Too Much, Too Late: Life chances and spending on education and training

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The Social Market Foundation

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Contents

Executive summary 5

Introduction 7

Chapter 1: The current pattern of spending on education and training 11

Chapter 2: A life cycle approach to education and training 17
   The benefits of an early start
   Building on the gains from early investment
   The ten year childcare strategy
   Second chances
   The government’s skills strategy
   Cost benefit analysis

Chapter 3: Rebalancing spending over the life cycle 41
   Early investment
   Higher education
   Education and training for low skilled adults
   Recommendations
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Executive summary

Efforts to widen participation in education are narrowly focused on transitions at sixteen and eighteen, such as the creation of a university Access Regulator. Such measures will not change the status quo significantly as long as the UK continues to invest nearly three times as much per student in higher education as it does per child under five. This ignores the critical role that early education and care plays in improving school attainment and forming an individual’s capacity for lifelong learning. This report argues that expanding opportunity can only be achieved by a reallocation of spending on education and training in favour of the under fives.

Given current constraints in the public finances and competing priorities for investment, a reallocation of spending would provide the additional investment needed to offer all children under five access to the affordable, high quality services that will give them the best start in school. A strong foundation for learning in the preschool years can then be built on in primary and secondary school, with the effect of improving attainment at sixteen. This will create new opportunities for young people from disadvantaged families who currently see their life chances severely limited by poor attainment in school.

Failure to invest adequate amounts early in the life cycle means that the education system will continue to fail nearly half of all young people, particularly those from disadvantaged backgrounds. Young people who leave school without 5 GCSEs at grades A*-C are forced to make up for their poor attainment the first time round through ‘second chance’ adult education and training programmes that have a dire track record. Many offer little improvement in employability or earnings.

The current pattern of spending treats each phase of education separately. A reallocation of spending in favour of
the early years emphasises the connections between different phases, recognising that doing well in one phase depends on prior attainment and, in turn, influences the likelihood of doing well in the future. In the medium term, the following changes should be made to spending on education and training to ensure that investment underpins the government’s commitment to improving life chances:

• Raise the £3000 cap on student contributions to higher education to limit annual growth in public funding. Redirect savings in government spending on universities to support high quality early years services.

• Switch investment from ineffective classroom-based training for low skilled young people and adults to more effective, lower cost work-based options, including subsidised work. Redirect savings in government spending on the low skilled to support high quality early years services.

• Add savings in public spending on higher education and the low skilled to the £1 billion earmarked for the childcare tax credit in 2007/8 to increase direct funding to childcare providers. This will reduce the parental contribution to early education and care and remove the affordability barrier for all families.

• Invest in targeted follow-on interventions during school to maintain the gains from high quality early education and care and prevent the attainment of disadvantaged children from slipping back. This will increase the percentage of sixteen year olds from disadvantaged backgrounds achieving five GCSEs at grades A*-C, making a lasting contribution to life chances.

Introduction

The government’s target for 50 percent of eighteen to 30 year olds to go on to university has become symbolic of its wider ambition to extend opportunity and improve life chances. Speaking to the 2004 Labour Party Conference, the Prime Minister described the Party’s third term mission as creating an ‘opportunity society’, describing it as follows: ‘Not a society where all succeed equally - that is utopia; but an opportunity society where all have an equal chance to succeed; that could and should be 21st century Britain under a Labour Government. Where nothing in your background, whether you’re black or white, a man or a woman, able-bodied or disabled stands in the way of what your merit and hard work can achieve.’

Using participation in higher education as a yardstick, we seem to have made good progress on extending opportunity in recent years. At the beginning of the 1990s, under 20 percent of eighteen to 30 year olds went on to university. In 2002/3 participation was up to 44 percent. On the surface of it, these figures represent a massive expansion of opportunity. In reality, rapid growth in the higher education sector in the 1990s gave the less able among the middle classes the chance of a university education but little headway was made among the lower social classes.

Growing inequality in higher education between young people from high and low socio-economic backgrounds stems from a failure to significantly narrow the attainment gap at the end of compulsory school. Close to 50 percent of sixteen year olds in the UK do not achieve 5 A*-C at GCSE, barring them from the high status academic pathway of A Levels and university. 5 percent leave school with no qualifications at all. Children from disadvantaged backgrounds are far more likely...
to be among this group. In 1995, nearly 80 percent of children with professional parents obtained five GCSE passes at grades A-C compared to around 20 percent of children with parents in unskilled manual occupations. Meanwhile, young people from lower socio-economic backgrounds who do achieve good grades often lack the motivation, aspiration and confidence to choose the academic route. One in four working class young people who achieve eight good GCSE passes do not end up in higher education.

In this report, I explore the changes that should be made to spending on education and training assuming that the government’s primary goal is to improve life chances. I argue that, despite a projected 4.4 percent real terms increase in spending on education between 2005/6 and 2007/8, investment is unlikely to lead to significant improvements in the life chances of the least well off. Attempts to widen participation are too narrowly focused on transitions at sixteen and eighteen, such as the creation of an Access Regulator (OOFA) whose remit it is to promote fair access for underrepresented groups in higher education. Such measures fail to recognise that skill formation is a dynamic process in which attainment in one phase of education is influenced by prior attainment and, in turn, influences future results. Access to upper secondary and tertiary education depends first and foremost on attainment at sixteen. This is influenced by what happens during compulsory schooling but also by development from zero to five.

Research conducted by Leon Feinstein at the Institute of Education based on a cohort of children born in Britain in 1970 identifies divergent development paths predictive of later attainment in children as young as 22 months and more clearly at 42 months. These are strongly correlated with a child’s socio-economic background. At 22 months, the cognitive attainment of children whose parents both had at least A levels was already 14 percent higher than the attainment of those whose parents had no qualifications and 7 percent higher than those in the middle educational group whose parents had some qualifications but did not both have A Levels. This early gap in attainment widens by school entry, with a clear gap between children from high and low socio-economic backgrounds present in Key Stage (KS) 1 test scores taken at seven.

The UK currently invests nearly three times as much per student in higher education as it does per child under five, ignoring the critical role that preschool plays in improving school attainment and forming an individual’s capacity for lifelong learning. If the government is serious about expanding educational opportunity and promoting life chances, it should reject the current pattern of investment in education and training driven by existing institutional structures and adopt a life cycle perspective. In the medium term, this would necessitate a rebalancing of spending over the life cycle in favour of the early years to provide all children with access to the affordable, high quality services that will give them the best start in school. A strong foundation of learning in the first five years can then be built on during schooling, with the effect of improving attainment at sixteen. This will create new opportunities for young people from disadvantaged families who currently see their life chances limited by poor attainment in school.

Failure to invest adequate amounts early in the life cycle will mean that the education system continues to fail nearly half of all young people, particularly those from disadvantaged backgrounds. Young people who leave school without 5 A*-C at GCSE see their life chances severely restricted as a consequence of poor attainment. They are forced to make up for underachievement in the first time round through ‘second chance’ adult education and training programmes that have a dire track record. Many offer little improvement in employability or earnings. Additional spending for early years should be secured through a reallocation of spending later in the life cycle to the under fives. In the medium term, the government should raise the current £3000 cap on student contributions to higher education, making the private cost of a university education more closely reflect the large benefits that accrue to graduates. This would allow universities to maintain quality without requiring a massive boost in public funding. At the same time, spending on education and training for the low skilled should be reviewed so that investment is channelled into those programmes that can demonstrate success and away from ineffective, high cost options.

The Left has always placed great hope in the promise of education to extend opportunity. Despite a generation of
comprehensive education in the UK, a child’s attainment is still strongly driven by his or her parents’ level of education and income. Continued growth in spending on education and training is unlikely to change this significantly without an accompanying shift in the pattern of spending.

Chapter 1: The current pattern of spending on education and training

The current pattern of spending on education and training, as illustrated in Figure 1, shows a strong gradient in per student funding towards older age groups. Despite an increase in spending on early education and care of 68 percent between 1996/7 and 2002/3, the UK continues to spend significantly less on under fives than at any other stage in the life cycle. The gap between per student spending on under fives and on other stages is £2152.61 for primary, £2690.78 for lower secondary, £3228.93 for upper secondary and £4843.40 for tertiary education.

Figure 1: The pattern of public spending on education over the life cycle, 2002/3

Far from promoting life chances, from a life course perspective spending on education and training is regressive.


The compulsory phase of education accounts for nearly two thirds of the fifteen years of full time education that young people in the OECD may expect to receive. But more than half of public expenditure is devoted to the post-compulsory phase, split equally between upper secondary and tertiary levels (see Figure 2).

Figure 2. Expenditure on different phases of education in OECD countries compared to number of years spent in each phase, 1998

While all benefit from investment in education and training up to sixteen, by eighteen only 60 percent of any one cohort in the UK are in education and training and only 44 percent of eighteen to thirty year olds participate in higher education. Those who do participate in post-compulsory education are more likely to be from higher socio-economic groups, as the rapid expansion of the higher education sector in the 1990s confirmed. Although the proportion of children of unskilled parents who entered higher education rose from 6 percent to 13 percent between 1991/2 and 1998/9, this was dwarfed by a 17 percent increase among children of professional parents. The proportion of undergraduates whose parents held partly skilled manual and unskilled manual occupations actually fell slightly from 10.9 percent in 1997 to 10.4 percent in 200112. Expansion has served to reinforce rather than alleviate existing intergenerational inequalities. Between 1981 and 1999, the gap in the percentage of 23 year olds in the top and bottom income quintiles with a degree grew from 14 percent to 37 percent13. As Figure 3 demonstrates, higher education remains the one area of education spending that is strongly regressive, with a greater share of public spending going to the top three income quintiles14.

Figure 3: Socio-economic distribution of education benefits in kind by phase of education 2000/1, (£ per person, 2000/01 prices rounded to nearest £10)

Given that the cost of education increases with age, we cannot rely on absolute spending per student to give us a complete picture of the balance of spending over the life course. It is, therefore, important to look at the percentage of public and private spending in different phases of education. I will look at opposite ends of the life cycle and compare the share of public and private investment in early education and care with investment in tertiary education.

In 2002/3, £3010 million of the £6685 million spent in England on early years came from parents15. This represents 45 percent of total costs. Parents with children under the age of three contribute as much as 75 percent of the total costs of childcare since no free provision is available for this age group. Choice for Parents, the Best Start for Children, the government’s ten year childcare strategy published in December 2004, states that the government intends to reduce parental contributions in the long term16. However, the additional £600 million promised in the strategy up to 2007/8 will still leave parents contributing over 40 percent of the costs of early education and care. By way of comparison, parents in Sweden contribute on average 17 percent of total costs, with no parent contributing more than 30 percent of costs17.

In contrast to parents with young children, students in
higher and further education contribute around 25 percent of the total costs of tertiary education. The current public subsidy for higher education of 75 percent will fall to around 70 percent with the introduction of top up fees of up to £3000 in 2006. In negotiating its budget for 2005/6 with the Department for Education and Skills, the Learning and Skills Council (LSC), the main funding body for further education, agreed to an increase in private contributions from 25 percent of total costs to 27.5 percent.

There are two main assumptions underpinning high levels of public subsidy for tertiary education: first, that education contributes directly to economic growth and, therefore, government investment in a more education population delivers large public benefit; second, that public subsidies serve to widen participation by lifting the financial constraints on lower income families. The first assumption is contested, most recently by Professor Alison Wolf in her provocative book, Does Education Matter? Wolf argues that there is little evidence to support the assumed causal link between levels of education and growth that informs education policy. This is not to say that levels of education have no bearing on growth. An educated population is undoubtedly one of a complex array of social characteristics that underpins a strong economy; others include an effective democratic process, well functioning markets and the rule of law. According to Wolf, the indirect contribution of education challenges the very hands on approach of government to the management and funding of tertiary education.

Given that the principal concern of this paper is improving the life chances of the least well off, the second assumption deserves more attention. High levels of public subsidy for tertiary education are thought to encourage wider participation by reducing the costs of remaining in education. Much opposition to the introduction of university top up fees in England was on the basis that they would create a barrier to access for large numbers of young people from lower income families. But students from lower socio-economic groups are underrepresented in countries with varying levels of public funding for higher education and different funding mechanisms. A participation gap similar to the one in the UK exists in Australia, the Netherlands and Germany, countries with 60 percent, 75 percent and 90 percent public funding for university education respectively. This suggests that financial constraints are one barrier, rather than the primary barrier, to widening participation.

Human capital experts James Heckman and Pedro Carneiro have looked at the gap in college enrolment in the US between black and white students. At first glance, family income appears to be significant: children from lower income, black families are 11 percent less likely to go on to college than their white counterparts. However, controlling for ability reduces the significance of family income to just half of one percent. Heckman and Carneiro conclude that only 8 percent of families in the US face short term credit constraints to their children going on to higher education.

Repeating the exercise for the UK, Dearden, McGranahan and Sianesi at the Institute for Fiscal Studies reach a similar conclusion. They look at the existence of credit constraints at sixteen when decisions about staying on in education are made and again at eighteen, at the transition to higher education. They find only a 7 percent gap in staying on rates between the top income quartile and the three lower quartiles having controlled for family and attainment factors. The gap at eighteen is smaller. They also compare the credit constraints faced by those born in 1958 with the 1970 cohort and find that financial constraints increased slightly at sixteen but not at eighteen. They conclude that policies aimed at reducing the impact of short-term financial barriers should target individuals at sixteen or earlier rather than at eighteen.

Heckman and Carneiro offer an alternative explanation for the socio-economic gap in university participation. Participation in higher education depends on success in school, but it does not follow that free or heavily subsidised university education for all students...
Chapter 2: A life cycle approach to education and training

In their work on human capital, Pedro Carneiro and James Heckman propose a new understanding of skill formation that challenges the current bias in funding towards older students. Their theory takes a life cycle perspective, recognising that, while educational institutions may be distinct entities, learning does not take place in discrete phases. Learning in one phase of the life cycle is affected by prior learning and, in turn, influences future learning. Education is a dynamic process that takes place over a life time.

Carneiro and Heckman’s theory of skill formation is based on two central concepts: plasticity and complementarity. Plasticity describes the fact that skills are more easily developed early in life because the brain is more malleable. As Shonkoff and Phillips explain in their comprehensive book on early childhood development, From Neurons to Neighbourhoods: The science of early childhood development (Washington D.C.: National Academy Press, 2000),

will significantly increase the intake from disadvantaged backgrounds and break the middle class stranglehold on higher education.

Far from promoting life chances, the current pattern of spending on education and training impedes progressive outcomes. Large public subsidies for higher education act as redistribution from low to high income households given that children from disadvantaged backgrounds are significantly less likely to participate. At the same time, high levels of parental contribution for early years services makes ability to pay a condition of access to high quality education and care for under fives. This can stand in the way of disadvantaged children accessing the developmental opportunities that could provide a strong foundation for improved attainment.

early childhood is characterised by remarkably rapid brain development that has enduring significance. This makes the first years of life critical to the formation of life long learning capabilities. Improvements in IQ do not continue beyond the first years of primary school, while positive behavioural outcomes are registered across all programmes in the teenage years and in many cases in adulthood. If this finding holds true across other studies, it is hugely significant for education and training policy, implying that far greater focus should be placed on the development of non-cognitive skills in youth and adult interventions rather than on classroom based learning.

Complementarity stems from an understanding of learning as a dynamic process. ‘Learning begets learning’, as Carneiro and Heckman describe it. Early investment increases the productivity of later investment and at the same time, maximising returns from early investment depends on sustained intervention over a lifetime. For example, the return to a year of college education in the US is 26 percent for someone in the top five percent of the distribution of maths scores and 16 percent for someone in the bottom 5 percent. This indicates that high achievers go on to benefit more from additional education because prior success increases their capacity for learning.

Plasticity and complementarity challenge the current pattern of spending on education and training. They imply that life chances would be better promoted by a stronger focus on early investment. Opportunities for early development, once missed, cannot be entirely made up. Remedial interventions for those who do not already possess adequate motivational or cognitive resources, for example young people who drop out of school or adults with poor basic skills, will be costly and of limited effectiveness. A strategy that relies on ‘second chance’ programmes will be far less efficient from the point of view of public spending and far less effective from a life chances perspective than one that invests early to improve the productivity of later investment. This is the central argument of Heckman and Carneiro’s work on skill formation: ‘The rate of return to a dollar of investment made while a person is young is higher than the rate of return for the same dollar made at a later age’ (see Figure 4).

The rest of this chapter will assess the evidence to support Carneiro and Heckman’s thesis: first, that early intervention is a more effective way of improving the life chances of the least well off than intervening at the transition to upper secondary or tertiary education; second, that trying to make up for poor achievement later in adulthood through remedial programmes is costly and does little to improve life chances.

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Cognitive and non-cognitive skills

Cognitive skills are related to knowing, thinking and perceiving. They are usually measured through assessments that have verbal and non-verbal components. An example of a cognitive skills assessment would be an intelligence test.

Non-cognitive skills generally refer to skills relating to social interaction, emotional understanding and self-control. Examples are independence, empathy and relating easily to others. There is growing recognition of the importance of non-cognitive skills for overall development and later social and economic success. The measurement of non-cognitive skills is not as advanced as for cognitive skills and usually involves rating aspects of behaviour related to the skills in question.

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24 Pedro Carneiro, Presentation made at the Social Market Foundation seminar, ‘Spending on Education and Training: Have we got the balance right?’, 19th January 2005.
25 ibid.
26 Carneiro and Heckman, op cit.
The benefits of an early start

Analysis of Key Stage 1 results reveals a significant gap in attainment at seven between children from low socio-economic status (SES) backgrounds and their peers. As children progress through school, the gap remains. Table 1 shows the gap in attainment at Key Stages 1-4 between children who are and who are not eligible for free school meals based on analysis of the National Pupil Database. At each key stage, around 10 percent fewer children eligible for free school meals achieve the expected standard compared to those not on free school meals.

Table 1: Probability of achieving attainment, disadvantaged and non-disadvantaged background

<table>
<thead>
<tr>
<th>Progression</th>
<th>Subject</th>
<th>Time period</th>
<th>% of those who achieved earlier target who achieve next target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All</td>
<td>Free school meals</td>
<td>Not free school meals</td>
</tr>
<tr>
<td>Key stage 1-2</td>
<td>English</td>
<td>1998-2002</td>
<td>68</td>
</tr>
<tr>
<td>Key stage 1-2</td>
<td>Mathematics</td>
<td>1998-2002</td>
<td>65</td>
</tr>
<tr>
<td>Key stage 2-3</td>
<td>English</td>
<td>1998-2002</td>
<td>78</td>
</tr>
<tr>
<td>Key stage 2-3</td>
<td>Mathematics</td>
<td>1998-2002</td>
<td>83</td>
</tr>
<tr>
<td>Key stage 3-4</td>
<td>5 A*-C GCSEs</td>
<td>2000-2002</td>
<td>51</td>
</tr>
</tbody>
</table>

Source: Leon Feinstein, 2004

Figure 4: Rates of return to human capital investment initially setting the investment to be equal across all ages

Source: Pedro Carneiro and James Heckman, 2002

Recent findings from the Early Childhood Longitudinal Study Kindergarten class of 1998-9 (ECLS-K) in the US show that preschool raises school readiness and lowers retention. Children who attended a pre-kindergarten programme had a 16 percent higher score on maths and reading on school entry and were 25 percent less likely to be kept down a year. The contribution that high quality early education and care can make to reducing this attainment gap by improving the school readiness of disadvantaged children is increasingly well known but it is worth rehearsing some of the most recent findings here. The significance of early investment in altering long term outcomes is a critical part of the case for a new balance of spending on education and training.
effects were larger and longer lasting for disadvantaged children. They were also larger for children who attended more hours of preschool but longer hours were associated with more behavioural problems\(^2^9\). These studies are particularly significant because they report positive findings from a cross section of preschool settings commonly found in the UK and US rather than from intensive early years programmes.

Few early years programmes in the UK have been running for long enough to assess whether they have a positive long term impact. However, a body of evidence on the long term impacts of early education and care is accumulating in the US. In November 2004, the High/Scope Perry Preschool programme released its latest evaluation. Participants in the programme are now 40 and continue to perform better across a range of outcomes than the control group. They are more likely to be in employment, have higher earnings, own their own home and have savings, and are less likely to have been arrested or sentenced\(^3^0\).

While its results are less spectacular, Head Start, a less intensive, lower cost, national programme, also demonstrates positive results for participants at age 30. Whites who attended Head Start were 20 percent more likely to complete high school and 28 percent more likely to attend college than siblings who did not. Those whose mothers had no high school education benefited most from the programme. The biggest gains for African American participants were through reductions in criminal activity. Participants were 12 percent less likely to report criminal activity than siblings who did not attend.

Gains were larger for those whose mothers only had high school education. Table 2 summarises the long term outcomes of several US early education and care programmes.

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Children who attended a pre-kindergarten programme had a 16 percent higher score on maths and reading on school entry and were 25 percent less likely to be kept down a year.

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Table 2: Long term effects of US early education and care programmes

<table>
<thead>
<tr>
<th>Programme</th>
<th>Programme description</th>
<th>Annual cost per child</th>
<th>Participant age for long term outcomes</th>
<th>Long term outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abecedarian</td>
<td>8 hours per day, 5 days a week, all year provision from birth to age 5</td>
<td>$15,000 (£7950)</td>
<td>21</td>
<td>• 40% still in school at 21 vs. 20% for non-participants</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 35% attended/attending four year college or university vs. 14% for non-participants</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 65% employment rate vs. 50% for non-participants</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Average age 19 at birth of first child vs. 17 for non-participants</td>
</tr>
<tr>
<td>Chicago Child Parent Center</td>
<td>Preschool and kindergarten for 2 to 6 years</td>
<td>$6,692 (£3545)</td>
<td>22</td>
<td>• 51.1% graduated from high school vs. 44% of non-participants</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 14.3% completed the GED vs. 10.3% of non-participants</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 16.9% faced juvenile arrest vs. 25.1% of non-participants</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 14.4% in special education by 18 vs. 24.6% of non-participants</td>
</tr>
<tr>
<td>High Scope/Perry Preschool</td>
<td>2 year, part-time preschool every weekday and weekly 90 minute home visit for 8 months a year</td>
<td>$15,166 (£8034)</td>
<td>40</td>
<td>• 65% graduated from high school vs. 45% of non-participants</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 76% employed vs. 62% of non-participants</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• $20,800 average annual earnings vs. $15,300 for non-participants</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 36% arrested 5 or more times vs. 55% of non-participants</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 28% ever sentenced vs. 52% of non-participants</td>
</tr>
<tr>
<td>Head Start</td>
<td>Publicly-funded preschool programmes</td>
<td>$5,400 (£2860)</td>
<td>30</td>
<td>• Whites 20% more likely to complete high school than non-participant siblings</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Whites whose mothers had no high school education 30% more likely to complete high school than non-participant siblings</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• African-Americans 12% less likely to report criminal activity than non-participant siblings</td>
</tr>
</tbody>
</table>

Building on the gains from early investment

Despite evidence from the US that the benefits of high quality preschool programmes can last well into adulthood, analysis of three UK cohort studies shows considerable mobility in attainment during compulsory schooling. Life chances are not irrevocably determined by the time a child is five. What happens to children between six and sixteen both in and out of school is hugely significant.

Overall, the analysis finds that low socio-economic status children are more likely to fall from positions of high achievement and less likely to rise from positions of low achievement than the average. The probability of a child from a disadvantaged background in the 1970 cohort escaping the bottom achievement quartile between six and sixteen was 35 percent compared to an average of 46 percent. Raising the attainment of low SES children through preschool provision so that they are less likely to start at the bottom of the pile does not prevent them from sliding but gives them a greater chance of remaining off the bottom rung, a position which seriously limits their life chances. Children in the lowest achievement quartile at seven have a far greater chance of not achieving a level 2 qualification, having a low income and living in a workless household as adults than their peers higher up the achievement scale.

For those who do start in the lowest achievement quartile, there is much to be gained from escaping during school. For the 1958 cohort, the odds for failure to achieve a level 2 qualification were 6.15 for those whose low quartile position persisted until eleven but 1.64 for those who escaped. Escapers did continue to have higher odds for failure than those who were in the second and third quartiles from seven. Escaping a low or losing a high quartile position after eleven was found to be less significant for longer term outcomes. For example, the odds of not achieving a level 2 qualification, having a low income or living in a workless household as an adult were similar for those who fell from a top quartile position between eleven and sixteen as for those who maintained their top position during that period. Author of the study, Leon Feinstein, concludes that a good position at eleven offers considerable protection from negative adult outcomes31.

The benefits of escaping a poor start, particularly before eleven, emphasise the importance of building on the foundations created by high quality early years services rather than seeing preschool as a lifetime’s inoculation against disadvantage. Evaluation of the school-based follow-on programme developed by the Abecedarian project in the US demonstrates complementarity between early intervention and follow-on programmes. The evaluation randomised children into four groups: those who attended preschool; those who took part in the school-based programme only; those who attended both; and a control group who took part in neither programme. Reading test scores indicate that there was a modest, long-lasting benefit from adding school-age intervention for children who participated in the preschool programme. But the school-age programme alone produced no lasting academic benefit32. The detrimental impact of poor follow on is illustrated by the experience of black children who participated in Head Start in the US. In an evaluation of children from the 1979 cohort, blacks who attended Head Start did not appear to benefit from participation, although white children benefited considerably. It is assumed that this is because blacks went on to attend poor quality primary schools that failed to build on early investment33.

The ten year childcare strategy

In the past, the welfare state was largely absent in the first five years of a child’s life. Between the last visit of the health visitor and the first day of primary school, families were left to fend for themselves. In response to research evidence demonstrating the positive contribution of early intervention to child development, there has been a dramatic turnaround in policy, starting with the National Childcare Strategy in 1998. The government’s latest commitments to families and children contained in the ten year childcare strategy include:

- nine months paid parental leave from April 2007;
- fifteen hours of free early education for all three and four years olds for 38 weeks a year by 2010;
- a childcare place from 8am to 6pm for the parents of all three to fourteen year olds who want one by 2010; and

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33 Carneiro op cit.
• a network of 3500 children’s centres across the country offering integrated services by 2010.

In a speech to the National Association of Head Teachers in May 2004, the Prime Minister described early years as ‘a new frontier for the welfare state and the education system’. But in contrast to other areas of welfare provision, relatively high levels of private contribution make ability to pay a condition of access. This can stand in the way of disadvantaged children benefiting from developmental opportunities that could provide a strong foundation for improved attainment, particularly children under three. Free, part time early education is provided for three and four year olds but there is clear evidence that disadvantaged children benefit from an earlier start. The EPPE study found that improvements in literacy, numeracy and language development were greater for children who attended three rather than two years of preschool and that duration had a greater effect than many background factors such as mother’s academic achievement and low birth weight. In January 2005, Daycare Trust surveyed 137 out of the 200 Children’s and Childcare Information Services in Great Britain to find out whether parents were reporting a lack of affordable, quality childcare in their area. 65 percent confirmed this to be a problem.

The childcare tax credit was introduced in 1999 to address the problem of affordability. Further subsidies were offered in the recent childcare strategy. From April 2006, parents working sixteen hours or more will be able to claim back 80 percent of childcare costs up to £135 for one child and £300 for two or more children. This represents a rise of 5 percent in the costs payable by government and an increase in the maximum amount that can be claimed for two or more children of £100.

Analysis conducted by Brewer, Crawford and Dearden at the Institute for Fiscal Studies demonstrates that the childcare element of the working tax credit primarily benefits middle rather than low income earners, with some higher earners eligible to claim. Figure 6 shows the distribution of benefit among families with children by income decile group. Around 7 percent of families in each of the third to seventh deciles receive the tax credit. Taking the changes announced in 2004 into account, middle income families in the fourth decile experience the largest gains to net income, followed by those in the seventh decile.

This pattern of distribution should not come as a surprise. Eligibility is linked to being in work. Fewer families in the lower deciles benefit because they do not satisfy the work criteria. For those families who do benefit, the childcare element of the working tax credit increases the gains from working, protecting families, particularly lone parent families, against a slide into poverty. But its link to work also means that the least well off miss out on support. Brewer, Crawford and Dearden conclude: ‘The childcare tax credit has almost no direct impact on child poverty as measured by the government: the vast majority of its beneficiaries are not in poverty, and many are in the top half of the income distribution of families.’

The inadvertent consequence of the tax credit failing to reach lower income earners is that childcare is weakest where it is most needed. Low levels of demand in poor areas mean provision is not viable or sustainable. 626,000 childcare places were created between 1999 and 2003 but 301,000 closed. Closures tend to be in places where the cognitive gain to children could be the greatest. Ethnic minority, lone parent and low-income households are least likely to use formal childcare. 68 per cent of Asian parents used registered childcare in 2001 compared to 87 per cent of white parents.
Alongside affordability, the quality of early education and care is also important. There is clear evidence that positive child development depends on services being high quality and that a well qualified workforce is the single biggest determinant of quality\(^a\). The UK has a poor track record in this respect. Only half of Britain’s 100,000 nursery workers have any kind of childcare related qualification. The average gross salary of a childcare worker is £7800 a year compared to £22,662 for a graduate-trained nursery or primary school teacher\(^b\).

The government has signalled its commitment to raising the qualifications of the workforce and has set aside a £125 million a year Transformation Fund to support quality improvement in 2006 and 2007. There are two questions marks hanging over the government’s approach to improving quality. First, is there enough money to do so without putting affordability at risk. Second, is subsidising the cost of childcare for parents through the childcare element of the working tax credit the best way to drive up quality.

Given the dismal state of qualifications at present, the Transformation Fund looks insufficient to support the improvements in workforce qualifications and pay necessary to raise quality across the sector. These will have to be paid for by parents, pushing up prices and creating further affordability problems. There is also evidence that parental choice is unlikely to act as a strong driver of quality improvement. A US study of the link between price and quality in formal childcare found that a fall in price caused parents to substitute quality for quantity\(^c\). While no such studies exist for the UK, the US experience suggests that subsidising parental demand through tax credits is a less effective strategy for raising quality that direct grants to providers through which government is able to exercise leverage over quality.

In its ten year strategy, the government in New Zealand set the ambitious target that everyone in the child workforce should be qualified to graduate level and chose to bear the costs of training and higher salaries itself. It recognised that leaving parents to pay for quality improvements would inevitably result in poorer parents having the worst quality care and that direct funding for providers offered government greater leverage. Early years providers receive 83 percent of their funding from government on a per child basis with a proportion linked to improvements in quality, such as staff qualifications and staff child ratios.

Early years expert Professor Gosta Esping-Andersen argues that the existence of universal, high quality, affordable preschool in Denmark and Sweden is one of the primary reasons why both countries have far better records on educational mobility than the UK. In the UK, the odds that children of poorly educated parents will make it through to upper secondary education compared to children of parents with secondary education are 2:10. In Denmark the odds are 5:10\(^d\). The government’s ten year childcare strategy puts life chances on an equal footing with labour market and work life objectives. But we should not expect the strategy to deliver Scandinavian type outcomes because it is not backed up with Scandinavian levels of investment. Current funding levels for children under five in the UK are inadequate to ensure that affordability does not become a barrier to access and do not provide sufficient funding to drive up quality to a level that ensures positive development for all children. An approach predicated on improving life chances would suggest a reduction in the level of parents’ contribution in favour of greater public funding for providers linked to strong incentives for quality improvement.

**Second chances**

Another way of considering Carneiro and Heckman’s theory of skill formation is to examine the effectiveness of education and training programmes for young people and adults who finish compulsory school poorly qualified. Is it possible to make up for poor achievement the second time round? Or, as complementarity would indicate, are second chance options costly and of limited effectiveness because participants do not have a solid foundation of learning on which to build?

At this stage, it is important to draw a distinction between privately and publicly funded training. The returns from privately provided training tend to be high because firms select the most able workers to be trained, as the dynamic nature of skill formation would suggest. A study based on the 1958 cohort shows that workers who received employer training experienced 12 percent higher wage growth. However, the impact of
the same training on workers who were not selected to receive it would be insignificant. Authors of the study Feinstein, Galindo-Rueda and Vignoles are clear that employer training only benefits a subset of workers and as such does not provide a universal policy solution to the problem of low skill. Overall, evaluations of publicly provided education and training for low skilled young people and adults in the UK make depressing reading. They illustrate unequivocally that missing out on qualifications the first time round cannot be entirely made up in adulthood, even at great cost. Gains in earnings and improved employability tend to be limited, and in some cases participants are worse off than if they had not taken part. Evaluations of the New Deal for Young People (NDYP) and adult work based learning programmes are illustrative of the general picture.

The New Deal for Young People offers unemployed eighteen to 24 year olds who have been on benefit for six months or more an intensive period of job search known as the Gateway, followed by one of four options to improve their chances of securing sustained employment: subsidised work; a year’s full time education and training; a place on an environmental taskforce; or a position as a volunteer. Participation in the different options breaks down as follows: 11 percent choose subsidised employment; 12 percent voluntary work; 18 percent choose the environmental taskforce; 32 percent go onto education and training; and 27 percent remain on the Gateway.

Despite large numbers choosing the education and training option, it has been proved to be far less effective as a pathway to permanent employment than subsidised work. The unemployment rate among those who choose subsidised employment is 12 percent lower than unemployment among those who participate in education and training. In fact, remaining in the initial job search phase of the programme is more effective than full-time education and training.

According to the National Institute for Economic and Social Research, the average annual cost per additional person of any age in employment through the NDYP is between £5000 and £8000. This is more than double the amount spent per child on preschool or compulsory schooling and in line with per student spending on higher education.

Work-based learning for adults consists of four programmes funded by the Department for Work and Pensions (DWP): Short Job Focused Training (SJFT); Longer Occupational Training (LOT); Basic Employability Training (BET); and Self Employment Provision (SEP). These programmes are targeted at over 25s who have been on Job Seekers Allowance (JSA) for at least six months. BET is aimed particularly at low skilled adults with no qualifications and no work experience. To call these programmes ‘work based’ is slightly misleading. They include a work placement but participants spend most of their time at a training provider. Evaluation of the first three schemes finds very limited evidence of success.

SJFT did accelerate participants into full time work but that was short lived. There was no effect on employment ten months later and no effect on wages. The main effect of LOT was...
The government’s skills strategy

The last year has seen the government streamline investment in post-compulsory education and training towards improving the skills of those who miss out in school. Public spending on further education is being channelled into basic, lower and intermediate skills, with the central objective being to raise the percentage of the adult population with level 2 qualifications (equivalent to five A*-C GCSEs). This is considered to be the level required for employability and access to lifelong learning opportunities. The government believes that market forces alone are insufficient to address the skills under-provision and responsibility for higher level skills that deliver large private returns to individual employers and their workforce.

### Table 3: Estimated government spending on education and training for low skilled youth and adults 2003/4, £ million*

<table>
<thead>
<tr>
<th>Programme</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning and Skills Council</td>
<td></td>
</tr>
<tr>
<td>Further education 16-18 participation programme **</td>
<td>1,197.2</td>
</tr>
<tr>
<td>Work-based learning for young people</td>
<td>565.3</td>
</tr>
<tr>
<td>Life Skills Programme</td>
<td>206.3</td>
</tr>
<tr>
<td>Level 2 implementation</td>
<td>54.2</td>
</tr>
<tr>
<td>Further education participation for adults</td>
<td>2,088.1</td>
</tr>
<tr>
<td>Work-based training for Modern Apprenticeships</td>
<td>293.9</td>
</tr>
<tr>
<td>Adult and Community Learning Programme</td>
<td>172.1</td>
</tr>
<tr>
<td>Neighbourhood learning</td>
<td>26.9</td>
</tr>
<tr>
<td>Employer Training Pilots</td>
<td>32.7</td>
</tr>
<tr>
<td>Family literacy and numeracy</td>
<td>23.1</td>
</tr>
<tr>
<td>European Social Fund</td>
<td>224.5</td>
</tr>
<tr>
<td>Department for Education and Skills</td>
<td></td>
</tr>
<tr>
<td>Prisoners’ Learning and Skills</td>
<td>115</td>
</tr>
<tr>
<td>Department for Work and Pensions</td>
<td></td>
</tr>
<tr>
<td>Working age employment programmes</td>
<td>1541</td>
</tr>
<tr>
<td>New Deal***</td>
<td>244.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>6,785.1</strong></td>
</tr>
</tbody>
</table>

*Excludes funding for information, support and capacity building

** Based on assumption that 54 percent of 16-18 year olds are studying for a level 2 qualification or below and that the costs of different qualifications are the same.

*** Based on the assumption that 32 percent of New Deal participants opt for the education and training option and that the costs of different options are the same.

and miss affair for participants. The impact of programmes in France, Eastern Germany, Switzerland and Sweden on the employment of participants compared to non-participants ranges from minus 15 percent to a positive effect of 8 percent. Overall, the study finds that adult women are most likely to gain from public sector programmes, while adult men profit less. The results from youth training are almost universally disappointing

Two large scale programmes of a similar kind in the US, Job Training Partnership Act (JTPA) Programmes and Job Start, appear to have no overall effect on earnings. Furthermore, male participants with no record of criminal activity before entering a JTPA programme experienced a significant increase in arrest rates. After 30 months on the programme, 35.8 percent of participants had been arrested compared to 18.7 percent of the control group. A review of a decade of public education and training programmes in Canada finds some positive impacts on earnings and employability but the benefits accrue primarily to those with the best labour market prospects. Those with the greatest difficulty in accessing the labour market are least likely to see long term benefits from training

Taken as a whole, the large body of UK and international evidence demonstrates poor returns from public training schemes for low skilled young people and adults. But research does offer three clear lessons as to how to maximise the effectiveness of these ‘second chance’ options.

- Qualifications at the same level offer very different returns. Channelling investment into raising the number of qualified adults should pay particular attention to the types of qualification gained.
- Work-based training offers greater improvements in employability and earnings than classroom based training. This reflects the fact that work-based training is more focused on the development of non-cognitive skills which, as we saw earlier in the chapter, remain malleable in adulthood.
- Subsidised employment offers a more effective pathway to permanent work than education and training.

Michael White and Genevieve Knight, Benchmarking the Effectiveness of NDYP: A review of European and US literature on the microeconomic effects of labour market programmes for young people (London: Policy Studies Institute, 2002).


Craig Riddell, Evidence of the Effectiveness of Youth Labour Market Programmes in Canada (Hull, Quebec: HRDC, 1997).

47 Michael White and Genevieve Knight, Benchmarking the Effectiveness of NDYP: A review of European and US literature on the microeconomic effects of labour market programmes for young people (London: Policy Studies Institute, 2002).


49 Craig Riddell, Evidence of the Effectiveness of Youth Labour Market Programmes in Canada (Hull, Quebec: HRDC, 1997).

50 There are several Public Service Agreement (PSA) targets linked to this overall goal: 60 percent of sixteen year olds to have 5 GCSEs at A*-C by 2008; increase the number of nineteen year olds with level 2 by 3 percent in 2004-6 and by 2 percent in 2006-8; reduce number of adults in the workforce without level 2 by at least 40 percent by 2010; 1 million adults to achieve level 2 in 2003-6.
In 2003/4 government spent close to £7 billion on education and training for the low skilled (see Table 3). This is likely to increase in 2005/6 as funding for the Learning and Skills Council is streamlined towards the government’s commitments on basic, lower and intermediate skills.

Several programmes are being used to drive up the number of people holding level 2 qualifications. These include:

- An entitlement to free tuition for all adults studying for their first level 2 qualification beginning in 2006/7
- Adult Learning Grants of £30 per week for adults studying for their first level 2 qualification, or level 3 if between nineteen and 30, starting in 2006/7
- A National Employer Training Programme providing free or heavily subsidised training up to level 2 with wage compensation for employers to run nation-wide from 2006/7
- Claimants on Job Seekers Allowance, Income Support and Incapacity Benefit to be entitled to free full-time training where this is judged by their personal advisor to be the best way of helping them into work.

Despite the government’s stated commitment to evidence-based policymaking and ‘what works’, these policies disregard the three lessons from research presented earlier. This is in spite of overwhelming consensus among academics in the UK and internationally as to how to make investment in the low skilled more effective.

Under the new level 2 entitlement, 8 million adults will be offered free tuition as part of a PSA target to reduce the number of adults in the workforce without level 2 by at least 40 percent by 2010. The target is most likely to be met by increases in the number of adults holding an NVQ2 as this is the most widely held level 2 qualification obtained in post-compulsory education. For example, 90 percent of participants in the first year of the Employer Training Pilots were studying for an NVQ2. Investment could be directed towards other level 2 qualifications that offer real improvements in earnings and employability rather than the NVQ2 that delivers little individual return. But the target emphasises increasing the number of adults with qualifications rather than improving outcomes for the low skilled.

Evidence of the benefits of workplace over classroom-based training for adults without basic and lower level skills is compelling but this is not reflected in the government’s recent initiatives. The Adult Learning Grant only applies to full-time learning and cannot be used for workplace learning. Similarly, the new entitlements to free tuition for benefit claimants only apply to full time learning and training. Participants on DWP work based learning programmes are offered a subsidised job if they finish the programme without securing a permanent job. The success of the subsidised employment option in the New Deal and the poor performance of work based learning programmes indicates that moving straight into subsidised employment would be a more effective option for most participants.

The government is targeting investment at level 2 in the belief that this provides a platform for accessing further learning opportunities, particularly employer-provided training. But this ignores strong evidence of limited progression from level 2 to 3. Analysis conducted by a three-year, academic review of education and training for fourteen to nineteen year olds in the UK finds that, among those studying for a level 2 vocational qualification in the first year of post-compulsory education, 41 percent progressed to level 3 in the second post compulsory year. By the third year, only 28 per cent had either gained the level 3 qualification or were still studying for it. Increasing the percentage of the adult population with level 2 skills offers limited guarantee of ongoing skill development without greater incentives for progression.
Early years programmes that target disadvantaged groups show consistently positive results lasting into adulthood, while second chance programmes aimed at the same population as adults show limited, and in some cases negative, effects.

Significant government investment is directed towards improving the paper qualifications of low skilled young people and adults. By ignoring the research evidence on how to maximise returns from programmes targeted at the low skilled, much of this investment does little to improve life chances.

Cost benefit analysis

Early years programmes that target disadvantaged groups show consistently positive results lasting into adulthood, while second chance programmes aimed at the same population as adults show limited, and in some cases negative, effects. The central argument of Carneiro and Heckman’s work on skill formation is that the rate of return to a dollar of investment made when a person is young is higher than the rate of return for the same dollar made when the person is older. Investing earlier is not only a more effective way of promoting life chances, it is also a more cost efficient way of doing so. The number of available cost benefit studies of programmes that target disadvantaged groups at different points in the life cycle is limited and comparison between studies is not always accurate due to different methods of accounting for costs and benefits. Nevertheless, this section provides a snapshot of the costs and benefits of intervening at different points in the life cycle.

Studies of early years programmes tend to report high cost benefit ratios, in excess of 3:1. Figure 7 shows the cost benefit ratios for several programmes in the US. The importance of taking a cost benefit perspective is illustrated by the fact that the High/Scope Perry Preschool costs twice as much per child as the Chicago Child Parent Center but does not deliver benefits to match.

Cost benefit studies of programmes targeted at disadvantaged teenagers also show relatively high ratios. Many of these programmes have a good track record of success in improving school attainment and subsequent employment and earnings. Successful programmes share two important features. First, they rely on an innovative mix of approaches including mentoring, volunteering and tutoring. Second, young people join before they drop out of school. As the poor record on youth and adult training outlined earlier in this chapter demonstrates, trying to pick people up once they have dropped out of the system and offer them a ‘second chance’ is far less effective and far more costly than interventions that seek to keep them within the system.

Table 4 presents the results from several US programmes targeted at disadvantaged teenagers at risk of dropping out of school. One of these programmes, the Quantum Opportunities Program, has been found to have a cost benefit ratio of 3.68:1 if participants go on to receive a degree and 3.04:1 if they do not.

Investing earlier is not only a more effective way of promoting life chances, it is also a more cost efficient way of doing so.
Cost benefit ratios for a range of youth and adult training programmes are shown in Table 5 below. As Figure 8 illustrates, cost benefit ratios for these ‘second chance’ options are consistently less favourable than for earlier interventions. There is a trade off in spending on education and training between efficiency and equity. Over the life cycle, this trade off increases. Investment in older, low skilled workers can be justified on equity grounds but is hugely inefficient. Investing early to raise attainment and reduce the number of low skilled adults in the workforce is a more effective strategy for improving life chances than playing catch up in adulthood. It is also a more efficient use of limited public resources.

### Table 5: Cost benefit of youth and adult training programmes

<table>
<thead>
<tr>
<th>Programme</th>
<th>Activities</th>
<th>Cost ($)</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantum Opportunities Program</td>
<td>4 year programme for disadvantaged youth, including educational activities, personal development, community service and adult mentoring. Small financial awards offered for participation and matching amounts paid into account for post-programme education/training</td>
<td>Treatment vs. control group:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>High school graduation:</td>
<td>63% vs. 42%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>School drop out: 23% vs. 50%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post secondary participation: 42% vs. 16%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 year college attendance: 18% vs. 5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 year college attendance: 19% vs. 9%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teenage parenthood: 24% vs. 38%</td>
<td></td>
</tr>
<tr>
<td>Teen Outreach Program</td>
<td>9 month programme including classroom based group discussion and community service</td>
<td>Measured against comparison group:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>11% lower rate of course failure in school</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>14% lower rate of school suspension</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>33% lower rate of pregnancy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>60% lower rate of school dropout</td>
<td></td>
</tr>
<tr>
<td>I Have a Dream</td>
<td>Participants from inner city schools (often non-white and from low income families). Wealthy families adopt whole class of 6th grade pupils until high school graduation. Participants are offered last dollar scholarships for college as well as services eg. tutoring, volunteering, counselling</td>
<td>Treatment vs. control group:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>High school graduation: 71% vs. 37%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enrolment in 2 or 4 year college: 63% vs. 20%</td>
<td></td>
</tr>
<tr>
<td>Big Brothers Big Sisters</td>
<td>Mentoring programme for young people, 3-4 hours 3 times a week for at least a year. 90% of participants are from single parent households, 60% minority, 60% boys and many are poor</td>
<td>Measured against control group:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>46% less likely to initiate drug use</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>27% less likely to initiate alcohol use</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/3 less likely to hit someone</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skipped half as many days of school and skipped fewer classes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Modest gains on grade point average</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in relationship with parents and peers</td>
<td></td>
</tr>
</tbody>
</table>

### Programme type | Target participant | Evaluation date | Cost benefit ratio |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Corps (USA)</td>
<td>Disadvantaged young people</td>
<td>1980/2001</td>
<td>2.02:1</td>
</tr>
<tr>
<td>JTPA Programmes (USA)</td>
<td>Adult women</td>
<td>1994</td>
<td>3.4:1</td>
</tr>
<tr>
<td>I Have a Dream</td>
<td>Male youth</td>
<td>1994</td>
<td>1.95:1</td>
</tr>
<tr>
<td>New Brunswick Job Corps (Canada)</td>
<td>Long term unemployed adults over 50 with low educational attainment and low household income</td>
<td>1994</td>
<td>Slightly less than 1:1 (may break even if intangible benefits are included eg. greater confidence, better worker)</td>
</tr>
</tbody>
</table>

Section 3: Rebalancing spending over the life cycle

From a life chances perspective, the turning point in the education life cycle in the UK occurs at sixteen. The level of attainment reached at sixteen to a large extent determines future educational pathways. This is the point at which sorting occurs. On the basis of their GCSE results, young people are sorted into academic and vocational routes. Vocational students are drawn from those with scores in the middle and bottom third of GCSE results. GCSE performance is strongly correlated with socio-economic background, with the result that children from lower socio-economic groups are more likely to pursue vocational routes post-sixteen.

We have struggled and so far failed to create high status vocational education in the UK. The government’s decision to maintain A Levels in its recent 14-19 White Paper will do nothing to change this. Choosing a vocational route can limit opportunity for many young people. Retention and attainment are lower on vocational than academic courses at the same level. Poor rates of completion on the Modern Apprenticeship are a prime example. Only 23 percent of those who leave the Foundation Modern Apprenticeship complete the whole framework and 36 percent acquire the NVQ2 part of the framework. At the Advanced level, 33 percent leave with the full framework qualification and 43 percent with an NVQ3. The returns to vocational education are also lower than the returns to academic education at the same level, even taking into consideration the extra time taken to complete academic studies. To a certain extent, this is due to poor standards in parts of the further education sector. In its 2003/4 annual report, Ofsted criticised the sector for its slow pace of improve-
compulsory schooling and widening participation in tertiary education must begin in the preschool years. Failing to tackle this not only blights the life chances of the current generation, it leaves families trapped in an intergenerational cycle of under-achievement and disadvantage.

The current pattern of spending on education and training is based on false assumptions about how investment can improve the life chances of children from disadvantaged backgrounds:

- The current system underestimates the extent to which child development from zero to five influences later attainment. As a result, it under-invests in the preschool period, particularly in children under three.
- The current system overemphasises the importance of financial constraints as a barrier to higher education. As a result, it offers universities a high public subsidy and fails to adequately address more significant barriers to participation caused by poor attainment, a lack of information and limited aspirations.
- The current system fails to recognise that most paper qualifications gained in adulthood make little contribution to life chances and that subsidised employment is a far better route into long term employment for low skilled adults. As a result, effort and investment are wasted on ‘second chance’ education and training programmes.

These assumptions critically misunderstand the theory of skill formation which is based on a life cycle approach to education and training rather than one which treats education as a series of distinct phases and institutions. In this section, I argue that a different balance of investment over the life course is required in the medium term if we are going to improve the position of children from disadvantaged backgrounds by age sixteen and give them the chance to participate. There are two parts to rebalancing spending: increasing investment in the early years and reducing spending in adulthood. I will consider these in turn.

**Early investment**

As we saw in Chapter 2, current levels of spending on children under five are inadequate to provide all families with accessible,
affordable, high quality education and care – the stated goal of the ten year childcare strategy. A critical part of rebalancing spending would be to secure additional investment for early years to capitalise on the potential of the preschool period as a foundation for future learning and attainment.

In October 2004, the Social Market Foundation (SMF) published a long term vision for early education and care that had the explicit aim of promoting the life chances of the least well off. The vision argues that life chances are being undermined by the lack of meaningful choices for disadvantaged parents and their children and proposes a policy package for 2020 designed to extend choice to all families (see box: Early education and care 2020).

### Early education and care 2020

By 2020, all parents and children would have the following entitlements to early education and care:

- **Twelve months parental leave to be shared freely between parents.** The first six weeks would be paid at 90 per cent of earnings and the remaining 46 weeks would be paid at the national minimum wage.

- **Parents of children between one and two years old would be entitled to claim home care allowance (paid at half the national minimum wage) to remain at home or to combine home based care with part time work.**

- **All two, three and four year olds would be entitled to four hours of free early years education and care a day for 48 weeks of the year.**

- **Children between one and five years old would be entitled to a subsidised childcare place in a group setting or in family daycare for up to 50 hours a week. Parental contributions to the costs of childcare would be related to income.**

These entitlements would be supported by the following improvements:

- **A significant improvement in the qualification levels of the early years workforce** from 2004 levels accompanied by a substantial pay increase. 60 per of the work force would be qualified to graduate level and 40 per cent to at least National Vocational Qualification 3.

- **A significant increase in funding for parenting support and management programmes.**

- **A funding system for children’s centres that channels extra resources to the areas of greatest need to support additional service provision.**

The policy package outlined above differs from the proposals contained in the ten year strategy in two ways that are particularly significant from a life chances perspective. First, parents do not contribute more than 30 per cent on average to the total costs of childcare, with individual contributions being related to parental income. The mainstay of funding comes from government grants paid on a per child basis directly to providers. This eliminates the affordability barrier that continues to limit the amount of childcare lower income earners are able to access.

Second, the proposals are underpinned by major improvement in the qualifications of the childcare workforce. By 2020, we envisage 60 percent of staff being qualified to graduate level and 40 percent to level 3 in recognition of the central importance of qualified staff to high quality provision. The costs of staff improvement are borne largely by government and not by parents to ensure that low income parents do not receive the lowest quality services.

The Social Market Foundation and Daycare Trust commissioned PricewaterhouseCoopers (PwC) to evaluate the costs and benefits of this vision. PwC estimated that implementing the vision would require an additional £21 billion in 2020 over and above government spending on early education and care in 2004/5. This is equivalent to 1.8 percent of GDP. Table 6 outlines the cost of each element of the policy package. The package would also entail economic benefits in the region of £12 billion to £24 billion at 2004/5 values. If important social benefits that are more difficult to quantify were factored in, for example improved health, reduced drug taking and...
lower incidence of criminal behaviour, PwC concluded that the benefits could start to outweigh the costs\textsuperscript{62}.

**Table 6: Estimated costs of vision for early years provision 2020**

<table>
<thead>
<tr>
<th>Cost to government</th>
<th>Parental contribution</th>
<th>Total cost</th>
<th>£ billion at 2004/5 GDP values</th>
</tr>
</thead>
<tbody>
<tr>
<td>(% GDP)</td>
<td>(% GDP)</td>
<td>(% GDP)</td>
<td></td>
</tr>
<tr>
<td>12 months parental leave</td>
<td>0.5</td>
<td>-</td>
<td>0.5</td>
</tr>
<tr>
<td>Home care allowance for 1 year olds</td>
<td>0.1</td>
<td>-</td>
<td>0.1</td>
</tr>
<tr>
<td>Subsidised care alternative for 1 year olds</td>
<td>0.3</td>
<td>0.1</td>
<td>0.4</td>
</tr>
<tr>
<td>20 hours pw free education for 2-4 year olds</td>
<td>0.6</td>
<td>-</td>
<td>0.6</td>
</tr>
<tr>
<td>Wrap around care for 2-4 year olds</td>
<td>0.4</td>
<td>0.2</td>
<td>0.6</td>
</tr>
<tr>
<td>Holiday/after-school care for 5-14 year olds</td>
<td>0.3</td>
<td>0.1</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Total costs</strong></td>
<td><strong>2.2</strong></td>
<td><strong>0.4</strong></td>
<td><strong>2.6</strong></td>
</tr>
</tbody>
</table>

Source: PwC, 2004

Figure 9 contrasts the build up of costs envisaged under the SMF’s vision for early years with spending commitments outlined in the ten year childcare strategy. It highlights a gap of 0.7 percent of GDP between proposed government spending on early years in 2007/8 and the 1.3 percent of GDP required by the SMF vision in 2010/11.

**Figure 9: Build-up of costs over time: SMF vision vs 10 year childcare strategy**

![Figure 9](image)

Source: John Hawksworth, Presentation given at Daycare Trust seminar, 7 February 2005.

Given current constraints in the public finances, competing priorities for public spending and the political constraints around raising income tax, it is important to consider where in the life cycle the additional investment needed for early years can be found. From the previous discussion there are two areas where current levels of funding are at odds with life chance objectives: higher education and education and training for low skilled young people and adults. In the medium term, investment should be redirected away from these areas in favour of the under fives.

**Higher education**

The passing of the Higher Education Act 2004 quelled an angry debate about university funding in the UK. But the settlement agreed in 2004 is unlikely to stick for long. Already in January 2005, the Vice Chancellor of the University of Oxford announced that the university would be increasing its intake of foreign students at the expense of home students to ease financial pressure. The annual per student cost of an undergraduate education at Oxford is £18,600. The university receives £9500 from government and from 2006 will also get a maximum fee of £3000 per student per year\textsuperscript{63}. The introduction of variable tuition fees is expected to raise £1 billion annually\textsuperscript{64}. This will go some way to easing current financial pressure but falls short of bridging the funding gap. In its submission to the 2004 Comprehensive Spending Review, Universities UK called for an additional £8.8 billion over the three year period from 2005/6 to 2007/8 but received only £2 billion from the government\textsuperscript{65}.

As discussed in Chapter 1, it is a common misconception that financial constraints are the single biggest barrier to widening participation in higher education. Poor prior attainment among children from disadvantaged backgrounds is a far bigger problem. Experts such as Professor Nick Barr at the London School of Economics argue that the government was right to impose a cap on private contributions rather than opting for ‘big bang’ liberalisation of higher education as this gives universities and students time to adjust to the new arrangements. However, the current ceiling of £3000 a year per student looks untenable in the medium term.

Without additional funding, it will become increasingly difficult for universities to maintain the quality of teaching and research across the full range of subject areas that secures their position in an increasingly global market for higher education. The President of Trinity College, Oxford, Michael Beloff, has...
suggested that Oxford University could reject state funding and go private within fifteen years to escape government pressure to recruit more students from poorer backgrounds and to permit the charging of fees higher than the planned ceiling. This would allow the university to invest similar amounts per student as global competitors. While the UK currently invests £4800 per student, state universities in the US spend £7500 and private universities £11,000.

The appropriate response to this situation, I would suggest, is not to keep increasing public funding for higher education to plug the gap. Maintaining quality in a rapidly expanding university sector will require constant increases in public funding, squeezing investment in other areas where it could produce significant improvements in life chances, notably early years. By 2005/6, spending on higher education will be almost £10 billion, a year on year real terms increase of 6 percent from 2002/3. Furthermore, it is middle class children who benefit most from additional investment directed towards higher education. A more equitable solution would be to increase private contributions to the costs of higher education beyond the current ceiling of £3000.

Increasing the private contribution to higher education would bring private costs more closely in line with private returns from a university degree. While there is disagreement over the public benefit of university education, there is no doubt that individuals benefit enormously. According to the National Institute for Economic and Social Research, graduates earn 50 percent more than non-graduates and over a lifetime, they earn £120,000 more than someone who goes out to work with 2 A Levels. As Figure 10 shows, graduates across OECD countries earn a significant wage premium over those with only lower or upper secondary education.

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**Figure 10: Relative earnings of male full time workers by level of educational attainment**

Percentage deviation from mean earnings at upper secondary level

Of course, fees for higher education can be levied in different ways with vastly different consequences for participation and equity. The system of deferred variable fees and income-contingent loans that will be introduced in 2006 should support equity by keeping university free at the point of use, releasing students from dependence on parental support and credit and linking repayments to graduate earnings.

Current levels of public funding for higher education are insufficient to maintain the quality of the sector. At the same time, they play a limited role in widening access that would be better tackled by investing earlier in the life cycle. It may not be possible to reduce public spending on higher education much below current levels without compromising quality and driving universities into the private sector. But increasing private contributions to the costs of higher education will mean that, in the medium term, public spending will stabilise, saving billions in year on year increases in government funding. Without further research, it is not possible to determine exactly how high the private contribution to university should be or whether the public subsidy could be frozen at current levels. But it is possible to conclude that the balance between public and private finance should be more equal in the medium term, freeing up resources for spending earlier on.
Education and training for low skilled adults

There are two main criticisms that can be levelled at current spending on education and training for low skilled young people and adults. First, the education system as a whole places too much emphasis on these ‘second chance’ options despite overwhelming evidence that they contribute comparatively little to improving life chances. The system systematically fails nearly half of all young people the first time round and then invests to catch up later. This is fundamentally at odds with the goal of improving the life chances of the least well off. Second, while it will always be necessary and desirable to offer second chances, a significant proportion of the investment currently made in the low skilled is directed towards ineffective programmes despite robust evidence of what works in this area.

The government currently spends nearly £7 billion on programmes for the low skilled. From evaluation evidence, we know that many of these programmes have poor records and offer little in the way of life chance improvements, for example:

- Adult work based learning programmes offer little return to employability or earnings.
- NVQ2 qualifications obtained through classroom education or government training offer poor or negative returns with the exception of women working in health or social care.
- The record of retention and attainment on Modern Apprenticeships is dismal.
- The education and training and voluntary work options on the New Deal are far less effective than the subsidised employment option as a route to a permanent job.

While it is difficult to identify exactly what percentage of the £7 billion spent on the low skilled is wasted because individual programme options are not accounted for separately, the figure most likely runs into billions. Many programmes could be stopped overnight with few repercussions.

The findings of evaluations conducted across the OECD agree that subsidised work is a far more effective means of securing permanent employment for low skilled workers than education and training. Leaving poorly qualified adults stuck in a classroom for a year can often damage their employment prospects more than doing nothing at all. A study comparing the costs of different types of employment programme in Sweden shows that paying wage subsidies to employers costs the government significantly less than any other type of training programme. A grant of 50 percent of labour costs up to a fixed amount costs on average £398 a month per participant, compared to £929 a month per participant for labour market training, £607 for a work experience placement and £600 for a temporary job. While there are problems of displacement with extending subsidised employment, too much is currently being spent on classroom-based training that offers little return.

Replacing ineffective programmes aimed at the low skilled with wage subsidisation programmes will improve outcomes for those who need routes back into employment in adulthood. It will also release money to be invested more effectively earlier in the life course. In the medium term, this should start to have a positive feedback effect on spending on education and training programmes for the low skilled. As more children benefit from high levels of investment in their first five years and continue to receive support through primary and secondary school, attainment at sixteen among young people from low socio-economic backgrounds should improve, reducing the numbers forced to try and catch up in adulthood and limiting growth in public spending in this area.

Recommendations

The current pattern of spending on education and training does not match the returns to spending illustrated in Figure 4. Investment over the life course starts to increase just as the returns to investment start to decrease. A shift in spending in favour of early years would improve the equity and efficiency of spending on education and training.

Changing current patterns of spending cannot happen overnight. Today’s low skilled workers cannot be abandoned to ensure that future generations will reach higher levels of attainment. A sudden hike in the level of tuition fees is likely to have negative consequences for student indebtedness and for participation among underrepresented groups. A reallocation of spending needs to take place over the medium term to minimise disruption, with short term objectives paving the way for...
more radical change.

In the short term, the priority is to significantly improve the effectiveness of investment in programmes for low skilled young people and adults. This in itself will reduce spending on further education that could be invested in the early years. I propose the following changes to current policies to reflect research evidence on maximising the effectiveness of programmes for the low skilled:

- Extend eligibility of the Adult Learning Grant to workplace training
- Ensure that adults entitled to free tuition for their first level 2 qualification are offered adequate choice between different qualifications and are not only directed towards NVQ2.
- Scrap the full time education and training option in the New Deal and direct participants towards subsidised work supported by education and training.
- Offer JSA, Income Support and Incapacity Benefit claimants subsidised employment supported by education and training instead of full time training programmes.
- Develop incentives to ensure effective progression from level 2 to higher qualifications

In the medium term, the following changes to the current pattern of spending should be made to ensure that investment in education and training underpins the government’s commitment to improving life chances and extending opportunity:

- Raise the £3000 cap on student contributions to higher education to limit annual growth in public funding. Redirect savings in government spending on universities to support high quality early years services.
- Switch investment from ineffective classroom-based training for low skilled young people and adults to more effective, lower cost work-based options, including subsidised work. Redirect savings in government spending on the low skilled to support high quality early years services.
- Add savings in public spending on higher education and the low skilled to the £1 billion earmarked for the childcare tax credit in 2007/8 to increase direct funding to childcare providers. This will reduce the parental contribution to early education and care and remove the affordability barrier for all families.

- Invest in targeted follow-on interventions during school to maintain the gains from high quality early education and care and prevent the attainment of disadvantaged children from slipping back. This will increase the percentage of sixteen year olds from disadvantaged backgrounds achieving five GCSEs at grades A*-C, making a lasting contribution to life chances.

The conclusion that has been drawn from the failure of comprehensive education to erode the influence of birth over destination is that government neglected a critical part of the life cycle – the early years. The hope is that extension of the welfare state to include services for families and children under five will bring about the kind of expansion of opportunity that compulsory education failed to deliver. Evidence of the effects of high quality early years provision on children’s cognitive, social and emotional development suggests that this hope is not misplaced, particularly if follow-on initiatives are put in place. But realising the potential of early years to improve the life chances of the least well off depends on securing adequate investment to create the accessible, affordable, high quality early years services that are the objective of the ten year childcare strategy. Maintaining the status quo in funding for education and training will almost certainly see the life chance objectives of the strategy and the government’s broader ambitions in this area go unmet. If the government is serious about its commitment to improving life chances, then a rebalancing of spending over the medium term in favour of the under fives will be essential.
SMF publications

Culture Or Anarchy? The future of public service broadcasting.
Ed. Philip Collins
This set of essays captures in a single volume the principal arguments in defence of public service broadcasting, combining it with a detailed history of the concept both in the UK and abroad. Contributors include Philip Collins, Professor Ivor Gaber, David Leam, Lord David Lipsey and Carole Tongue.
June 2002, £20.00

A Social Market In Housing
Tom Startup
This pamphlet offers a detailed and wide-ranging critique of the troubled UK housing market and lays out a set of policy proposals designed to bring about a more equitable and efficient system. Among the central planks of the suggested reform programme are liberalisation of the planning regime, increased taxes on home-owners and steps to allow Registered Social Landlords to compete more easily with their counterparts in the private sector.
June 2003, £15.00

A Modern Agenda For Prosperity And Social Reform: Opportunity, Security, Prosperity
Rt Hon. Gordon Brown MP
In a speech to the SMF, Chancellor of The Exchequer Gordon Brown sets out his view of the proper relationship between the state and markets. He argues that, in order to achieve the twin goals encouraging enterprise and promoting fairness, it is necessary to harness the dynamism of markets, whilst appreciating that they still have limitations.
January 2004, £10.00

The New Regulatory Agenda
Dieter Helm
This report argues that one of the key reasons why regulation often fails to achieve its objectives is a democratic deficit which has developed following the devolution of excessive decision-making power to regulators. To effect improvements, it is suggested that policy and delivery should be more clearly separated. This in turn requires broad reforms both to institutional structures and regulatory methods.
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A 2020 vision for early years: extending choice; improving life chances
Vidhya Alakeson
This paper presents a vision for early years policy and provision in 2020 that has the life chances of disadvantaged children and their families as its primary focus. It addresses parental leave, early education and care, parental support and the role of children’s centres, and explores how each component of the vision contributes to improved life chances. The paper concludes that life chances are being undermined by the lack of meaningful choices for disadvantaged parents and their children.
October 2004, £5.00

The BBC And Public Value
Gavyn Davies OBE with commentary by Lord David Lipsey
In this pamphlet Gavyn Davies argues that even in a multi-channel age, Reithian-style public service broadcasting justifies the continued existence of the BBC in its current form. In this pamphlet he develops the most thoroughly argued case to date for the maintenance of the BBC on economic, rather than just on social and cultural grounds, and David Lipsey provides a valuable commentary on his essay, challenging his arguments at several points.
November 2004, £10.00

Choice: The Evidence
Jonathan Williams and Ann Rossiter
Choice has become an increasingly popular political buzz-word in recent years but debates have often lacked rigorous analysis based on empirical evidence from previous attempts to introduce choice into public services. This extensive volume seeks to plug that gap and brings together findings from a range of studies in Europe, Scandinavia and the Americas in order to analyse the conditions under which choice-based systems are likely to succeed.
December 2004, £25.00
Despite unprecedented levels of investment, education has failed to break the link between attainment and family background. *Too Much, Too Late* argues that this will not change significantly as long as the pattern of spending on education and training continues to offer a far greater public subsidy to tertiary than preschool education. Based on strong evidence of the contribution of early education to improvements in school attainment, the report proposes a reallocation of spending in the medium term in favour of children under five.

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