning compared to European average across 15 countries, % Lifelong learning is useful and important...

	<i>Eu15</i>	<i>UK</i>
To have a full and satisfying life	83.7	84.0
To take one’s life into one’s hands	81.8	82.5
To cope with rapid changes in society	82.6	82.4
To avoid unemployment	76.6	81.3
To improve job and career prospects	89.1	90.9
To adapt to change in	82.4	80.0

	<i>Eu15</i>	<i>UK</i>
professional life To help disadvantaged people	80.6	85.7

From Chisholm et al. (2004)

These attitudes are also reflected in the high proportion of take-up for adult learning courses shown in **Table 2**.

Table 2: Proportion of respondents participating and not participating in education and training in the preceding year, excluding students under 25, by country, %

	<i>EU15</i>	<i>B</i>	<i>DK</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>IRL</i>	<i>I</i>	<i>L</i>	<i>NL</i>	<i>A</i>	<i>P</i>	<i>FIN</i>	<i>S</i>	<i>UK</i>	<i>N</i>
Participated	27.9	25.6	51.9	31.4	22.3	18.9	27.7	21.9	30.6	37.8	33.0	10.3	48.9	47.3	35.9	37.4
Not participated	70.9	71.5	47.7	67.5	77.0	79.5	70.3	77.6	66.4	61.0	63.4	89.0	50.4	51.3	63.0	58.9
Don't know	1.2	2.9	0.4	1.1	0.7	1.7	2.0	0.5	3.0	1.2	3.6	0.6	0.7	1.5	1.0	3.7
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

From Chisholm et al. (2004)

From the evidence available the literacy picture for the UK is one in which a majority of people value learning and literacy. However, there is a significant minority of people disenfranchised from literacy, and often education in general. It is this minority who need to be better informed about the wider benefits of literacy.

In the next section we will explore the relationship between literacy and economic factors, such as likelihood of employment, promotions and employers' perception of basic skills needs in the workplace

Economic well-being

- 22% of men and 30% of women with literacy below entry level 2 live in non-working households.
- 63% of men and 75% of women with very low literacy skills have never received a promotion.
- 41% of employers are concerned about their employees' basic literacy skills.
- Acquisition of Level 1 numeracy or literacy skills raises the probability of employment by about 5 percentage points, and, for workers, raises wages by about 7 percentage points in the case of literacy skills.

In 2006 KPMG released a paper entitled *The long term costs of literacy difficulties*. This research estimated the annual cost of poor literacy as £1.73bn; made up of costs in terms of crime, health, special needs support, behavioural issues, and unemployment. KPMG states that this estimate is conservative, and there are a number of intangible benefits of literacy that are not included in the survey.

The KPMG findings complement research previously published that highlights the UK's output per worker relative to other nations. According to the Centre for Economic Performance (2005), the UK has a lower output per hour (between 10 and 25%) than France, Germany and the US, which can be explained at least partly by poorer levels of basic skills and a lack of capital investment.

The benefits to society of a fully literate nation are clear, but we believe that in order to enfranchise the significant minority of those with poor literacy levels the wider benefits of literacy to the individual need to be explored.

Employment

Research shows that literacy (and numeracy) skills play an important part in terms of employability and wages.

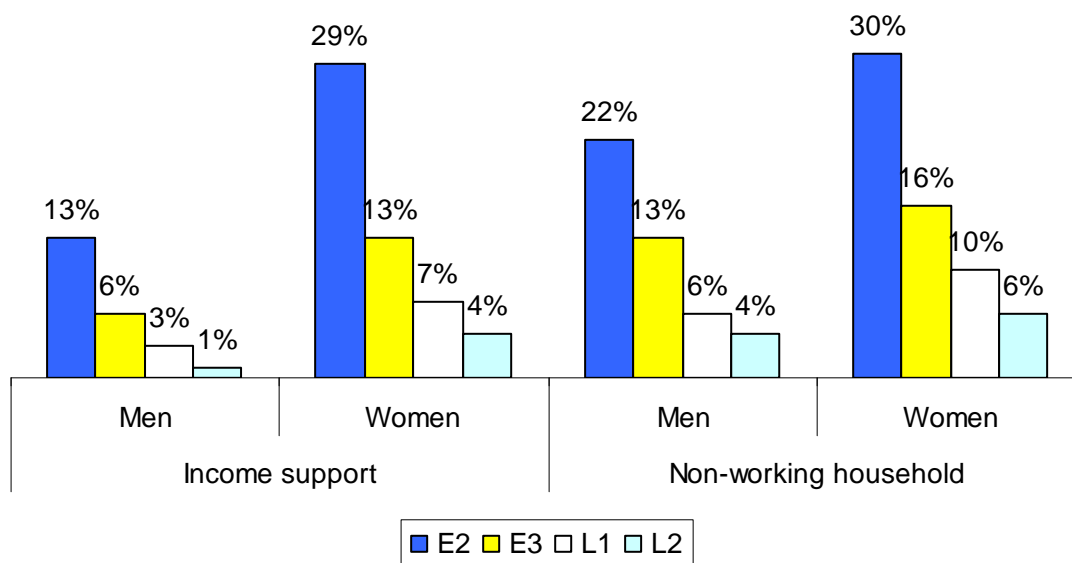
Bynner and Parsons (2006) found that men and women with poor literacy had the lowest levels of full-time employment at the age of 30. 70% of men with poor literacy and/or numeracy were in manual jobs, compared with 50% of those who were competent in both

Studies generally show a marked disparity in levels of literacy and employment rates. For example, data from the NCDS shows that men and women with the lowest levels of literacy are also the least likely to be employed (e.g. Parsons and Bynner, 2006). Because of the longitudinal nature of the data it is possible to track people's progress from the age of 17 to 37. This data shows that those with lower levels of literacy enter employment earlier and are more likely to be unemployed by the time they are 23. The gap between those with low, average and good literacy levels widens by age of 37, with those with low levels of literacy being less likely to be in full-time employment than those with average or good literacy skills. The study also found that the relationship between skills and employment is more pronounced in women than in men.

Men who were poor in both literacy and numeracy were more likely to be in semi-skilled and unskilled jobs, to have had fewer work-related training courses, to have lower weekly wages and poorer promotion opportunities. 40% of women with low skills were in manual work, a much higher proportion than for other women in this cohort. It should be noted that although literacy levels have a powerful impact on a person's employment, poor numeracy rather than poor literacy was associated with low economic well-being.

The association between poor literacy and household employment levels is clearly indicated in **Figure 4** below.

Figure 4: Income support and non-working households by literacy levels



From Bynner and Parsons (2006)

Encouragingly, research also shows that even when controlling for other characteristics, improving literacy skills to Level 1 increases the likelihood of employment by about 5 percentage points. It also increases wages by 7 percentage points (e.g. Layard et al., 2002). The impact of increased literacy skills is explored in more detail later in the document.

Work-related issues

Work-related issues include levels of full-time work, as well as some of the specifics related to work, such as the use of a computer at work and whether or not a person has received training at work.

Table 3 clearly illustrates that the lower an individual's literacy levels, the less likely they are to have been on a training course. This is particularly worrying as those with lower skills are most in need of training.

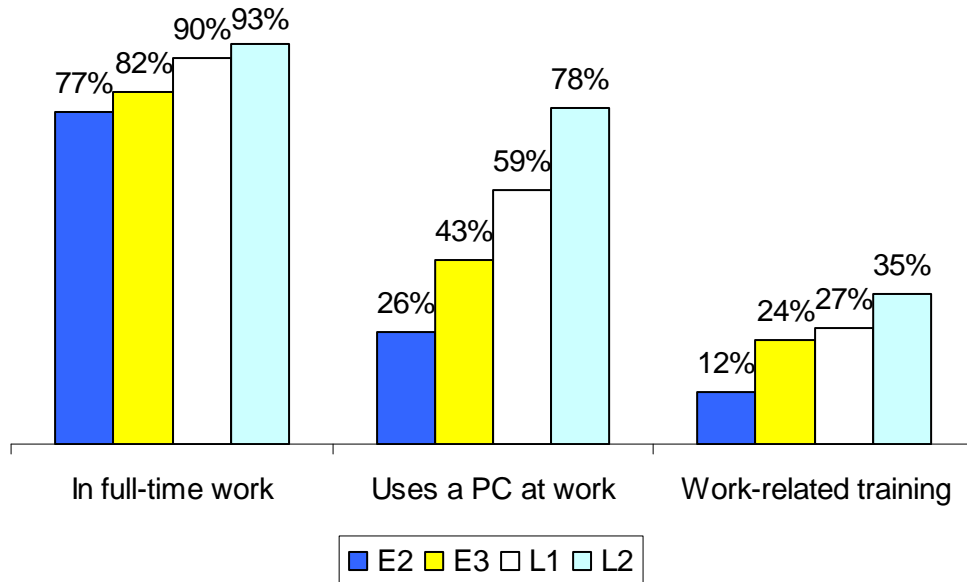
Table 3: Proportion of men and women *never* having been on a training course by literacy level

	Men	Women
Very low	58%	58%
Low	30%	43%
Good literacy	20%	30%

From Bynner and Parsons (1997)

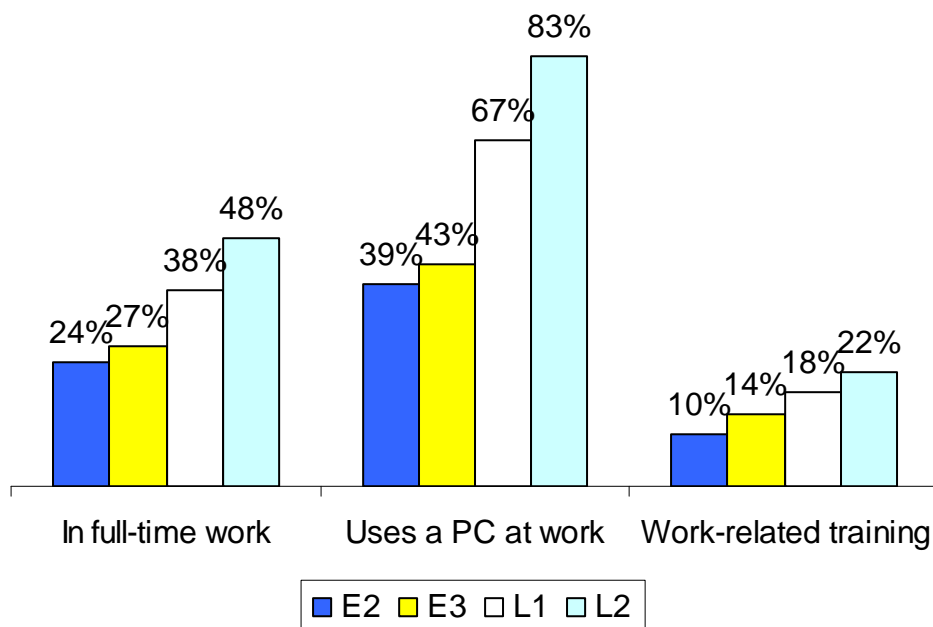
More general work-related issues are found in the two graphs below (**Figures 5 and 6**). Both men and women with literacy below level 1 were less likely to use a PC at work and also less likely to be in full-time employment.

Figure 5: Work-related issues by literacy level - Men



From Parsons and Bynner (2006)

Figure 6: Work-related issues by literacy level - Women



From Parsons and Bynner (2006)

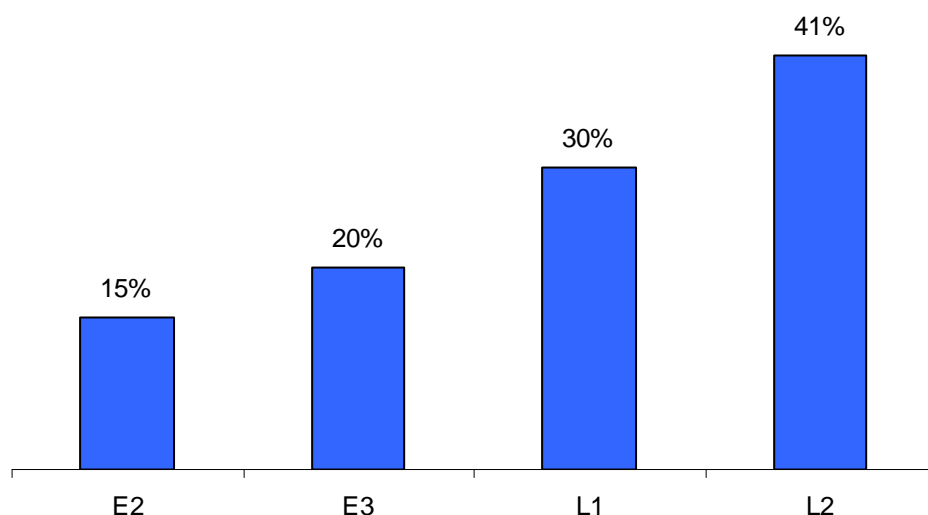
Wages

Good literacy and numeracy skills tend to be associated with good wages. The Skills for Life Survey (DfES, 2003) showed that nearly seven in ten full-time workers with Level 2 or above numeracy earned more than £20,000 a year before tax. Those with Entry Level 3 or lower level numeracy were less than half as likely to earn this amount; they earned c.£8,000 less than those with Level 2 numeracy or above.

Having basic literacy and numeracy skills also explains up to 10% of the differential in wages across the UK (de Coulon et al., 2007). As the Leitch report suggested, basic skills may become even more important for wages in the future. There is also evidence, displayed below, that those with higher levels of literacy are more likely to have investments than those with lower literacy levels.

Investments are almost certainly linked to wage levels, and **Figure 7** demonstrates the clear difference that literacy rates make to the likelihood of individuals making financial investments.

Figure 7: Investments by literacy level



From Bynner and Parsons (2006)

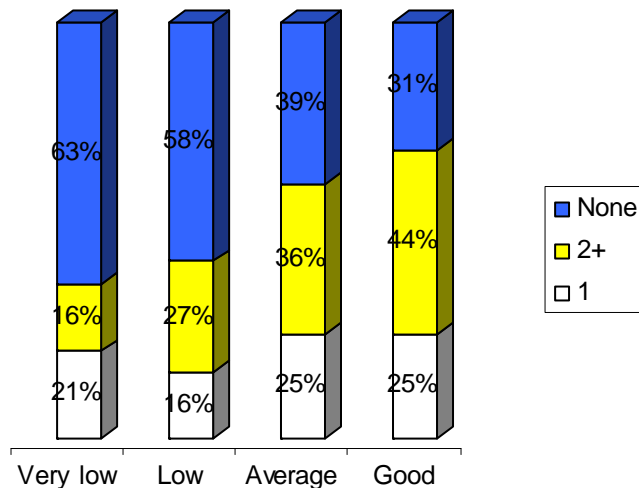
McIntosh and Vignoles (2000) and Layard *et al.* (2002) have shown that acquiring basic skills during one's working life can have a significant impact on wages and employability. Both pieces of research show that the acquisition of very basic skills in numeracy and literacy has an important effect on the probability of employment and on wages.

This finding is particularly encouraging as it highlights the potential benefits of an adult gaining education later in life and being able to raise both their employability and wages.

Promotion

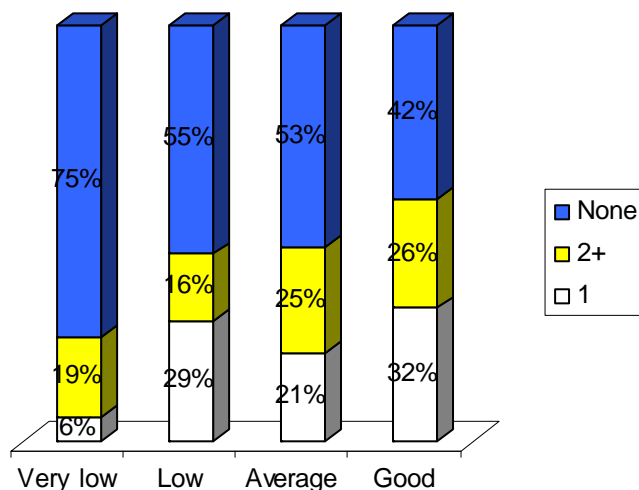
Individuals with low literacy skills are also less likely to be promoted in their workplace. For example, analysing NCDS data, Bynner and Parsons (1997) revealed that 63% of men and 75% of women with very low literacy skills had never received a promotion (see **Figures 8** and **9** below).

Figure 8: Number of promotions by literacy level - Men



From Bynner and Parsons (1997)

Figure 9: Number of promotions by literacy level - Women



From Bynner and Parsons (1997)

The same analysis, displayed above, also shows the difference in numbers of promotions between those with good literacy and those with very low literacy, demonstrating that an individual with low literacy is unlikely to get any promotions,

whereas someone with good literacy stands a relatively good chance of obtaining more than one.

Employers' perceptions

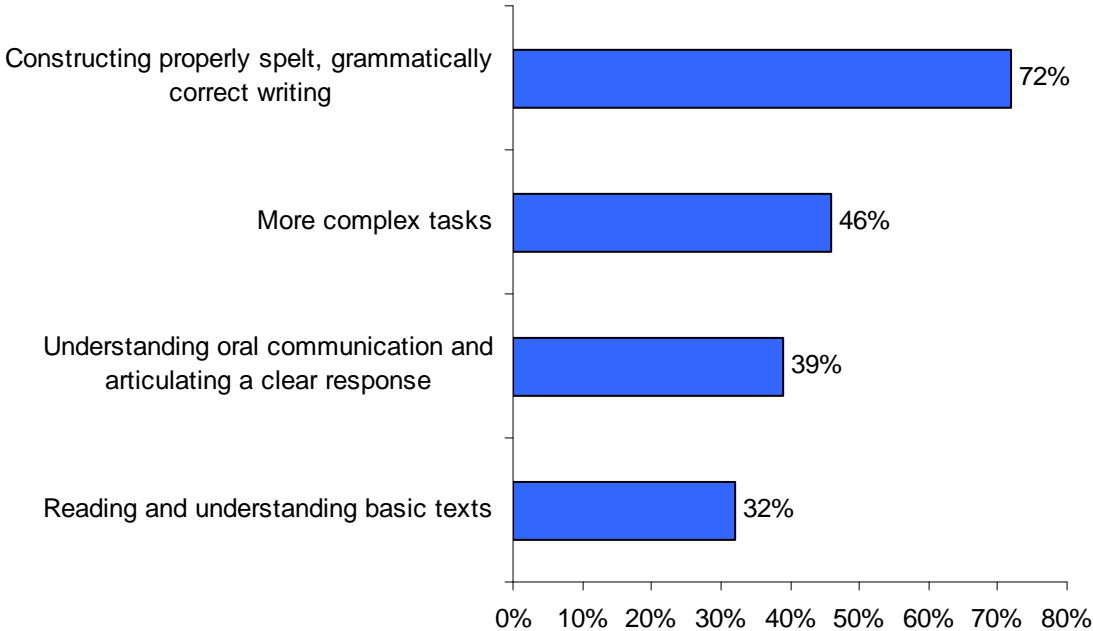
A study conducted by CBI in April 2008, which surveyed over 700 businesses, found that 41% of employers are concerned about their employees' basic literacy skills. This has ramifications for wages and also may account for the difference in the promotion chances between those with good literacy skills and those without.

The level of concern among employers was dependent on the business sector. For example, a considerably greater percentage of employers from the distribution, transport and communication sector (58%) and construction businesses (52%) than from the banking and financial services (24%) expressed concern about their workforce's basic skills.

The perceived impact is again dependent on sector. Poor customer service is thought to be of greater consequence in the banking and financial services sectors, and the distribution and professional services sectors, while low productivity has a greater impact in manufacturing and the public sector. Businesses operating in the agriculture and construction sectors feel that poor basic skills impact most on health and safety measures.

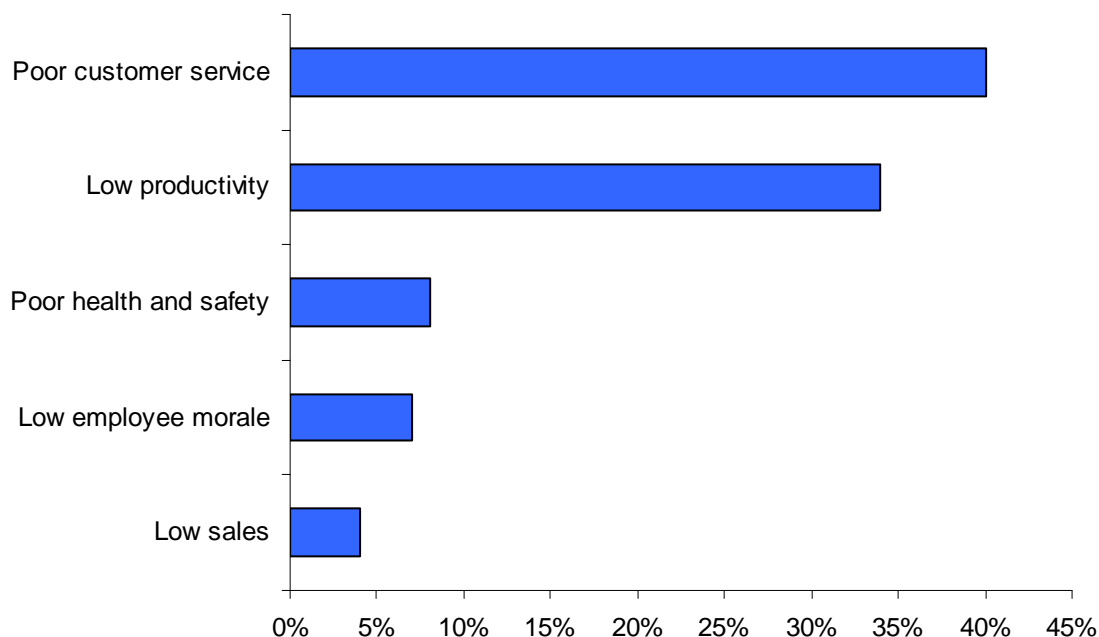
According to the CBI (2008) survey, 27% of businesses provide remedial literacy training for their workforce.

Figure 10: Employers' concerns over employee literacy



From CBI (2008)

Figure 11: Main impact of poor basic skills on businesses



From CBI (2008)

Summing up

Poor literacy levels have startling relationships with an individual's economic circumstances. A poor reader is more likely to be unemployed and, if employed, is more likely to be earning a lower wage with less chance of a promotion. The prevalence of poor literacy is reflected in the attitudes of employers, who for a variety of reasons are worried about their employees' basic skills.

Reassuringly, the likelihood of economic disadvantage is reversible if an employee has training to improve their basic skills.

Aspirations

- Among men, those with Entry Level 2 literacy skills were at least twice as likely to have had low career aspirations at the age of 16 as men with Level 1 skills or higher (38% and 15 %, respectively); women with Entry Level 2 literacy skills were three times less likely than their higher skilled counterparts to have career aspirations (11% and 3%, respectively).
- Those who did not like school were far more likely to have low literacy skills at age 34.

- Inequalities in aspiration among adults drive inequalities in attainment for their children at school.

The importance of aspirations should not be underestimated. It has been argued that aspirations can act like a compass to help chart a life course and provide direction for spending time and energy. Teenage aspirations in particular have been shown to influence educational attainment, career choices, and future earnings (Schoon and Parsons, 2002).

Aspirations do not just affect an individual's life chances, there is also an intergenerational transfer. This includes aspirations for a child's literacy level as well as a myriad of other aspirations either directly or indirectly expressed (for a recent review of the determinants of aspirations see Morrison-Gutman and Akerman, 2008). For example, the final report of the Leitch Review of Skills (2006) has found that inequalities in aspiration among adults drive inequalities in attainment for their children at school.

Developing positive aspirations is a key factor in securing good educational and occupational outcomes, and an important component of autonomy. Research on how those in their mid-teens think about the future has consistently found that further education, employment, leaving home and starting a family are the chief preoccupations (Morrow and Richards, 1996).

Often the same factor influences the formation of aspirations and the chances the young person has of achieving their goals: for example, being from a higher social class background is associated with higher occupational aspirations, and is also associated with a higher likelihood of achieving the occupation of choice (Furlong, 1992). However, peer group, parental and teacher expectations are also important influences on a young person (Schoon and Parsons, 2002), and aspirations to succeed can override socio-economic disadvantage.

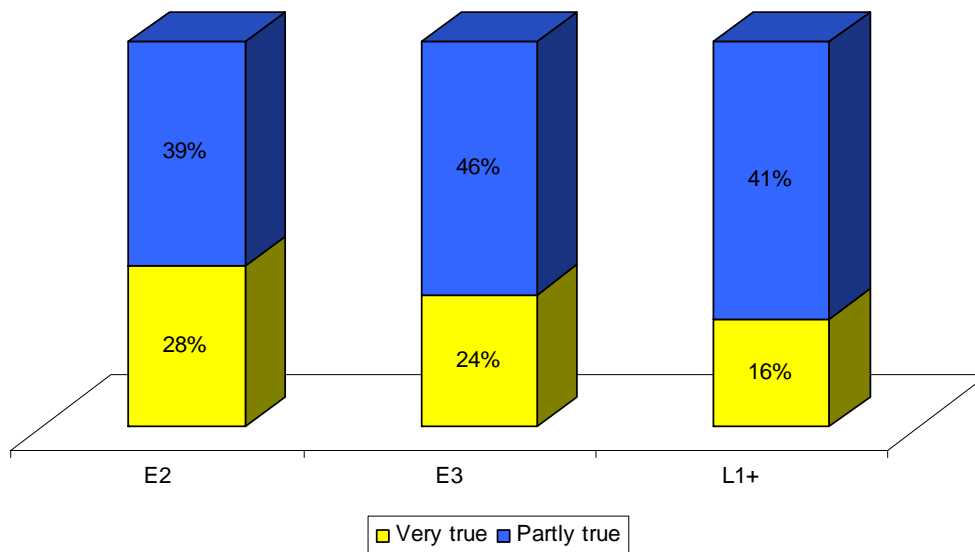
Attitudes towards education

The two graphs below clearly show that educational aspirations have a significant impact on the future of a young person. Those who did not like school were far more likely to have low literacy skills at age 34 (**Figure 12**). These negative attitudes towards school transfer into a generally negative attitude towards learning that may prevent an individual from continuing their education (**Figure 13**). It should be noted, however, that the negative attitudes towards education may themselves be based on problems with basic skills needs in the first place.

Despite this, 27% of men with Entry Level 2 literacy, and 23% with Entry Level 3 literacy did want to study for further qualifications or take up training opportunities, rather than finding immediate employment. This increased to 33% for women with Entry Level 2 literacy and to 40% for women with Entry Level 3 literacy.

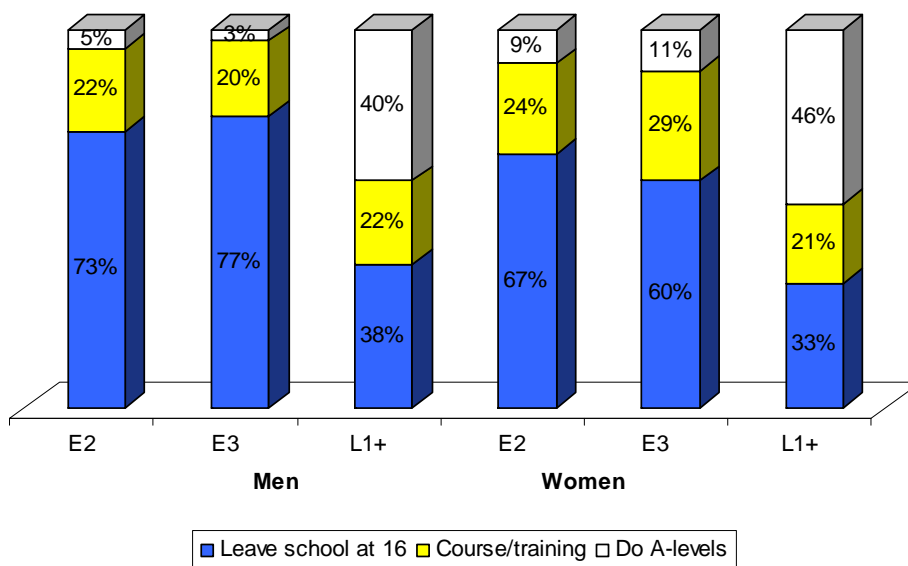
This compared with the 62% of men with Level 1 or higher literacy and 67% of women with Level 1 or higher numeracy who wanted to study for further qualifications or take up training opportunities.

Figure 12: Individuals' answers to 'I don't like school' at age 16, by literacy level at age 34



From Parsons and Bynner (2007)

Figure 13: Post-16 educational aspirations by gender and literacy level



From Parsons and Bynner (2007)

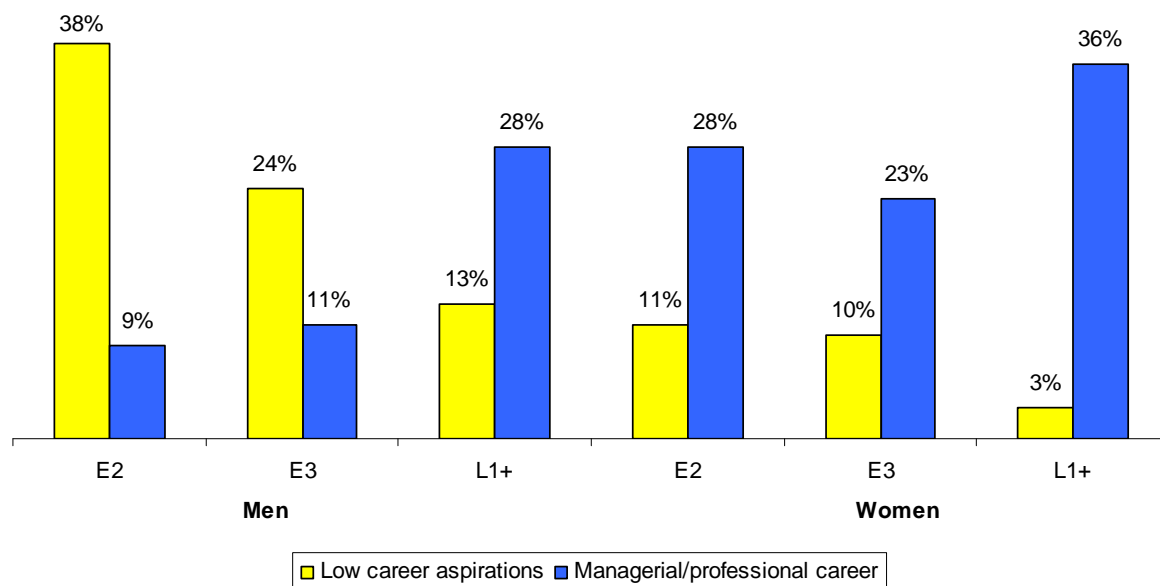
Professional aspirations

Poor literacy is also related to an individual's professional aspirations. Among men, those with Entry Level 2 literacy skills were at least twice as likely to have had low career aspirations at the age of 16 as men with Level 1 skills or higher (38% and 15%, respectively); women were three times less likely (11% and 3%, respectively). Reflecting their lack of skills and poorer socio-economic background, men with Entry Level 2 literacy were one third as likely to have aspirations towards a managerial or

professional career in comparison with men with Level 1 literacy skills or higher (9% to 28%, respectively). Differences for women across skills groups were not as apparent, perhaps reflecting the ‘white-collar’ office-based job aspirations of many women rather than the more physical, manual work that was more readily available as an alternative for less skilled men.

This data is displayed below in **Figure 14**, where low career aspirations refers to teenagers reporting that their first or joint first choice for a job was in the service industry, on an assembly line, in maintenance or transport.

Figure 14: Professional aspirations by gender and literacy level



From Parsons and Bynner (2007)

Attitudes towards children’s education

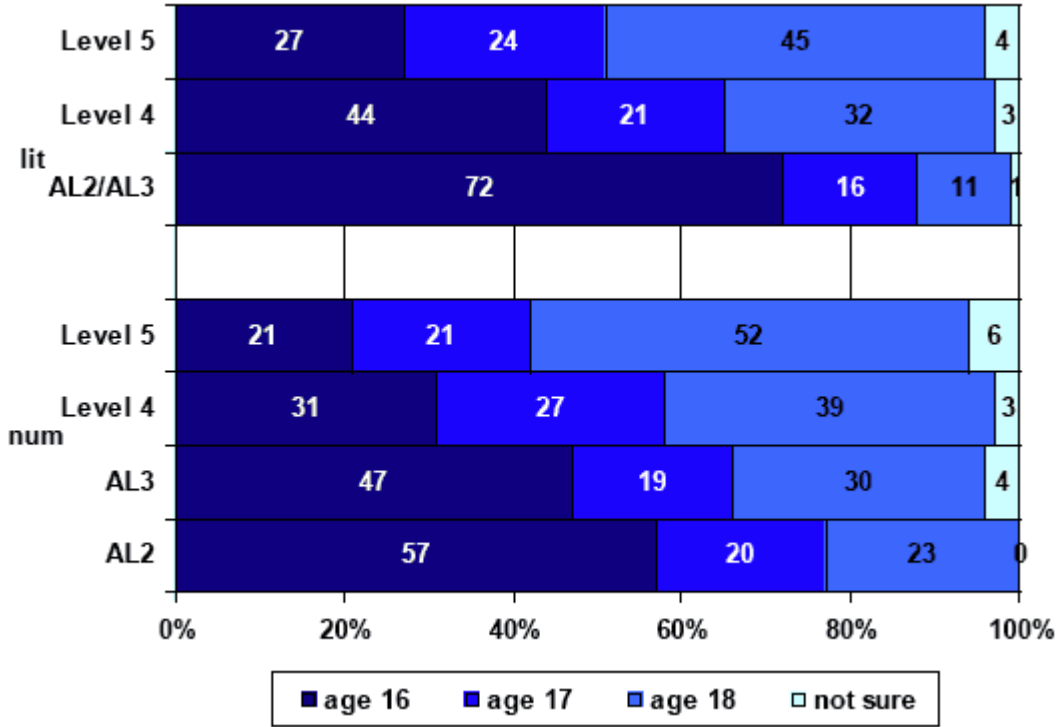
Parents’ educational expectations and aspirations shape their interactions with their children (e.g. de Temple and Tabors, 1994), and in turn parental aspirations and expectations for their children are strongly linked to their own educational attainment (Sammons et al., 2007).

This intergenerational transfer of low aspirations is particularly pertinent given the quality of the early years home learning environment (HLE) and parents’ (especially mothers’) qualification levels are the most important background factors relating to a child’s attainment in reading at Year 5 (Sammons et al, 2007).

Figure 15, taken from Scottish data, shows the clear difference in expectations for the children of parents with low literacy. Parents were asked if they wanted their child to continue in education beyond the age of 16. The answers show that cohort members with Access Level 2 or 3 literacy or Access Level 2 numeracy were nearly three times as likely to have had parents who wanted them to leave full-time education at the earliest opportunity compared with parents of cohort members with Level 5 skills or higher.

These educational aspirations were replicated in the cohort members themselves. At age 16, although numbers are restricted, more than 8 in 10 children with Access Level 2 or 3 literacy wanted to leave education at the earliest opportunity as did nearly 6 in 10 with Access Level 2 numeracy. This compared with 1 in 3 of those with Level 5 literacy, and 1 in 4 with Level 5 numeracy.

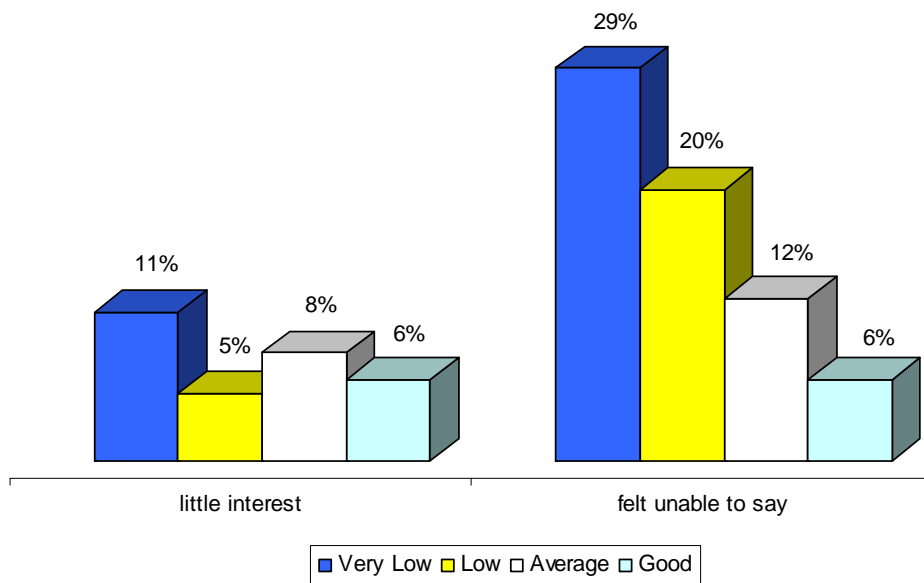
Figure 15: Parental aspirations of cohort members continuing with education (age 10) by cohort members’ literacy and numeracy level



From Parsons and Bynner (2008)

Teachers’ perception of the interest of parents in a child’s education further enforces the intergenerational theory. **Figures 16 and 17** show that teachers viewed mothers as more interested in general, and when broken down by gender and age parents with higher literacy levels were more likely to show an interest.

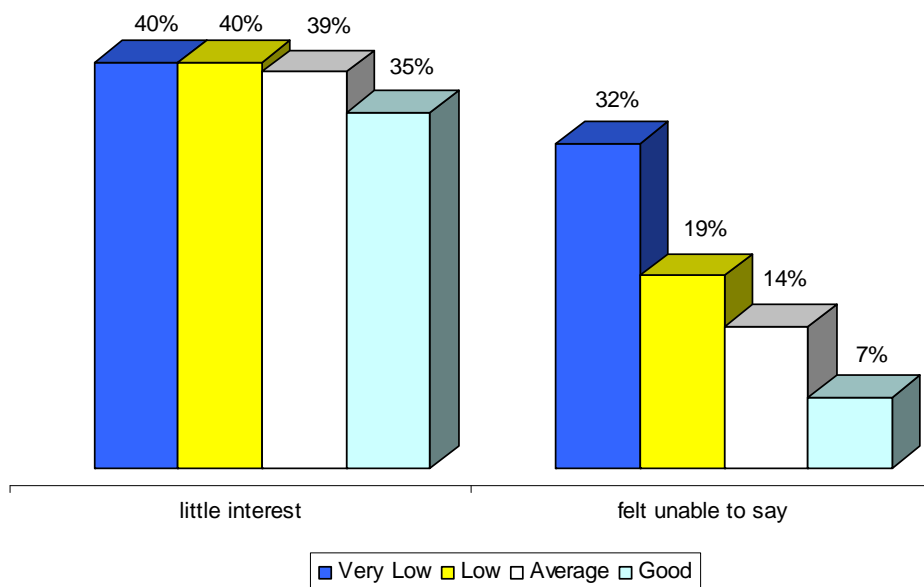
Figure 16: Parental lack of interest as rated by teachers of cohort members at age 7 by literacy – Mother’s interest



From Bynner (1998)

Figure 17 shows that as well as fathers being less interested in general, the difference by literacy level is less pronounced.

Figure 17: Parental lack of interest as rated by teachers of cohort members at age 7 by literacy – Father’s interest



From Bynner (1998)

Summing up

Poor literacy rates and low aspirations can become a vicious circle that feed into each other and contribute towards fewer life opportunities. An individual's aspirations can influence a variety of areas of their lives, including economic issues such as promotions.

Aspirations are also hugely important because the cycle of underachievement that low aspirations causes is too often passed on to the next generation, where poor literacy and low aspirations are replicated.

Family life

- Individuals with low levels of literacy are more likely to lead solitary lives without any children.
- Those with low literacy are also more likely to marry younger.
- Women with lower literacy skills tend to have children when they are younger and tend to have more children.
- Individuals with low literacy levels are more likely to live in overcrowded housing with reduced access to technology.

Partnerships and marriage

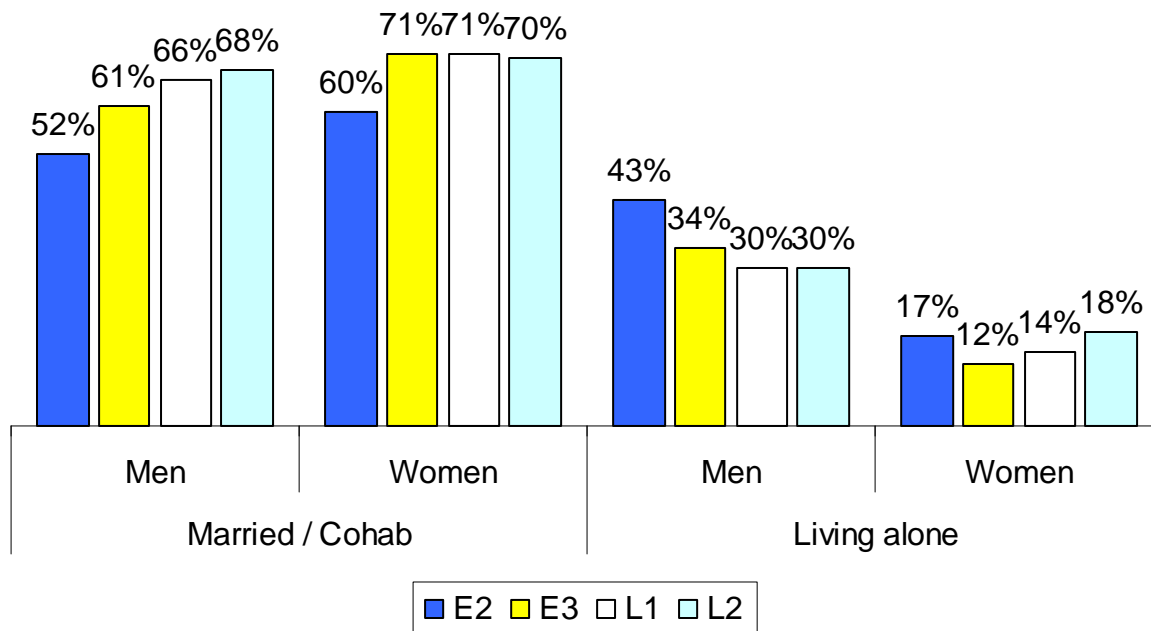
There is also evidence to suggest that literacy levels are associated with some facets of family life. For example, at age 34, 20% of all men and 13% of all women had never lived with a partner. For both men and women, lack of partnership was highest amongst those with Entry Level 2 literacy – 29% of men and 20% of women (Parsons and Bynner, 2007).

The same study also found that 28% of women with Entry Level 2 literacy skills had first moved in with their partner while still a teenager compared with 18% of women with Level 1 skills or higher. Differences among men were much less apparent. 11% of those with Entry Level 2 or 3 numeracy skills had first lived with a partner as a teenager, compared with 7% with Level 1 numeracy skills or higher (Parsons and Bynner, 2007).

Bynner and Parsons (2000) showed that men with poor literacy skills were less likely than others in the cohort to have married or to be co-habiting. Compared to others in the same cohort, both men and women with low literacy skills were also more likely to have married young.

Figure 18 shows men with Entry Level 2 skills were less likely to be married than those with higher literacy skills. Among those who had married by age 34, 84% of women and 78% of men were in their first marriage (Parsons and Bynner, 2007). In comparison, marital breakdown was most likely among men with Entry Level literacy (26% of those at Entry Level 2; 29% of those at Entry Level 3; Parsons and Bynner, 2007).

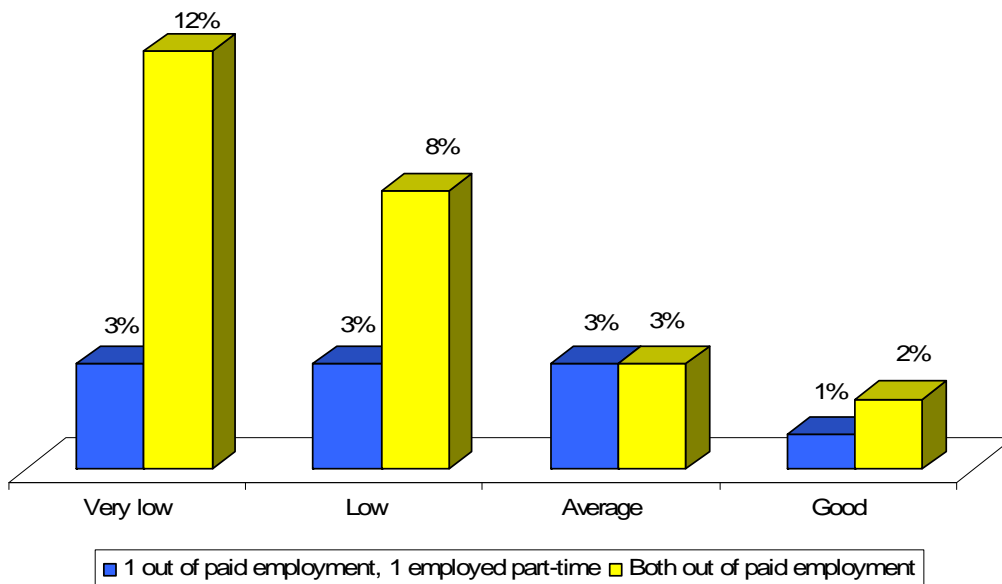
Figure 18: Relationships by literacy levels



From Parsons and Bynner (2006)

Individuals with the lowest literacy skills are more likely to be living in a household where both partners are unemployed (see **Figure 19**).

Figure 19: Employment among married or co-habiting households by literacy level



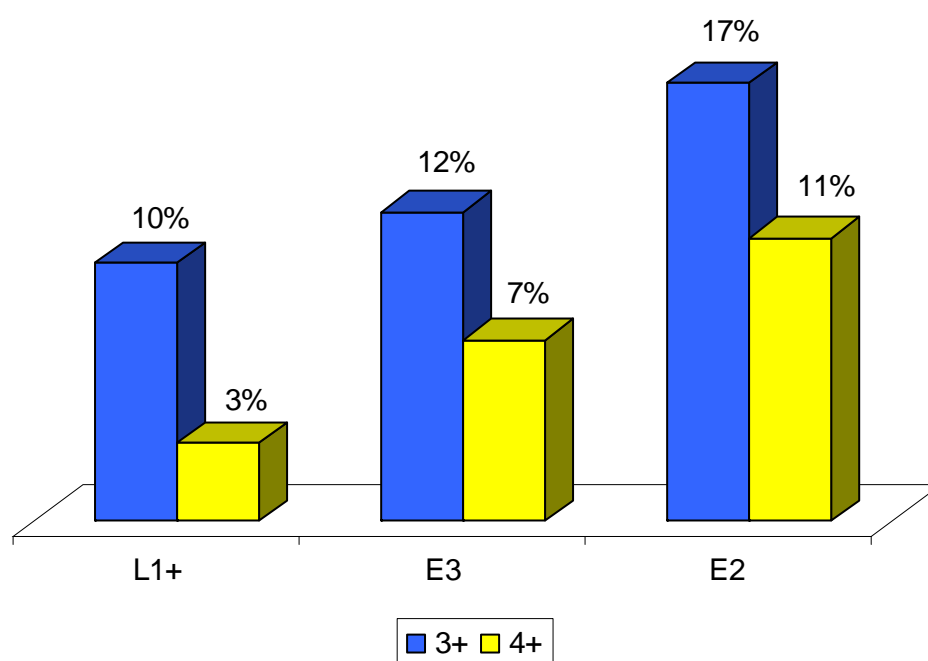
From Bynner and Parsons (1997)

Children

Women with low literacy skills are more likely to have their first child when younger (22 years of age compared with 25 years of age among those with good literacy skills) and to have more children than others in the same cohort (Parsons and Bynner, 2007).

Women with lower levels of literacy are also likely to have more children than their more skilled counterparts. For example, **Figure 20** shows that by the time women had turned 34, those with lower levels of literacy (Entry Level 2) were twice as likely as their more skilled counterparts to have more than three children and three times more likely to have more than four children (Parsons and Bynner, 2007). Unfortunately, there is no equivalent breakdown by literacy for men.

Figure 20: Percentage of women with 3+ children at age 34 by literacy level



From Parsons and Bynner (2007)

Far more BCS70 cohort members with Entry Level 2 or 3 literacy grew up experiencing many aspects of economic disadvantage throughout their childhood compared with cohort members with a better grasp of literacy. In most cases those with Entry Level 2 literacy came off the worst.

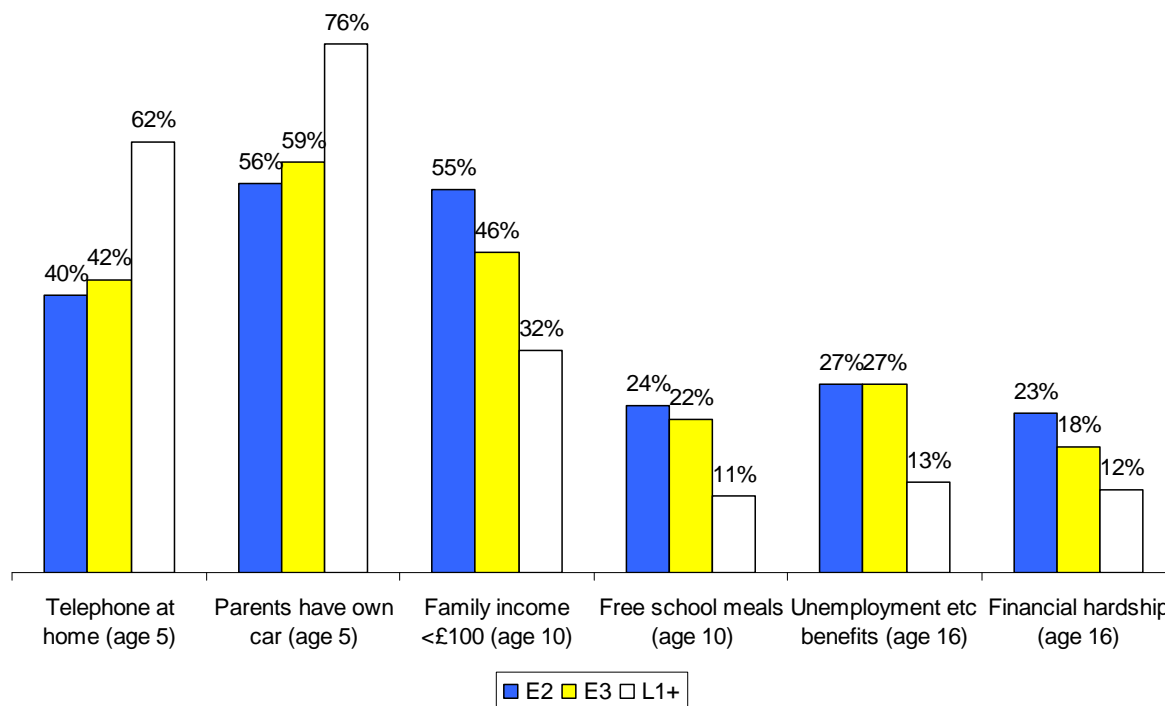
For example, compared with those who grew up to have Level 1 skills or higher, families of cohort members who grew up to have only an Entry Level 2 grasp of literacy were far less likely to have a telephone (40% to 62%) or a car (56% to 76%) in 1975. They were far more likely to have had a low family income (55% to 32%) and to have received free school meals in 1980 (24% to 11%).

In 1986, families of those with low literacy were also more likely to have received state (unemployment or supplementary) benefits (27% to 13%) or to have reported

experiencing financial hardship (23 % to 12% – see **Figure 21**). A picture is created of relatively disadvantaged family circumstances preceding literacy difficulties.

Economic disadvantage is part of the whole syndrome of factors which work against educational progress and inhibit literacy and numeracy skills acquisition.

Figure 21: Financial disadvantage in childhood by literacy level in later life (age 34)

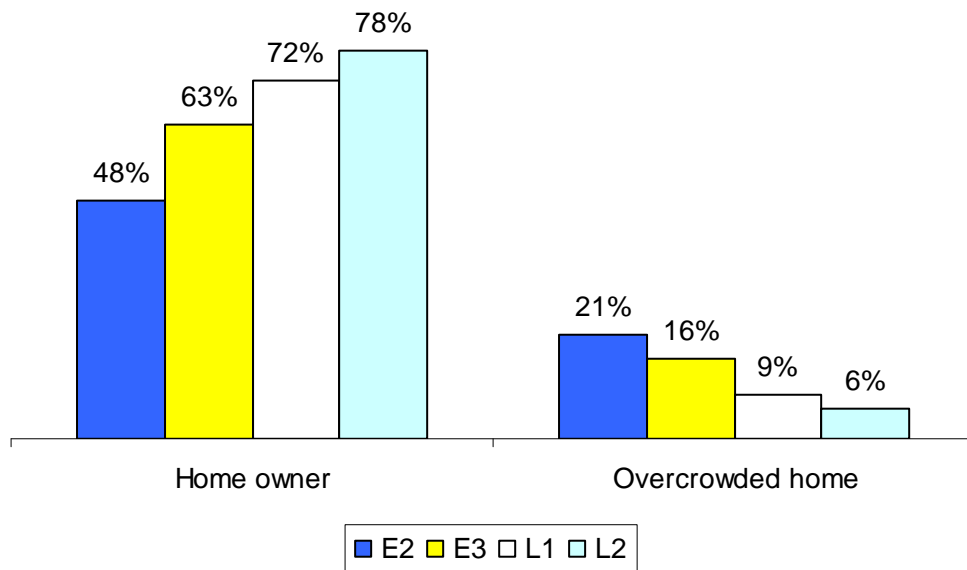


From Parsons and Bynner (2007)

Housing

There appears to be a relationship between literacy and home ownership, which most likely operates through its link to employment and wages. For example, Bynner and Parsons (1997) report that 42% of those with the lowest literacy skills own their homes compared with 78% of those with good literacy skills.

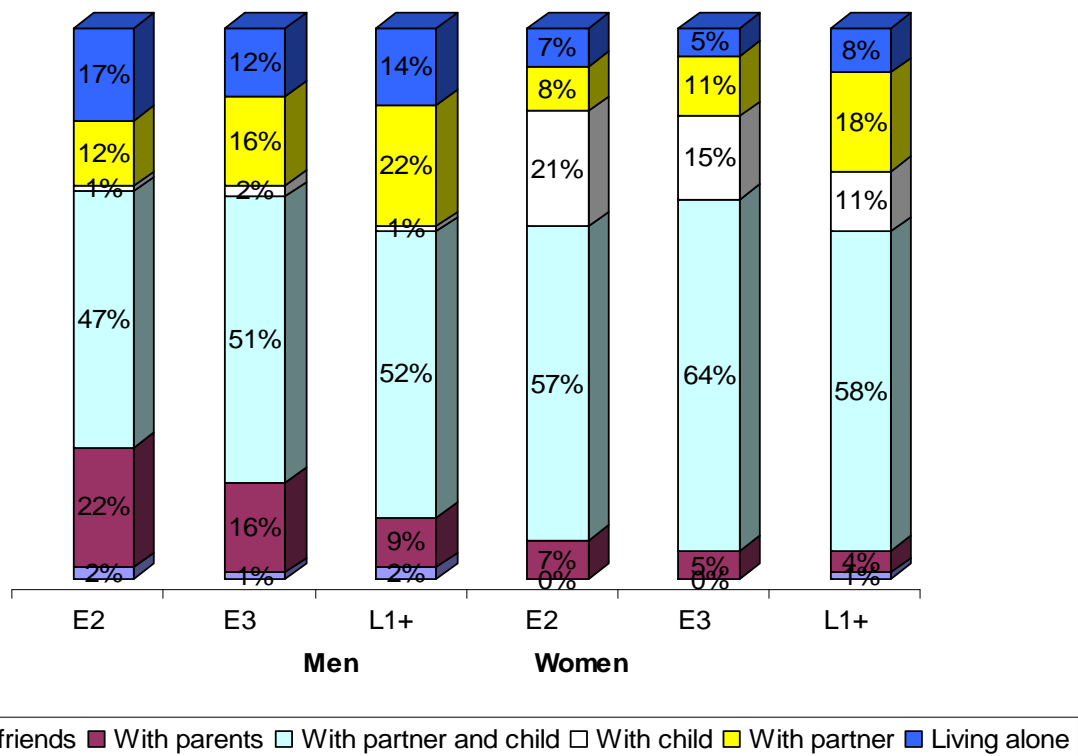
Figure 22: Home ownership and living conditions by literacy level



From Bynner and Parsons (2006)

An analysis of the data (see **Figure 23**) showed that, at age 34, men with poor literacy skills were far more likely to be living with their parents or alone (22% and 17%, respectively), compared with those with Level literacy 1 skills or higher (4% and 8%, respectively). The difference is far less pronounced for women.

Figure 23: Living arrangements at age 34 by gender and literacy level

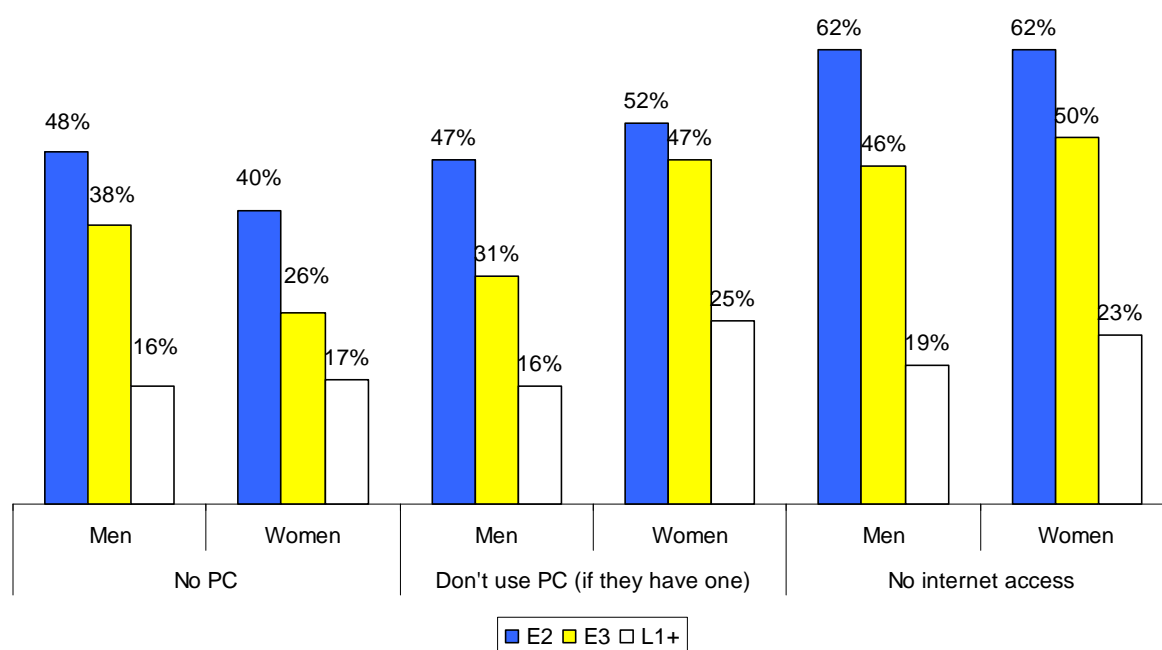


From Bynner and Parsons (2007)

Technology

Parsons and Bynner (2007) also demonstrate a link between poor literacy and technology in the home. **Figure 24** shows that 48% of men and 40% of women with Entry Level 2 literacy did not have a computer in their home compared with just 16% of men and 17% of women with Level 1 literacy skills or higher. Those with low literacy were also less likely to use their computer than their more literate counterparts if they have one. This digital divide may be a reflection of the more disadvantaged socio-economic circumstances that surround men and women with Entry Level 2 literacy.

Figure 24: Technology in the home by gender and literacy level



From Parsons and Bynner (2007)

Summing up

Literacy and family life are related in a number of ways, with the nature and strength of the relationships varying for men and women. The profile of a man with low literacy is someone with less stability, more likely to live with their parents or alone. For women, those with low literacy often have children younger and are more likely to move in with their partner while still a teenager.

Family life and housing conditions can affect aspirations, as explained earlier, and an individual's mental and physical health, which is explored in the next section.

Health

- Relatively poor physical health and mental wellbeing are associated with poor literacy. Poor skills are also often related to poor health-related practices.
- Individuals with lower literacy drink more units of alcohol and are more likely to smoke than those with higher levels.
- Women with low literacy skills were five times more likely than those with average or good literacy skills to be depressed.
- 37% of men and 31% of women with Entry Level 2 literacy agreed that they 'never get what they want' compared with just 16% and 14% of those with Level 2 literacy.
- Only 50% of men and women with very low literacy agreed that they were 'satisfied with life so far' compared with 75-80% for all other literacy levels.

Hicks (2003) found that recreational reading exercises the imagination, gives access to information and provides opportunities for relaxation, enjoyment and social interaction.

Reading also empowers the individual, promotes personal development, supports self-expression and personal choice and results in creative independent learners who have an understanding of self, of others and of wider social issues.

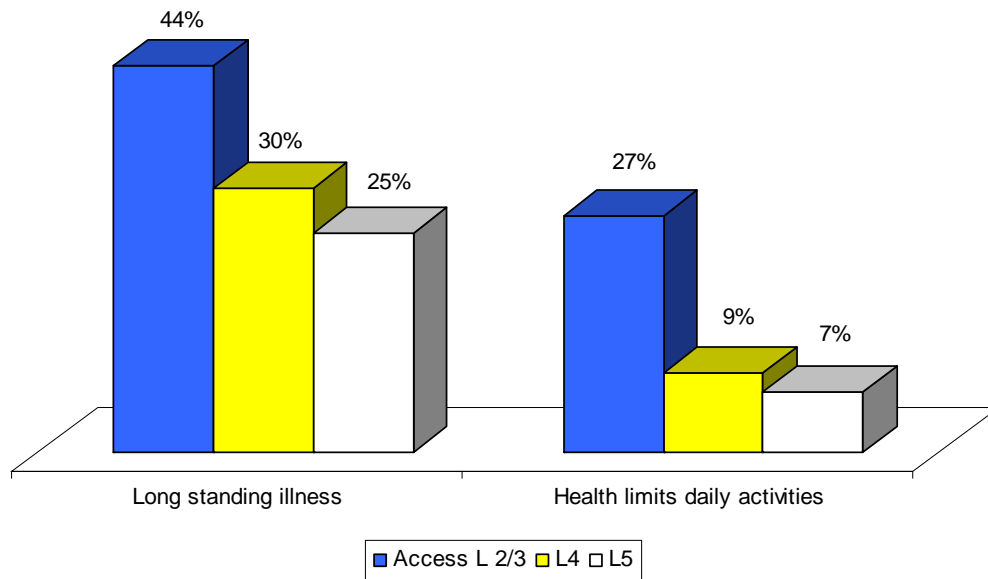
The above benefits indicate that reading has a significant role to play in combating some of the causes of illness, improving health and keeping people well by contributing to a general sense of well-being.

Indeed, US evidence shows that low literacy is associated with several adverse health outcomes, including low health knowledge, increased incidence of chronic illness, and less than optimal use of preventive health services (Berkman et al., 2004). Lower literacy levels can also adversely affect patient-physician communications.

Physical health

Data collected in Scotland shows a relationship between long-standing physical health issues and literacy level. **Figure 25** shows that women with Access Level 2 or 3 literacy are most likely to report having a long-standing illness compared with their more skilled counterparts (44% to 25%), and that their general health limited their everyday activities compared with women with higher literacy skills (27% to 7%).

Figure 25: Physical health among women in Scotland by literacy level



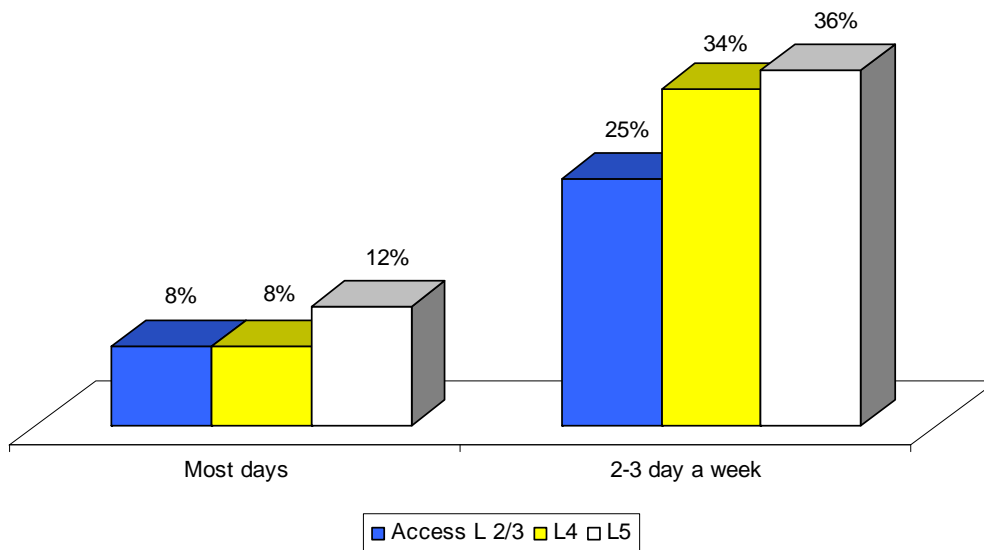
From Parsons and Bynner (2008)

The same data showed a link between low literacy and obesity. An analysis of cohort members' Body Mass Index (BMI) showed that six in 10 men and four in 10 women in Scotland as overweight or obese. Compared with men and women with Level 5 skills or higher, this was *slightly* more likely among men and women with the poorest grasp of literacy (64% to 58% for men, 48% to 42% for women).

Risk behaviour such as smoking and drinking

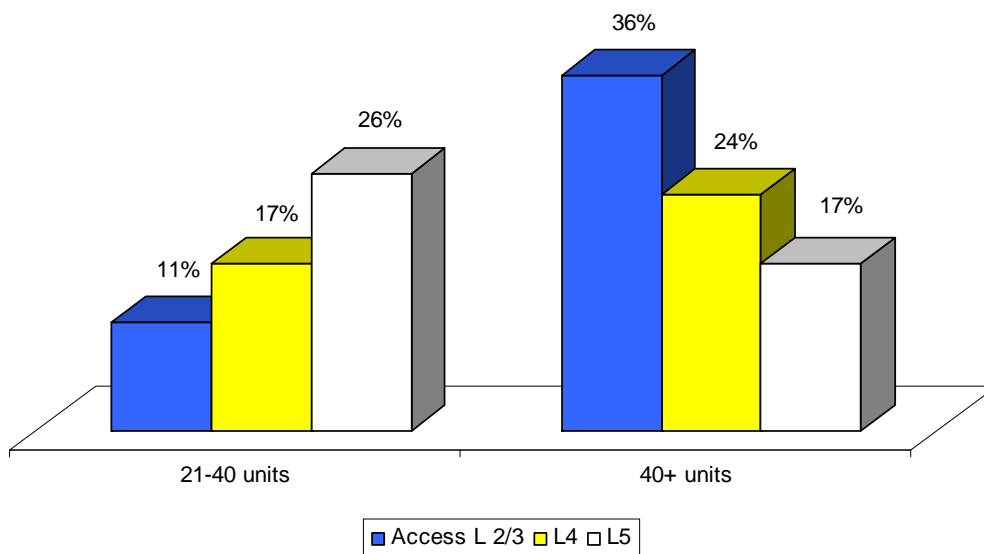
Data from Scotland also showed that drinking and smoking levels correlated with literacy levels. Interestingly, the data show that those with higher literacy levels drank more regularly (**Figure 26**). However, they drank fewer units per week than those with lower literacy levels (**Figure 27**), which indicates less binge drinking amongst more literate individuals.

Figure 26: Drinking rates by literacy level (Scotland)



From Parsons and Bynner (2008)

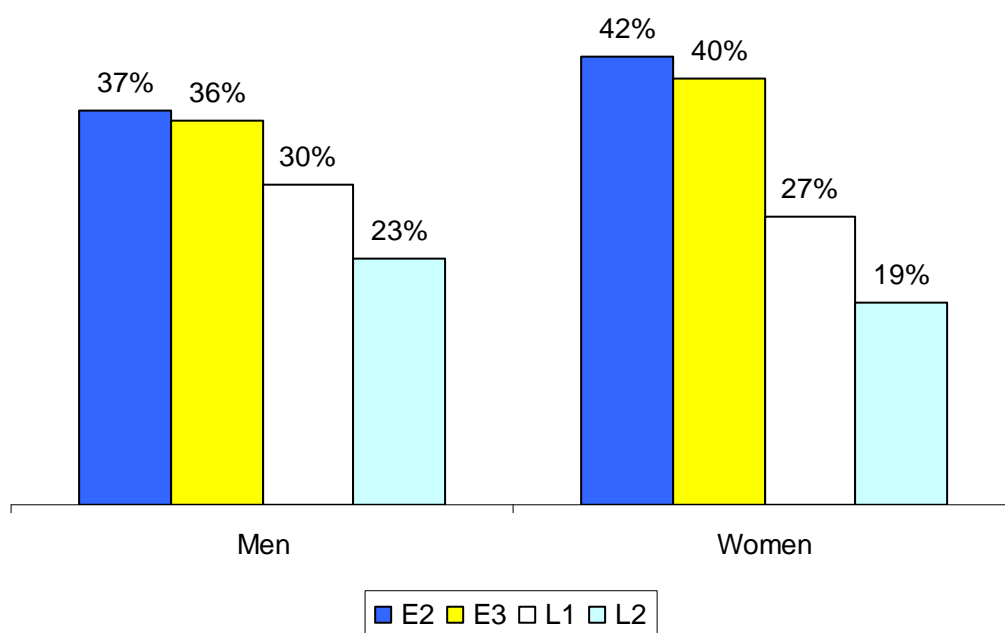
Figure 27: Units of alcohol consumed by literacy level (Scotland)



From Parsons and Bynner (2008)

Figure 28, using English data, shows women with Entry Level 2 literacy were more than twice as likely as women with Level 2 skills to smoke every day – 42% compared with 19%. Similar but less pronounced differences were apparent between men.

Figure 28: Smoking cigarettes daily by literacy level



From Parsons and Bynner (2006)

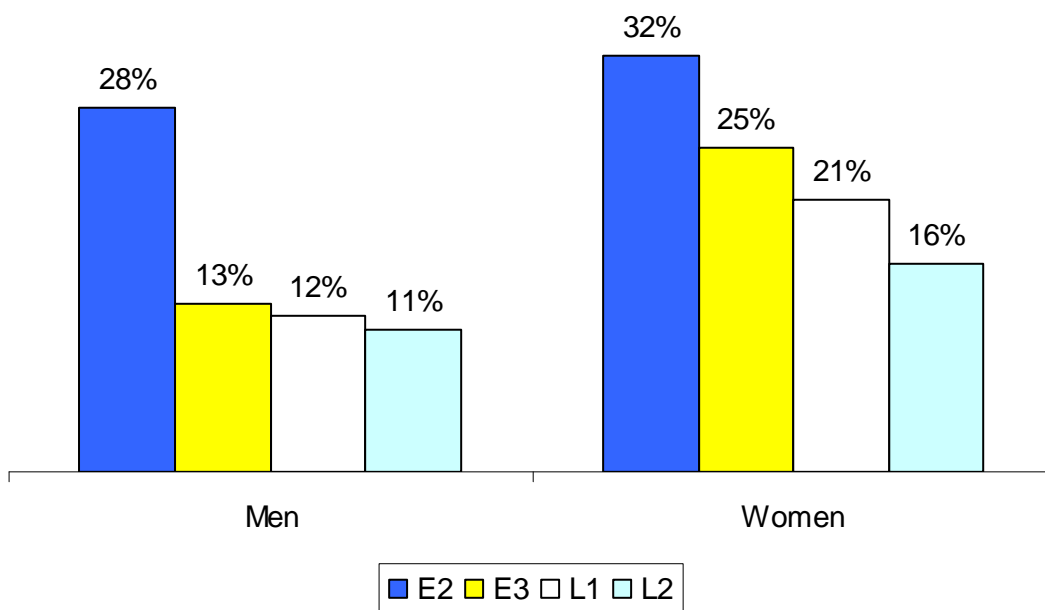
Mental health

Analysing British longitudinal as well as other data, Chevalier and Feinstein (2006) found that education significantly reduces the risks of adult depression. For example, they found that having a secondary qualification reduces the risk of adult depression by 5 to 7 percentage points; an effect that remains even after work and family characteristics are controlled for.

Similarly, Bynner and Parsons (2000) reported that women with low literacy skills were five times more likely than those with average or good literacy skills to be depressed (see **Figure 29**).

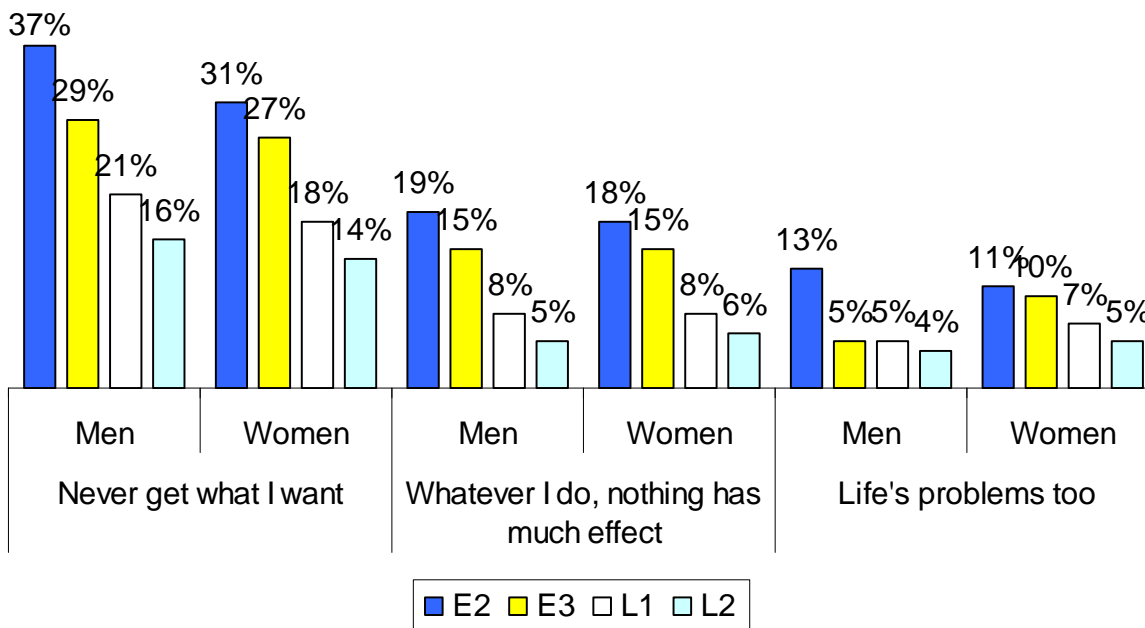
Psychological well-being was also shown to have a correlation with literacy levels (see **Figure 30**). 37% of men and 31% of women with Entry Level 2 literacy agreed that they “never get what they want” compared with just 16% and 14% of those with Level 2 literacy. Psychological attitudes such as this could be closely related to an individual’s aspirations with one contributing towards the other, and both being related to poor literacy.

Figure 29: Symptoms of depression by literacy level



From Parsons and Bynner (2006)

Figure 30: Psychological well-being and literacy level

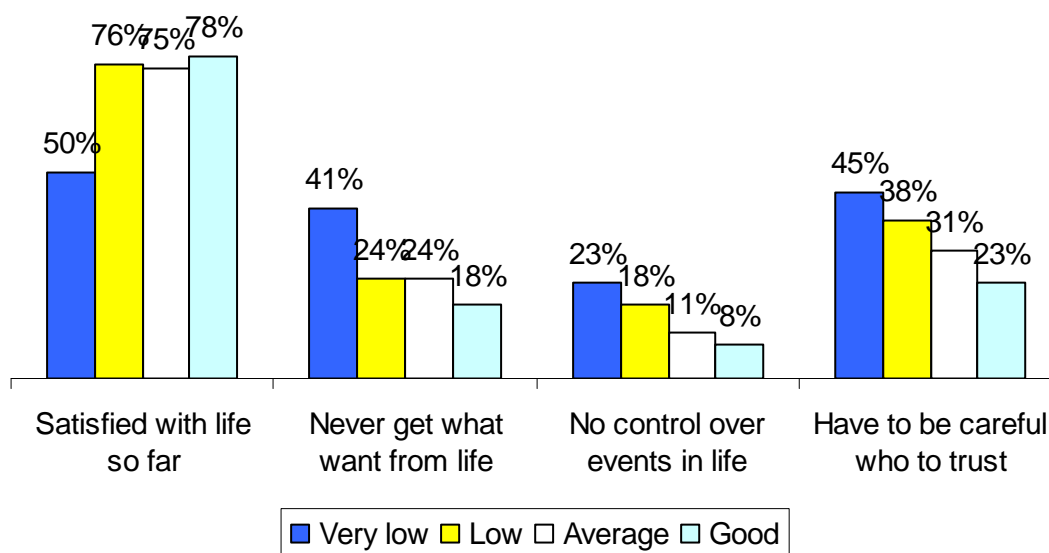


From Parsons and Bynner (2006)

Life satisfaction

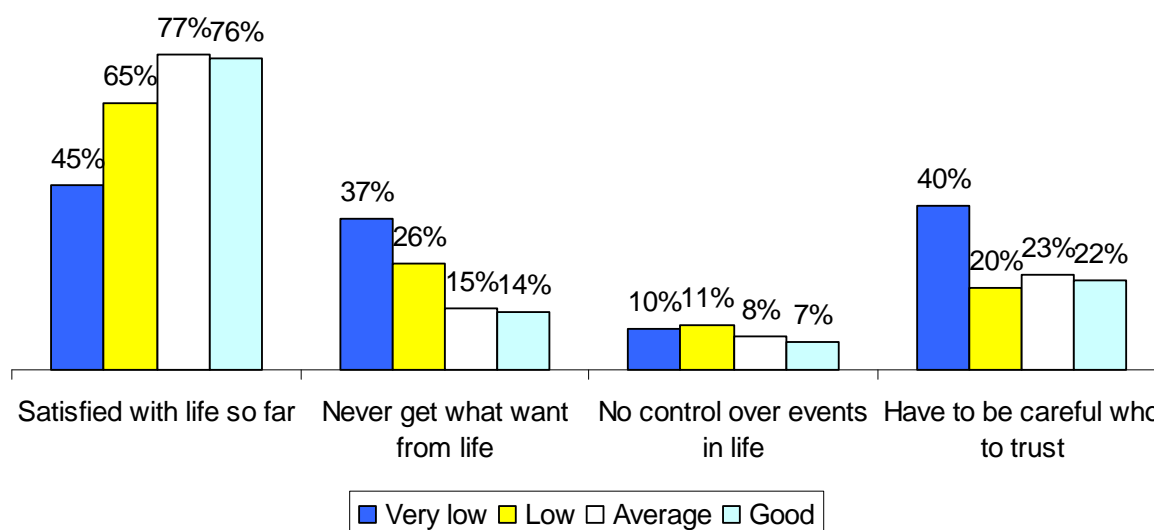
A positive outlook on life appears to be consistently high for men and women, except those who have very low literacy skills (see **Figures 31** and **32**). Only 45% of women and 50% of men with very low literacy agreed that they were “satisfied with life so far” compared with 75-80% for those with higher literacy levels.

Figure 31: Life satisfaction by literacy level - Men



From Bynner and Parsons (1997).

Figure 32: Life satisfaction by literacy level - Women



From Bynner and Parsons (1997).

Summing up

Results from longitudinal studies show that poor literacy levels are related to someone's mental and physical health, as well as to risk behaviour, such as smoking and drinking.

This suggests that poor literacy is associated with a person's ability to stay healthy. Indeed, as outlined earlier, American research also suggests that 'low literacy is associated with several adverse health outcomes, including low health knowledge, increased incidence of chronic illness, poorer intermediate disease markers, and less than optimal use of preventive health services' (see Berkman et al., 2004).

This research reports that poor literacy, especially very poor literacy not only relates to an individual's ability to remain healthy, it has an impact on their ability to return to health once they are ill.

Civic and cultural engagement

- Individuals with poor basic skills are much more likely to report being 'not at all' interested in politics (42% for men with poor basic skills and 17% for men with good basic skills and 50% and 21% respectively for women).
- Men and women with the poorest literacy or numeracy skills were the least likely to have voted in the 1987 and 1997 general elections.
- Data for Scotland shows that 45% of men and 47% of women with poor literacy levels did not trust people in their area, compared with 24% and 18% for men and women with high literacy.
- Individuals with higher literacy levels are around four times as likely to be a member of an organisation than those with poor literacy.

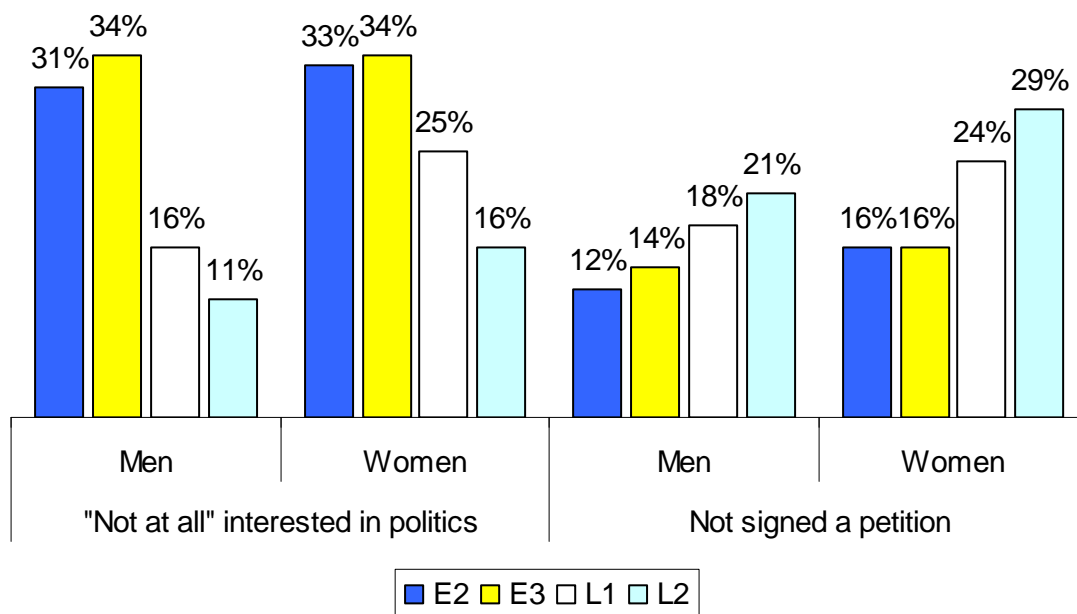
There is no longer a need to demonstrate that literate women are better able to care for themselves, their families and participate in economic and social change in their societies. Educated young people and adults are better able to identify their rights and responsibilities as well as options for change that affect them and their communities. (UNESCO, 2005: p.2)

As the above quote suggests, the case for literacy improving both the ability to participate in civic and cultural life, and also the quality of that participation is inarguable. Literacy is essential to knowledge and understanding and impacts in more ways than could ever be listed here. Therefore, the sections below represent the existing evidence base for literacy and cultural or civic participation, rather than an exhaustive list of inferred knowledge about the power of literacy.

Political attitudes

Figure 33 shows that individuals with poor basic skills are much more likely to report being “not at all” interested in politics (42% for men with poor basic skills and 17% for men with good basic skills; and 50% and 21% respectively for women), and more likely to have a higher degree of political cynicism.

Figure 33: Political interest and petitions by literacy level



From Parsons and Bynner (2006)

Voting

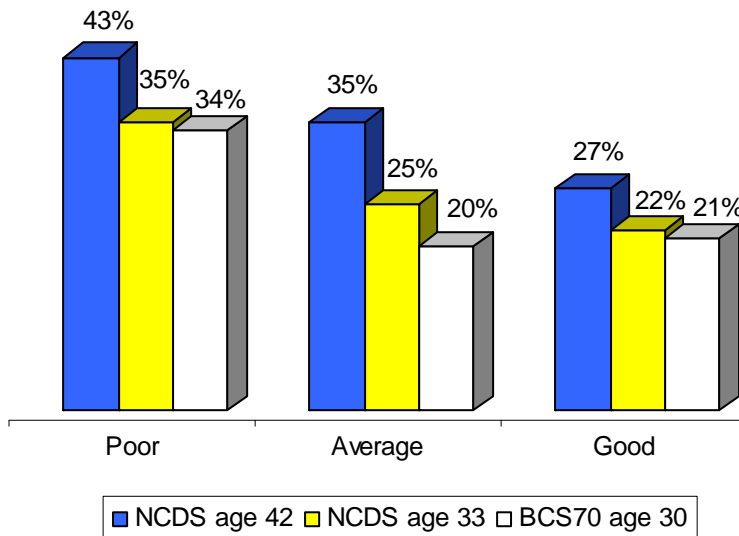
A report from the Basic Skills Agency entitled *Basic Skills and Political and Community Participation* (2002), found that men and women with the poorest literacy or numeracy skills were the least likely to have voted in the 1987 or 1997 general election.

Considering first voting in general elections, the authors identify whether the NCDS cohort (born in 1958) voted in the 1987 and 1997 elections, and whether the BCS cohort (born in 1970) voted in the 1997 election. Overall, the younger cohort were less likely to vote, suggesting a falling of political interest among younger people.

Within in each cohort, however, those people with a low level of basic skills were less likely to vote (see **Figures 34** and **35**). For example, in the BCS70 survey, approaching half (43%) of the men with poor literacy skills did not vote in the 1997 general election, compared with a third (34%) of the men with good literacy skills. The equivalent figures for women were 42% and 30%. There is a similar pattern of voting behaviour across skills groups for the NCDS cohorts in both the 1987 and 1997 general

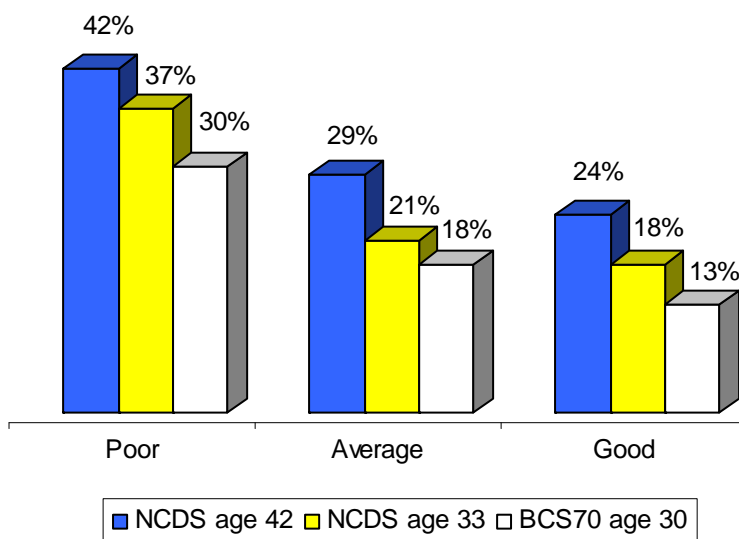
elections, albeit at a lower level of non-participation for all groups, suggesting this behaviour of the low-skilled is not a new phenomenon.

Figure 34: Not voted in general election by literacy level – Men



From Parsons and Bynner (2002)

Figure 35: Not voted in general election by literacy level – Women

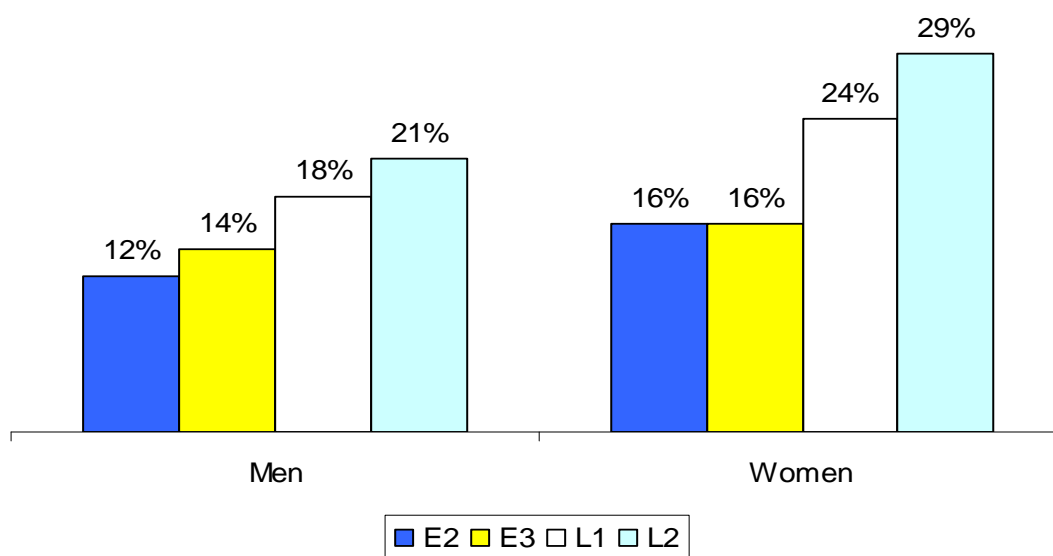


From Parsons and Bynner (2002)

Community participation

Figure 36 shows that community participation is higher among men and women with higher literacy skills, perhaps reflecting their level of satisfaction with their lives and also their belief that they have an influence on their surroundings.

Figure 36: Community activity by literacy level

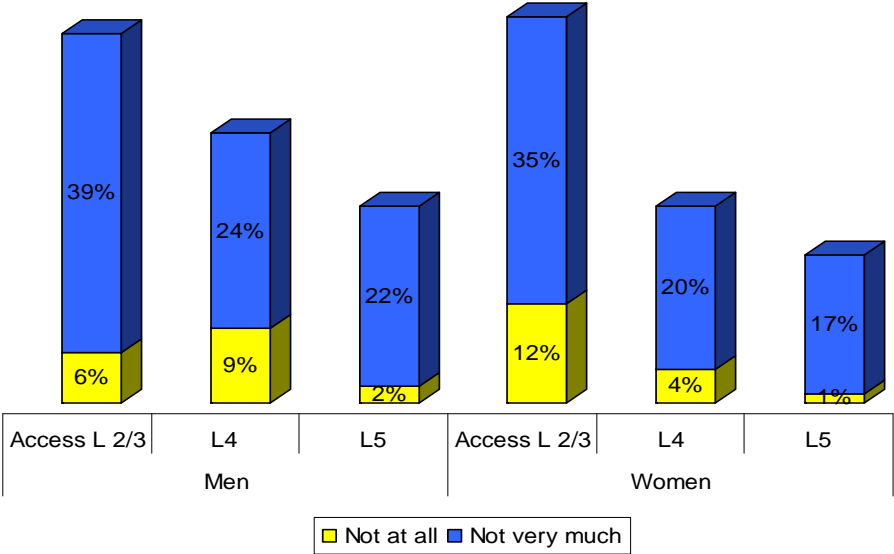


From Parsons and Bynner (2006)

The levels of community participation may also be affected by people's attitudes towards their local area, which in turn are related to literacy levels. Assessment of the cohort data for Scotland in **Figure 37** shows that 45% of men and 47% of women with poor literacy levels did not trust people in their area, compared with 24% and 18% for men and women with high literacy.

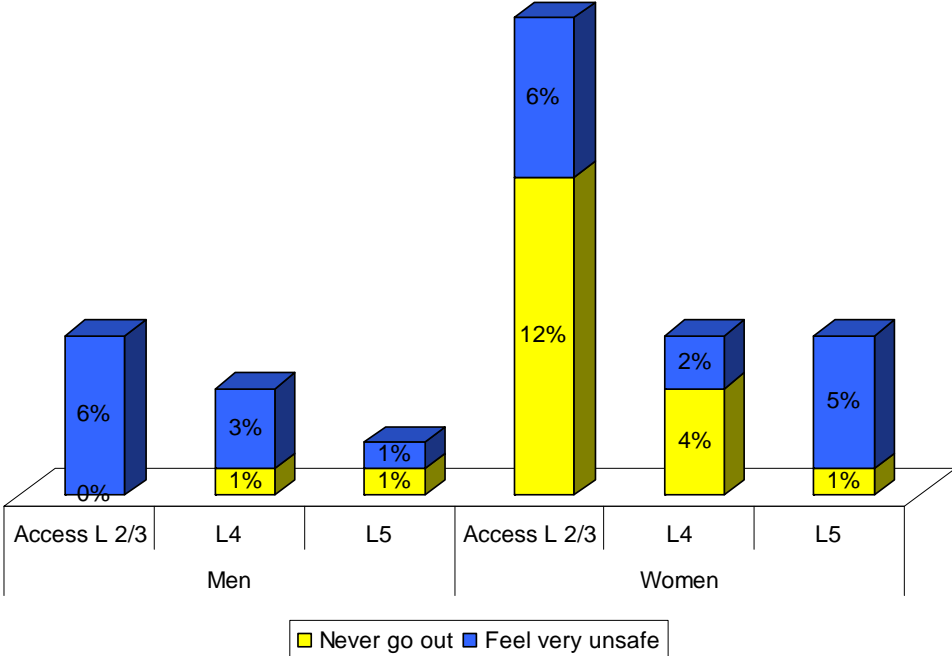
In addition, 18% of women with poor literacy did not feel safe at all going out in their local area, compared with 6% for those with high literacy (see **Figure 38**). The trend of feeling safe was less pronounced for men.

Figure 37: Men and women reporting they did not trust people in their area by literacy level (Scotland)



From Parsons and Bynner (2008)

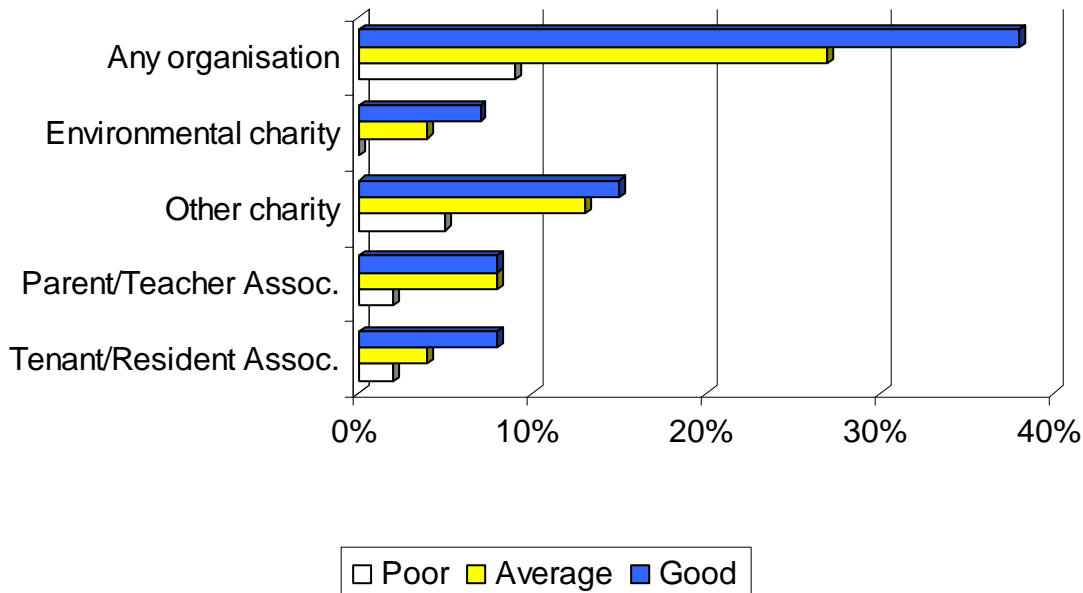
Figure 38: Men and women reporting they did not feel safe in their area by literacy level (Scotland)



From Parsons and Bynner (2008)

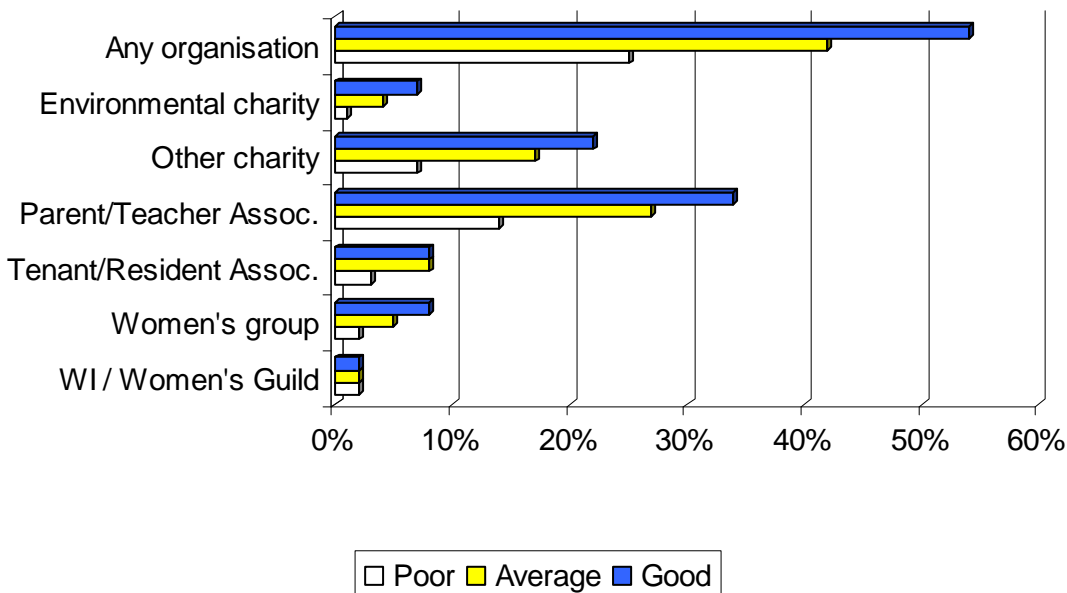
In addition to participation in an individual's own community, literacy levels are also related to organisational membership (see **Figures 39 and 40**).

Figure 39: Organisational membership for men by literacy level



From Parsons and Bynner (2002)

Figure 40: Organisational membership for women by literacy level



From Parsons and Bynner (2002)

Men with higher literacy levels are around four times as likely to be a member of any organisation than those with poor literacy. The same pattern emerges with regard to

women's membership of organisations. In general participation is higher, but the breakdown by literacy level shows many of the same results.

Summing up

The case for a relationship between literacy and community or civic participation is clear as literacy is an essential tool for understanding and utilising knowledge. Illiteracy and poor literacy skills prohibit an individual from accessing the knowledge required to vote, read newspaper, fill in forms and read campaign leaflets.

In addition to this, the section above shows that community participation and feelings of comfort and satisfaction with one's community are also linked to literacy levels. This may well be part of the same cycle that links literacy, aspirations and life satisfaction, and adds more weight to the argument that literacy is an essential life skill.

Discussion

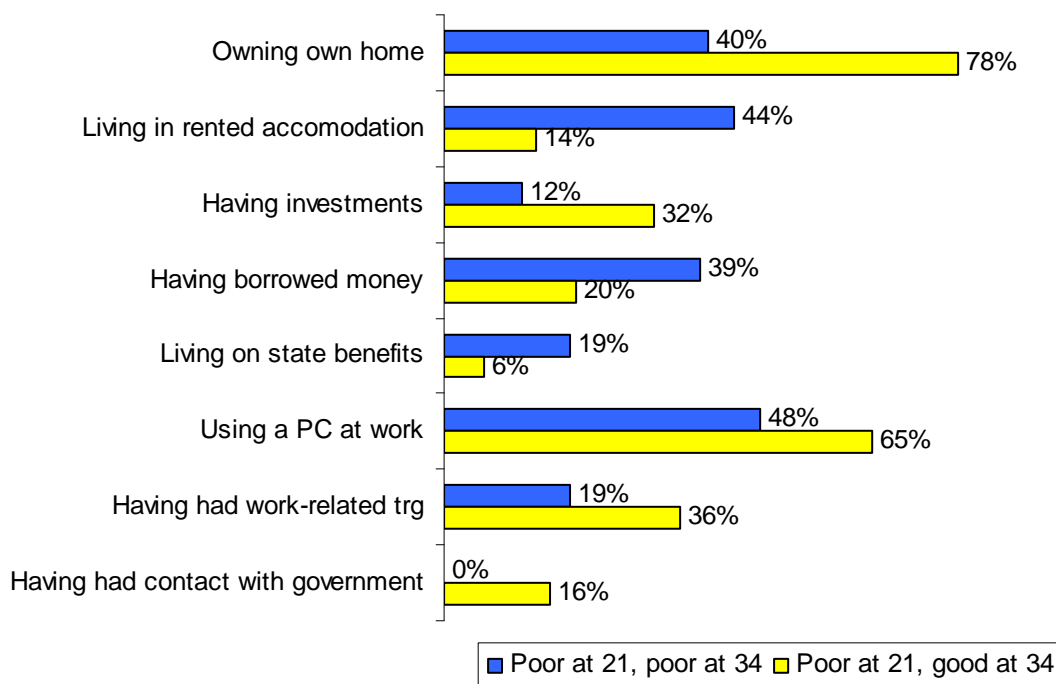
The purpose of this document was to bring together evidence of the wider benefits of literacy by looking at five key personal areas; economic well-being, aspirations, family life, health and civic / cultural engagement. While these relationships may not be causal, it is clear that poor literacy skills are part of a vicious circle of deprivation and underachievement.

The results make the profile of a poor reader look particularly worrying. The poor reader is more likely to be in worse physical and mental health, as well as being economically worse off and having lower aspirations. However, the situation in Britain is not a crisis and the purpose of this document is not to present an overly negative picture. As well as the obvious caveat that the majority of the adult population can read effectively, and the vast majority of young people are learning to read, there are other reassuring findings.

Analysis of the two cohort studies from Bynner and colleagues found that those who improved their basic skills improved their chances in the labour market, suffered less from poor physical and mental health, and were – among other things – more liberal and less discriminatory in their attitudes, and more likely to be active citizens, as shown by voting and experiencing interest in politics (Bynner *et al.*, 2001; see **Figure 41**).

The figure shows improvement for men across most of the personal outcomes listed in the document. Improved autonomy in terms of home ownership and dependence on the state, as well as increased contact with government and other indicators of civic participation, were all found in those who had improved their literacy between the ages of 21 and 34.

Figure 41: Impact of literacy skills improvement on various personal factors



From Bynner and Parsons (2006)

Some of the data within the document also suggest that a modest improvement in an individual's literacy levels can have a significant improvement in a range of areas. Perhaps the clearest example of this is the difference in 'life satisfaction' (page 41) between those with very low literacy and those with low literacy. Only 50% of men with very low literacy reported being satisfied with their lives compared with 76% of those whose literacy was classified as low. The results were slightly less startling but nonetheless significant for women whose literacy differed by the same degree.

It should also be noted that the effects recorded by Bynner and colleagues (2001) persist even after controlling for earlier family circumstances and educational achievement, illustrating that improved literacy can change lives.

Overall, this document outlines clearly the dangers of poor literacy and also the benefits of improving literacy on the individual, the community, the workforce and the nation. It should be noted again that these are relationships between literacy and other variables, which may, or may not, reflect direct causal connections. Outcomes in adult life are often the product of educational and social processes comprising a combination of influences in which literacy plays a part.

Profile of a poor reader

22% of men and 30% of women with literacy below Entry Level 2 live in non-working households.

Individuals with low levels of literacy are more likely to lead solitary lives without any children.

Profile of an improved reader

Men who improve their literacy rates see their likelihood of being on state benefits reduced from 19% to 6%.

A modest rise in literacy level sees the likelihood of a man owning his own house rise from 40% to 78%.

Individuals with low literacy levels are more likely to live in overcrowded housing with reduced access to technology.

Men and women with the poorest literacy or numeracy skills were the least likely to have voted in the 1987 and 1997 general election.

Increased literacy rates improve the chances of using a PC at work from 48% to 65%.

16% of men who improved their literacy between 21 and 34 had contact with government, compared to 0% whose literacy remained poor.

Improvements in an individual's literacy can have a profound effect on their life. The document also shows that literate individuals contribute and are successful in a range of areas, as well as helping to create literate families, who live within literate communities, which contribute towards a literate nation. The benefits of these three literate units are listed below:

Profile of a literate family:-

- A literate family is less likely to experience divorce, as divorce rates among those with high literacy are low, and significantly lower than those with poor literacy.
- Families with high literacy levels are far more likely to live in working households, with only 2% of families with good literacy living in workless households.
- Families with high literacy are more likely to own their own houses and not live in overcrowded conditions.

Profile of a literate community:-

- Individuals with good literacy are far more likely to be involved in the community. Among those with Entry Level 2 literacy 21% of men and 29% of women actively participate in community activities.
- Scottish data show that individuals with good literacy are significantly more likely to trust people in their community, with only 2% of men and 1% of women saying they did not trust people at all.
- Literate residents also consider their communities to be much safer compared with those with low literacy. Only 1% of men and women with high literacy levels reported never leaving their houses.

Profile of a literate nation:-

- Highly literate individuals are more likely to vote and have an interest politics, therefore participating in the democratic process and holding an interest in the governance of the nation.
- High literacy levels are associated with lower drinking and smoking, as well as higher levels of mental health. This takes pressure off the health service and public funds, and contributes to a healthier nation.
- A literate workforce is advantageous to both employees and employers. Good literacy skills provide an opportunity for flexibility in the workforce across all sectors, as data collected by the CBI show.

This document demonstrates the importance of literacy. However, it did not aim to paint a picture of doom and gloom. Rather, as shown above, real changes are made to a person's life when literacy levels improve. Socio-economic background and many other factors are outside the control of an individual. However, what matters is that for many addressing literacy skills is a key first step in beginning to address and helping to overcome other related factors that lock individuals into a cycle of disadvantage. Improving literacy skills at any point in life really can change lives.

References

- Berkman, N.D, DeWalt, D.A., Pignone, M.P., Sheridan, S.L., Lohr, K.N. and Lux, L. (2004). *Literacy and health outcomes. Evidence Report/Technology Assessment No. 87*. Rockville, MD: Agency for Healthcare Research and Quality.
- Book Marketing Ltd (2000). *Reading the Situation - Book Reading, Buying and Borrowing Habits in Britain*. London: Book Marketing Ltd.
- Bruner, J. (1996). *The culture of education*. Cambridge, MA: Harvard University Press.
- Bus, A.G., van Ijzendoorn, M.H., and Pellegrini, A.D. (1995). Joint book reading makes for success in learning to read: A meta-analysis on intergenerational transmission of literacy. *Review of Educational Research*, **65** (1), 1-21.
- Bynner, J. (1998). *Origins of Social Exclusion: the risk factors affecting young children*. London: City University.
- Bynner, J. and Parsons, S. (1997). *It doesn't get any better: the impact of poor basic skills on the lives of 37 year olds*, London: Basic Skills Agency.
- Bynner, J., Dearden, H., McIntosh, S., Reed, J., Van Reenen, J. and Vignoles, A. (2001). *Improving Adult Basic Skills: Benefits to the Individual and to Society*, DfEE Research Brief No. 251.
- Bynner, J. and Parsons, S. (2006). *New Light on Literacy and Numeracy*. London: NRDC
- CBI (2008). *Taking stock: CBI education and skills survey 2008*. London: CBI.
- Chevalier, A. and L. Feinstein (2006), *Sheepskin or Prozac: The Causal Effect of Education on Mental Health. Discussion Paper*. London: Centre for Research on the Wider Benefits of Learning.
- Clark, C. and Rumbold, K. (2006). *Reading for pleasure: A review of the literature*. London: National Literacy Trust.
- Cunningham, A. E. and Stanovich, K. E. (1998). What reading does for the mind. *American Educator*, **22**(1&2), 8-15.
- deCoulon, A.; Marcenaro-Gutierrez, O. and Vignoles, A. (2007). *The value of basic skills in the British labour market*. London: Centre for Economics of Education.
- de Temple, J.M. and Tabors, P.O (1994). *Styles of interaction during a book reading task: Implications for literacy intervention with low-income families*. Paper presented at the Annual Meeting of the National Reading Conference 44th November 30-December 3, 1994. San Diego, CA..
- DfES (2003). *The Skills for Life Survey: A national needs and impact survey of literacy, numeracy and ICT skills*. London: DfES.

Furlong, A. (1992). *Growing up in a classless society? School to work transitions*. Edinburgh: Edinburgh University Press.

Hicks, D. (2003). *Reading and health mapping research project*. Prepared for the Arts Council by the Reading Agency. Accessed online on 10 June 2008 at: www.readingagency.org.uk/new-thinking/newthinking/uploads/Reading_and_health_project.pdf

Kassam, Y. (1994). Who benefits from illiteracy? Literacy and empowerment. In Z. Morsy (Ed.), *The challenge of illiteracy: from reflection to action*. New York: Garland Publishing.

KPMG (2006). *The long term costs of literacy difficulties*. London: KPMG Foundation.

Layard, R., McIntosh, S., and Vignoles, A. (2002). *Britain's Record on Skills*. CEE Discussion Paper 23.

Leitch Review of Skills (2006). *Prosperity for all in the global economy – world class skills*. Final Report. London: HMSO.

McIntosh, S., and Vignoles, A., (2000). *Measuring and Assessing the Impact of Basic Skills on Labour Market Outcomes*. CEE Discussion Paper 03.

Meek, M. (1991). *On Being Literate*, London: Bodley Head.

Morrison-Gutman, L. and Akerman, R. (2008). *Determinants of aspirations*. London: DCSF.

Morrow, V. and Richards, M. (1996). *Transitions to adulthood: A family matter?* York: York Publishing Services.

National Endowment for the Arts (2007). *To Read or not to read: A question of national consequence*. Research Report No 47. Washington: National Endowment for the Arts.

OECD (2000). *PISA Programme for International Student Assessment*. New York: Organisation for Economic Cooperation and Development.

OECD (2000). *Literacy Skills for the Information Age: Final Report of the International Adult Literacy Survey*. Paris: OECD.

OECD (2002). *Reading for change: Performance and engagement across countries. Results from PISA 2000*. New York: Organisation for Economic Cooperation and Development.

Parsons, S., and Bynner, J. (2002). *Basic Skills and Political and Community Participation*. London: The Basic Skills Agency.

Parson, S. and Bynner, J. (2005). *Does Numeracy Matter More?* London: NRDC.

Parsons, S. and Bynner, J. (2007). *Illuminating Disadvantage: Profiling the experiences of adults with Entry Level Literacy or Numeracy over the life course*. London: NRDC.

Parsons, S. and Bynner, J. (2008). *New light on literacy and numeracy in Scotland*. Edinburgh: Scottish Government. Accessed online 10 June 2008 at <http://www.scotland.gov.uk/Publications/2008/01/22131652/0>.

Sammons et al (2007). *Summary report influences on children's attainment and progress in Key Stage 2: cognitive outcomes in year 5*. London: Institute of Education, University of London.

Schoon, I. and Parsons, S. (2002). Teenage aspirations for future careers and occupational outcomes. *Journal of Vocational Behavior*, **60**, no 2, 262-88.

Twist, L., Schagen, I. and Hodgson, C. (2007). *Readers and Reading: the National Report for England 2006* (PIRLS: Progress in International Reading Literacy Study). Slough: NFER.

UNESCO (2005) *Literacy and Empowerment: Background and issues paper*. From the sixth meeting of the Working Group on Education for all (EFA). UNESCO Headquarters Paris, 19-21 July, 2005.

Appendix A

The National Child Development Study (NCDS) started in 1958 and consists of surveys of individuals who are born during a specific week in that year. These individuals were and are still consistently surveyed. For example, these individuals were surveyed at ages 7, 11, and 33 (N = 11400). A follow-up survey of 10% of the sample at age 34 included literacy and numeracy assessments among other information about employment, wages and other factors of their adult life. A basic skills test was also given to a randomly selected 10% of the cohort in 1995, when they were 37 (N = 1,579).

The 1970 British Cohort Study dataset similarly selected individuals born during a particular week in 1970, who were surveyed at ages 5, 10, 16 and 26 (N = 9000). In 1991, a randomly selected subsample of 10% were surveyed at the age of 21, which also included literacy and numeracy tests and questions about their employment and earnings.

Appendix B

Classification of adult literacy and what do they mean

Level	Literacy (reading) An adult classified at this level...	Equivalent to...
Entry level 1	<ul style="list-style-type: none"> - Understands short texts with repeated language patterns on familiar topics - Can obtain information from commons signs and symbols 	National curriculum level 1
Entry level 2	<ul style="list-style-type: none"> - Understands short straightforward texts on familiar topics - Can obtain information from short documents, familiar sources and signs and symbols 	Level expected of a seven-year-old (national curriculum level 2)
Entry level 3	<ul style="list-style-type: none"> - Understands short straightforward texts on familiar topics accurately and independently - Can obtain information from everyday sources 	Level expected of an 11-year-old (national curriculum levels 3-4)
Level 1	<ul style="list-style-type: none"> - Understands short straightforward texts of varying length on a variety of topics accurately and independently - Can obtain information from different sources 	GCSE grades D-G (national curriculum level 5)
Level 2	<ul style="list-style-type: none"> - Understands a range of texts of varying complexity accurately and independently - Can obtain information of varying length and detail from different sources 	GCSE grades A-C (national curriculum levels 6-8)

These levels descriptors are taken from *The Skills for Life Survey: a national needs and impact survey of literacy, numeracy and ICT skills*, published by the Department for Education and Skills in 2003.