National Research and Development Centre
for adult literacy and numeracy

The impact of basic skills education

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Introduction

In this introduction to our workshop on low skilled adult learners I will attempt to do two things. Firstly I will address the question of why investment in adult basic skills is worthwhile. Having entered a recession, and now that 'value for money' claims about adult literacy and numeracy are again hitting the headlines, it is worth reviewing the evidence on the impact of improving adult basic skills. I use 'basic skills' to denote the literacy and numeracy required to function in modern society. I regret this: they are not simply 'skills', they are not always 'basic', and there are many differences between the two. What's more, defining the skills needed to function in modern society, 'functional skills' is deeply contested territory. However, for the sake of simplicity and with the expertise of my audience in mind I will stick with basic skills.

I will start with evidence on wages and employability, moving on to say something about the impact on educational progress, personal and social life. I will also suggest three models of basic skills which might help us to understand the projects and initiatives that we will hear described by colleagues in the subsequent presentations.

Economic evidence

There is absolutely no doubt that acquiring and improving basic skills at some point in our lives has a positive impact on wages and employability. Study after study reaches this conclusion. Examining evidence from the 2003 Skills for Life Survey, Grinyer (2006)[1] found a large effect on earnings and employability for both literacy and numeracy, a finding corroborated by a recent NRDC study[2]. What about the effects of gaining skills in adulthood? Here, the case is less conclusive, but still a growing body of evidence suggests that there is a positive economic impact. Some studies suggest that the effect is greater for numeracy,

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[1] Grinyer, J. 2006. '*Literacy, numeracy and the labour market: further analysis of the Skills for Life survey'*, DfES.

[2] De Coulon, A., Marcenaro-Gutierrez, O and Vignoles, A. 2007. *'The Value of Basic Skills in the British Labour Market'*. Centre for the Economics of Education Discussion Paper CEEDP0077, London School of Economics.

but the truth may be more nuanced. Machin (2001)[3] finds that for adults with very low basic skills, improving numeracy to at least Level 1 has a greater effect on earnings than improving literacy; but for adults who already have good basic skills the greatest wage gains stem from further increasing literacy rather than numeracy.

Drawing on data in the 1958 and 1970 British cohort studies, Bynner and Parsons (2006)[4] found strong relationships between improving basic skills and improving a range of economic statuses; they also found strong relationships between improving basic skills and improving well-being. Compared with women who had a poor grasp of literacy or numeracy at both age 21 and 34, women who had improved their literacy or numeracy by age 34 were more likely to be generally better off and to have savings and investments. Compared with men who had a poor grasp of literacy or numeracy at both age 21 and 34, men who had improved their literacy or numeracy by age 34 were more likely to own their own home, and they were less likely to be living on state benefits and to have borrowed money from a friend, family member or other source.

Men who improved their literacy skills were more likely to be in full-time employment (94% compared to 81% of those whose skills were poor at 21 and remained poor). Women whose numeracy skills had improved were more likely to be in full-time employment at age 34 (43% compared to 27% whose numeracy skills were and remained poor.

Self-perception of improvements in skills levels also appears to be significant. For men and women born in 1958 those who felt that their skills have improved tended to earn more than those who did not believe their skills had improved. Men who felt their numeracy had improved earned 3% more than those who did not and women who felt their numeracy had improved earned 11% more.

Evidence suggests that for adults with very low basic skills, improving their numeracy to at least Level 1 will have a greater effect on earnings than improving their literacy, whereas adults with better basic skills will see the greatest wage gains from increasing their literacy.

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[3] Machin, S.McIntosh, S. Vignoles, A. & Viitanen, T. 2001. *Basic skills, soft skills and labour market outcomes: secondary analysis of the National Child Development Study.* Department for Education and Skills.

[4] Bynner, J. & Parsons, S. 2006. '*New Light on Literacy and Numeracy; Results of the Literacy and Numeracy Assessment in the Age 34 Follow-up of the 1970 Cohort Study'.* London, National Research and Development Centre for adult literacy and numeracy.

Wider benefits

Bynner and Parsons also found that improved skill levels were associated with better health, increased well-being and greater civic participation. Individuals who improved their basic skills were more likely to have been married or to be married at age 34, and that people who improved their skills were more likely to be more interested in politics (men) and engaged in social or community organisations (women). Women who improved their basic skills were less likely to report symptoms of depression and less likely to report poor health or long-term health problems.

The benefits of studying

There is, however, a glaring gap in our evidence on - of all things - the contribution of formal adult provision to these economic benefits. There is no authoritative UK quantitative study that provides evidence of the positive impact of engagement in formal adult literacy and numeracy classes on learners' wages and employability. One study, indeed, comes close to suggesting that there is no impact, although the authors go out of their way to suggest that the time required for impact may be longer than the life of their project (three years); and some of the known precursors to increased employability *were* observed – growing confidence and self esteem, and an increased ability to find work.[5]

Perhaps adult provision, for all its impact on adult lives and learning, just doesn't translate into economic benefits for anyone? This is unlikely, to say the least, and made more so by the emerging findings of research outside the UK. In the US Tyler[6] has repeatedly found evidence of higher earnings for holders of the General Education Development (GED) test, a qualification not unalike some of our own adult literacy and numeracy qualifications, and in one study he found that earnings' effects are concentrated amongst the lowest skilled GED holders.

Wider evidence

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[5] Metcalf, H. and Meadows, P. 2004. *'Evaluation of the impact of basic skills learning: report on wave 1'.* London, NIESR.

[6] Tyler, J.H. 2001b. '*What do we know about the economic benefits of the GED: a synthesis of the evidence from recent research'*. Providence, RI: Brown University.
Tyler, J., 2004a , 'Basic skills and the earnings of dropouts' in *Economics of Education Review 23,* 221-235.

Positive evidence on the impact of adult basic skills courses is especially important in view of recent work by Vignoles[7] in the UK, suggesting that short work-based literacy and numeracy provision was having no economic benefit. However, the critical word in that last sentence is 'short'. As Vignoles went out of her way to stress, she was talking only about workplace courses of 30 hours or less. The National Centre for the Study of Adult Learning and Literacy (NCSALL) has led the way in helping to increase our understanding of the importance of "time on task" in adult learning. NCSALL's Steve Reder has conducted a several-year long study of the dynamics of change in literacy and numeracy over the adult life span[8]. His work shows that literacy and numeracy continue to develop among adults after they leave school. He also shows that adult provision has a differential impact on everyday literacy and numeracy practices as compared with literacy and numeracy proficiency (performance in standardised tests) - practices develop a long way in advance of proficiency.

This is of a piece with Comings' work on the time required before we can expect learners to make significant progress. In his review of US literature on students taking the GED test he suggests that 100 hours of instruction is the point at which a majority of adult students are likely to show educationally significant progress. Evidence from the UK - from Brooks for example - would suggest a more positive assertion, that a significant number of learners can be expected to make progress after about 50 hours, a finding NRDC evidence would tend to support.[9]

Approaches to basic skills education

With the presentations of colleagues in mind, I would like to pause to consider ways of describing the types of basic skills education programmes that we will hear about this afternoon.

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[7] Vignoles, A., de Coulon, A. & Marcenaro-Gutierrez, O. 2007. '*The Value of Basic Skills in the British Labour Market*'. No. CEE02-07. London: Centre for the Economics of Education, London School of Economics and Department for Education and Skills.

[8] Reder, S. 2008. The development of literacy and numeracy in adult life. In S. Reder & J. Bynner, (Eds.), *Tracking adult literacy and numeracy: Findings from longitudinal research* pp. 59-84. New York and London: Routledge.

[9] Warner, J., and Vorhaus, J., (eds)., 2008, *The Learner Study*, NRDC.
Vorhaus, J. 2006, *Four years on: NRDC 2005-6: findings and messages for policy and practice*, London, National Research and Development Centre for adult literacy and numeracy.

It is possible to understand basic skills education as being about the pursuit of individual skills. For society this has benefits in terms of improved economic productivity, reduced social exclusion; for the individual there is the prospect of access to economic prosperity. This approach has an individual focus and requires a high level of specification and control at a macro level. There is a focus on qualitative outcomes, usually qualifications, and low trust of teachers and learners. It can be described as learning for work.

Alternatively we can look at basic skills education in relation to citizenship, as a source of social capital. For society the benefits might be a healthier democracy, cultural enrichment and diversity; for the individual increased agency and voice as well as democratic participation. Here we are looking at basic skills education at a community level. As opposed to the previous model low specification is required with encouragement of diversity and a focus on participation rather than outcomes. Indeed, this is learning for participation.

We can also see basic skills education as social transformation, enabling learners to contribute to society by effecting social and political change and increasing the fight against injustice and inequality. The focus here is on empowerment of individuals and political groups. This is learning for transformation, perhaps best exemplified in the work of Freire.

Research and adult learning

What is increasingly clear from the research that has been carried out is that the impact of adult literacy and numeracy is not to be understood solely by tracing the effects that are attributable to formal provision; the effects will emerge alongside, sometimes growing out of, sometimes dependent upon, sometimes interacting with other forces and developments at work in adults' lives; their daily practices, routines at work, the learning related needs of children and other dependants, technological demands in the workplace and so on. Brandt (2001)[10] shows this in her life histories; Iadema and Scheeres (2003)[11], in their accounts of the growing textual and technological demands of the workplace; Barton and Hamilton (2000)[12], in their accounts of literacy as a social practice; and Coben (2003)[13], in her account of what numeracy *is*.

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[10] Brandt D (2001) *Literacy in American Lives*, CUP

[11] Iedema, R. and H. Scheeres. 2003. 'From doing work to talking work: Renegotiating knowing, doing, and identity,' *Applied Linguistics* 24/3: 316–37

[12] Barton, D., & Hamilton, M. (2000). Literacy practices. In D. Barton, M. Hamilton, & R. Ivanic (Eds.), *Situated literacies: Reading and writing in context* (pp. 7–15). New York: Routledge.

We continue to need a broad coalition of research activities on adult literacy and numeracy; life histories, ethnography, social practice analyses, econometrics, multi-level growth curve modeling, and, where we need decisively to settle a precise question, randomised controlled trials. But above all, we need more in the way of large scale longitudinal endeavour to understand the varying impact over time of the interacting forces and elements that shape adult lives.

Parents and children

Some of the most important recent studies show how effects of different kinds – personal, educational, social and economic – are all closely related. And that also applies across the generations, where we have convincing evidence of how parent's levels of literacy and numeracy affect the cognitive development of their children.[14]

NRDC investigated whether parents' levels of literacy and numeracy affect the cognitive development of their children. In 2004 we interviewed BCS70 cohort members aged 34 and assessed their children's' cognitive development. The impact of the parents' basic skills on children's cognitive outcomes was positive and highly significant and the relationship holds even when we allow for other factors that also influence child development, including parents' qualifications and abilities. Parents' literacy skills seem to be more significant than their numeracy skills in affecting cognitive development of children. Mothers' basic skills are more significant for daughters than for sons, and fathers' basic skills are more significant for sons than for daughters. Worryingly, the intergenerational transfer of basic skills is particularly large for parents with low level qualifications.

Conclusion

If we want to aim at a comprehensive understanding of the impact of adult literacy and numeracy we must be prepared to look at how it influences the confidence of adults and children as learners, their sociability, health and wellbeing, as well as their literacy and numeracy practices, their future wages, employment patterns and professional development. We have known for a while that it takes time for many of the effects of adult learning to appear in ways that are evident to policy makers. The impact of literacy and numeracy ramifies across the whole of an adult's life, and those ramifications develop over time,

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[13] Coben D, 2003, Adult numeracy: review of research and related literature. London: National Research and Development Centre for Adult Literacy and Numeracy, November

[14] De Coulon, A., Meschi, E., and Vignoles, A., *Parents' basic skills and their chidren's test scores*, NRDC 2008.

requiring the breadth and depth of insight that multi-disciplinary longitudinal studies are uniquely well placed to provide. If we are to win the argument for investment in basic skills education we need better evidence. However, in Member States data collection that might help us to make explicit the positive impact of adult basic skills learning is sadly lacking. NRDC is currently completing a study for the EU on the terminology used by different countries to talk about adult basic skills. The overall objective of the study is to support the Commission in monitoring and analysing the adult learning sector in Europe by improving the quality and comparability of data. We have carried out a survey of 33 European countries, 36 adult education systems covering 28 different languages.

Initial findings show that while most countries collect a wide range of information on learners, the quality and range varies greatly and most collect no data at all on the teaching workforce. However, most serious is the lack of information on the long-term impact of adult learning. If adult education is to get more policy attention and funding, the field needs to generate more evidence of its benefits to society. We see the benefit in the transformed lives and communities of the learners of which the presentations this afternoon will no doubt provide many inspiring examples.