INVESTING FOR IMPACT

A report on the returns to investments in educational programmes based on work by The Boston Consulting Group

Introduction by Sir Peter Lampl

Since the Sutton Trust was established ten years ago, our key objective has been the promotion of social mobility, by providing educational opportunities for those from non-privileged backgrounds.

We seek to do this by running programmes and conducting research across the educational spectrum, from early years through primary and secondary schooling, to further and higher education and beyond.

We believe strongly that only with the help of rigorous evaluation can we ensure that educational programmes are as effective as they can be. It is a standard we apply to others in our analysis of, for example, school standards and university access. It is also how we measure the impact of our own programmes; we want to be sure that every pound we invest is helping to extend opportunities and is having maximum impact.

We therefore asked the Boston Consulting Group to assess the difference made by our various programmes and this report presents their findings.

For a long time I have thought intuitively that our programmes have very high returns and this has now been confirmed by the Boston Consulting Group.
They found that all our programmes have net returns with an overall present value return to individuals of £15 for every £1 invested. This does not include the value of the additional benefits to society, which are considerable.

What is most interesting is the extent to which some very well targeted interventions can make a huge difference – up to thirty times the investment in the case of one particular programme targeted at potential Cambridge maths students. The highest return interventions have a very clear focus on individuals with whom it is possible to achieve a significant impact; and work best at key transitional points in a young person's life.

We have more young people going into higher education than ever before, and the numbers staying in school or college after 16 have been rising too. So, it matters that those from the poorest backgrounds have the same chance to benefit from expanding opportunities as their better off contemporaries, based on their talents and interests rather than their background.

This report will help the Sutton Trust to target its interventions in the future, as we look forward to the next ten years. We will look at how to improve the returns on our programmes – by improving their design, increasing their content or sharpening their targeting - and the degree to which we can lever in additional funds from both public and private sources.

But the Boston Consulting Group analysis also holds lessons for other charitable foundations and for government as it shows that widening access matters not only for social equity, but generates very attractive economic returns as well.

The Sutton Trust will continue our mission to advance and foster talent, so that young people have a more level playing field, regardless of their family background or where they went to school. This report will help us to maximise our impact on their lives.

I am very grateful to the Boston Consulting Group for producing this important piece of work *pro bono*. They have made a great contribution to improving the effectiveness of educational interventions.

Sir Peter Lampl
Chairman
The Sutton Trust
October 2007

Summary and key findings

- The Boston Consulting Group (BCG) used a classic corporate portfolio analysis, a model common in business, to analyse the returns to individuals of participating in nine Sutton Trust programmes, with three non-Trust programmes used for comparison.
- They looked at programmes aimed at pre-school, school age and post-school children and young people, and assessed the financial benefit for participants on each programme as a whole.
- They quantified this investment in education as providing, on average, over an individual's lifetime, a present value real return of £15 for every £1 invested.
- This figure does not include the wider benefits – such as improved health, happiness and participation in the community – which are considerable.
- There is a wide variation between types of programme in the level of return from £3 for each £1 invested to £31 per £1: low cost, well targeted programmes - such as the STEP programme[1] to prepare students for Cambridge exams or the Chelmsford First in the Family project to help students applying to university - bring the highest returns.
- Investment works best when it is targeted at key milestones in a child's life: pre-school before starting primary education; transition from primary to secondary school; moving from school or college to higher education.
- Educational investment is better deployed when it is focused on targeted individuals, such as those at highest risk of falling behind in primary school or bright pupils who may not fulfil their potential. High impact outcomes – a place at university, for example – mean higher returns.
- Existing pre-university programmes, such as summer schools, could be even more effective with more content to prepare students for applying to higher education, such as lectures and other learning activities.
- The Sutton Trust will consider the implications of the research in deciding which programmes to extend and which new programmes to support in the future.

[1] STEP stands for Sixth Term Examination Papers which applicants sit after A-levels.

- The model used here could be of great benefit to other charities and to the government in targeting its work and comparing different types of project.

CHAPTER 1: THE PROGRAMMES

The Boston Consulting Group looked in detail at a dozen schemes, to assess the extent to which Sutton Trust programmes deliver returns on the investment made. Most of the programmes receive financial support from the Sutton Trust, often with other co-sponsors. Three programmes were used to provide comparative data.

Early Years

PEEP drop in centre: A drop in centre in Oxford, 'Room to Play' is designed to help parents assist in their children's learning and literacy. Based in a former sweet shop in a busy shopping centre, the centre is co-funded by the Garfield Weston Foundation. It is run by Peers Early Years Partnership (PEEP), which reaches parents who would initially be reluctant to access more formal early years' services. It is planned to replicate the Oxford model in London.

Perry's Pre-School project: An American programme from the 1960s which comprised daily classes and weekly home visits for 3 and 4 year-olds identified as being at risk of school failure. The programme was included in the study for comparative purposes.

School Age children

Open Access at Belvedere School: Belvedere school in Liverpool was an independent day school for 500 girls until 2007 – it has now become an Academy. From 2000 to 2007 the Trust, in partnership with the Girls Day School Trust, funded the Open Access scheme, whereby all places at the school were awarded on merit alone, with parents paying a sliding scale of fees according to their means. A third of all girls admitted gained free places, and the social make-up of the school reflected the local area. Under the scheme, the school achieved its best ever GCSE results and the best in Liverpool.

Pate's Curriculum Enrichment Programme: This project supports gifted and talented children in primary schools serving the poorer areas of Cheltenham, with the aim of increasing the numbers who successfully gain entry to Pate's grammar school, thus improving their chances of attending a top university. The project involves 130 children each year.

Reading Recovery: This programme provides intense 1:1 tuition for young children falling behind in literacy. Research suggests that four in five participants reach the expect standards for their age, having successfully completed the programme. The programme was included for comparative purposes.

Material Help Project: A hypothetical project which provides £30 of resources, such as a study desk or other materials, to 1000 pupils to help them to achieve academically. This programme was included for comparative purposes.

University Admissions

Summer schools: The Sutton Trust has worked with leading universities since 1997 to provide summer schools for bright young people without any family experience of higher education, giving them a taste of university life, an insight into the admissions process and the chance to meet undergraduates, at a time when they are considering their futures. Over 1000 Year 12 students take part in summer schools each year. The Government has adapted the model at most universities through its Aim Higher programme. The National Foundation for Educational Research has shown that Sutton Trust summer schools significantly increase the chances of those who attend being offered a university place. Boston Consulting Group looked at the **Cambridge Summer School** and **Bristol Summer School** for its analysis.

STEP Easter Programme: A programme of extra tuition for state school students who have a conditional offer from the University of Cambridge to read Mathematics. The short residential programme helps them to achieve the necessary grades in the Sixth Term Examination Papers which applicants must sit after their A-levels.

Chelmsford First in the Family: A programme run by Chelmsford County High School for Girls, supported in partnership with the Esmee Fairbarn Foundation, which encourages local state school students with little or no family history of university attendance to consider and work towards a higher education. Students visit local universities and are given support in making applications.

Pathways to Law: This programme, jointly funded with the College of Law, targets state school students from non-professional backgrounds with an interest in a legal career, supporting them through A-levels and university, with introductions to legal contacts and placements in firms and chambers. This programme is based on a similar programme run by the University of Edinburgh over a number of years.

FE2HE: This programme, run by Southampton University (with Portsmouth University for some courses), provides a residential summer school for FE students to sample courses such as audiology, pharmacy, radiology, occupational therapy and midwifery. Subsequent applications to university from the target group are double what might be expected.

CHAPTER 2: THE ANALYSIS

The Sutton Trust asked the Boston Consulting Group (BCG) to apply a classic corporate portfolio strategy analysis to its programmes. The Trust wanted to see what return it was getting for its investment in programmes ranging from those that help pre-school children through to those that enable brighter youngsters from deprived backgrounds to attend research-led universities.

The Trust was keen to assess where its money is currently spent, and where it could be best spent. It also wanted to identify opportunities to maximise its impact by putting more resources into those areas that achieved most for a relatively small outlay.

To achieve this, BCG collated research on the quantified benefits of different types of project, choosing comparators like the Perry's pre-school project and Reading Recovery[2], to assess the effectiveness of Trust programmes targeted at similar age groups.

To get an accurate measure of the benefits of each programme, BCG needed to make key assumptions, based on an understanding of the normal returns for such programmes.

For example, 'Pathways to Law' aims to make it easier for young people from poorer backgrounds to pursue a career in law. The programme seeks to build the sort of contacts that are often commonplace in public schools and middle-class families. So, an analysis of the success of the programme will examine the proportion of participants who apply to study Law, and what proportion of them take up places to study Law. The return can be measured using a PriceWaterhouseCoopers study[3] showing that the present value of studying Law *rather than an average degree* is £117,000 over a lifetime.

Thus – based on an evaluation of the model of the project, at Edinburgh University - of fifty participants in Pathways to Law, 26% (13 students) will apply to study Law, and of them

[2] Reading recovery is now known in the UK as 'Every Child A Reader' and is supported by the government in England.
[3] "The economic benefit of higher education qualifications" (PriceWaterhouseCoopers LLP, 2005)

around six will take up places to study Law. The programme costs £60,000 for the fifty students. The value generated by the programme is over £600,000, a return to the trust of £10 for every £1 invested.

For pre-school programmes, we already know from the US based Perry project the value of intensive pre-school education to employment and life chances: a reasonable assumption can be made about the likely benefits of less intensive programmes like the PEEP drop-in centre.[4]

BCG, therefore, used a three stage process in their analysis.

- They collated international academic research on the quantified benefits of different types of project

- They built an understanding of how these projects made a difference, and in what timeframe

- They were then able to model the returns of each project.

Individual benefits

How one models the returns from different programmes could take several forms. One could decide to look at the returns to society, for example. Quite often it is argued that pre-school programmes are of great benefit because by making those who participate more employable, crime will be reduced. Yet, even the Home Office admits:

> The costs of crime to society can never be estimated comprehensively, since there are so many direct, indirect and knock-on effects of crime to consider, some of which might be identified but which can never be quantified or valued.[5]

Of course, the Home Office tries to make such an evaluation, but its difficulty in doing so illustrates the problem with trying to measure societal or economic impacts.

[4] Detailed assumptions for all programmes are in the Appendix.
[5] *Crime Reduction Programme Analysis of costs and benefits: guidance for evaluators* (Home Office, 1999), p37

Instead, BCG have analysed the benefits to the individual, making some reasonable assumptions about how their greater employability or better education will have a positive effect on society.

One reason why the government, for example, places such a premium on qualifications is the very clear link between higher levels of qualification and employment or unemployment levels. As Lord Leitch put it in his recent review of skills[6]

> There are important links between skills and wider social outcomes, such as health, crime and social cohesion. Skills also have important impacts on financial capability, helping households to manage the family finances, and family life...

Those links have been shown by the Labour Force Survey[7] to mean significantly higher rates of employment the higher the level of qualification achieved. And a Home Office study[8] has shown that

> ...women who left school at 16 and men who left before the age of 18 were more likely to be offenders than those who continued into further education.

So it is reasonable to assume that the benefits to society of young people who are more motivated at school and go on to achieve better qualifications will be substantial. BCG worked on the assumption that there are 'trickle-down' benefits from improving the lot of an individual: by changing individual lives, there are better outcomes for society in employment, crime and family life. BCG also assumed that the higher the benefit for the average individual, the more likely it is that most participants will benefit in some form; and that high individual benefits are likely to lead to transformational impact.

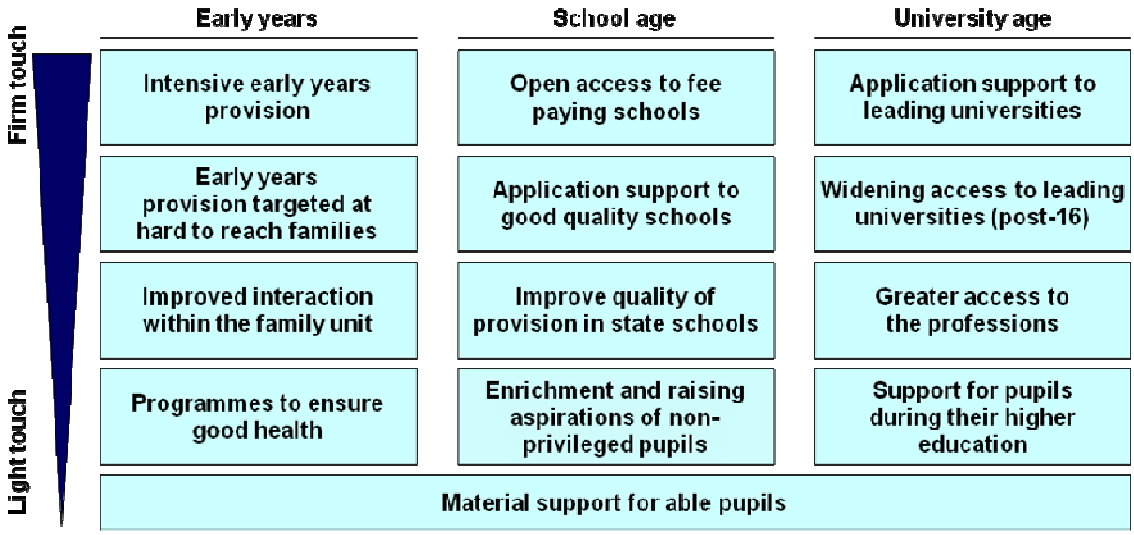
Again, there is good evidence for these assumptions. Leading universities often run programmes – like the Sutton Trust summer schools – to give young people a taste of life in a top university. A proportion of those who attend will apply for and may attend a leading university. But, as importantly, a high proportion of attendees will go on to higher education in some form. The return may not be as great, but it is greater than not having any university level education. Similarly, attendance at university –particularly a leading university – is the norm in many professions including the Law, politics and national media, something aptly demonstrated by the Trust's previous reports.[9]

Types of Project

[6] *Leitch Review of Skills: Prosperity for all in the global economy* (Final Report, HM Treasury, 2006) p36
[7] *Labour Force Survey* Winter 2001 cited in *Education and Skills: The Economic Benefit* (DfES, 2003)
[8] Youth crime: Findings from the 1998/99 Youth Lifestyles Survey (Home Office, 2000)
[9] See Sutton Trust reports on top solicitors, barristers and judges; journalists; and politicians at www.suttontrust.com.

BCG segmented the range of potential educational interventions into three categories: early years, school age and university age. They then categorised different types of programmes in a spectrum from 'light touch' to 'firm touch'

Figure 1: Interventions by stage



This categorisation highlighted the strength of intervention involved in each project. Further analysis showed that most Sutton Trust money was spent on three of these categories: 54% on open access to fee paying schools (the Belvedere project); 21% on widening access to leading universities (through summer schools and other projects) and 11% on enrichment and raising the aspirations of non-privileged pupils. Just over 6% goes on a range of pre-school interventions.[10]

Then, for each educational intervention, BCG assessed in detail the benefit from that project. It looked at cost, the number of young people who benefited, the 'value' generated by the programme (based on the average to each individual) and the return on each £1 spent. For each project, a number of assumptions were made about the programme (see full data in appendix A). Summer schools, for example, have been shown by independent research to increase the likelihood of participants getting into top universities.[11] These results were used when calculating their benefits.

Is there a displacement effect?

A criticism sometimes made of such interventions is the question of whether or not there is a displacement effect that is not captured by an analysis of individual returns. For example, helping a pupil from a state school and a poor background to get a place at Oxford or Cambridge can only happen if he or she takes the place of a child from an independent school with a wealthier background.[12] Therefore, the societal benefits are neutralised.

This argument has less merit than would at first appear. The fact that the displaced pupil went to an independent school and came from a privileged background will of itself give considerable added advantage to that pupil compared with a young person from a non-privileged background, in terms of contacts, social skills and qualifications. It stands to reason too that a university can add more value to a non-privileged young person, who may not have had access to a first class school education – the 'untapped potential' may therefore be greater.

The likelihood is that he or she will get another place at the same or another university, and probably a leading university, because while the number of places at Oxford or Cambridge may not be growing significantly, there has been growth in university places generally, including at other

[10] These figures reflect Sutton Trust investment and do not include either research or other trusts' or agencies' contributions to projects.
[11] Kendall and Schagen "Do the Sutton Trust Summer Schools have an effect on university applications and entries" (NFER, 2001) looked specifically at Oxford, Cambridge, Bristol and Nottingham.
12See, for example, "Seven universities accused of bias against private pupils" (Daily Telegraph, 1 October 2002)

leading universities, to meet the changing demands of the economy. So, for example, the expansion in the number of state school students entering leading universities between 1997-2003 almost exactly matched the expansion of places at those universities.[13]

There is another important argument: evidence suggests that a state pupil who has struggled more to get to a good university will work harder when there and gain a better degree, thus potentially offering a higher return to society.[14] This is not an argument in favour of positive discrimination which is not necessary, but one in favour of creating a level playing field so that children of equal ability have an equal chance of using it to the full, and the brightest and best – regardless of background - reach the top.

13See figures in State School Admissions to our Leading Universities (Sutton Trust, 2005)
14 See "Schooling effects on higher education achievement" (Hefce, 2003) at http://www.hefce.ac.uk/pubs/hefce/2003/03_32.htm

CHAPTER 3: LEVELS OF RETURN

Using their portfolio strategy analysis – and aggregating the average return to individuals benefiting from the programmes – BCG concludes that educational initiatives deliver excellent returns relative to other potential industry investments.

They quantify such investment in education as providing, on average, over an individual's lifetime, a return of £15 for every £1 invested.

Moreover, they believe that the investment delivers the highest returns when it is targeted at key milestones in a child's life: pre-school before starting primary education; the transition from primary to secondary school; and moving from school or college to higher education.

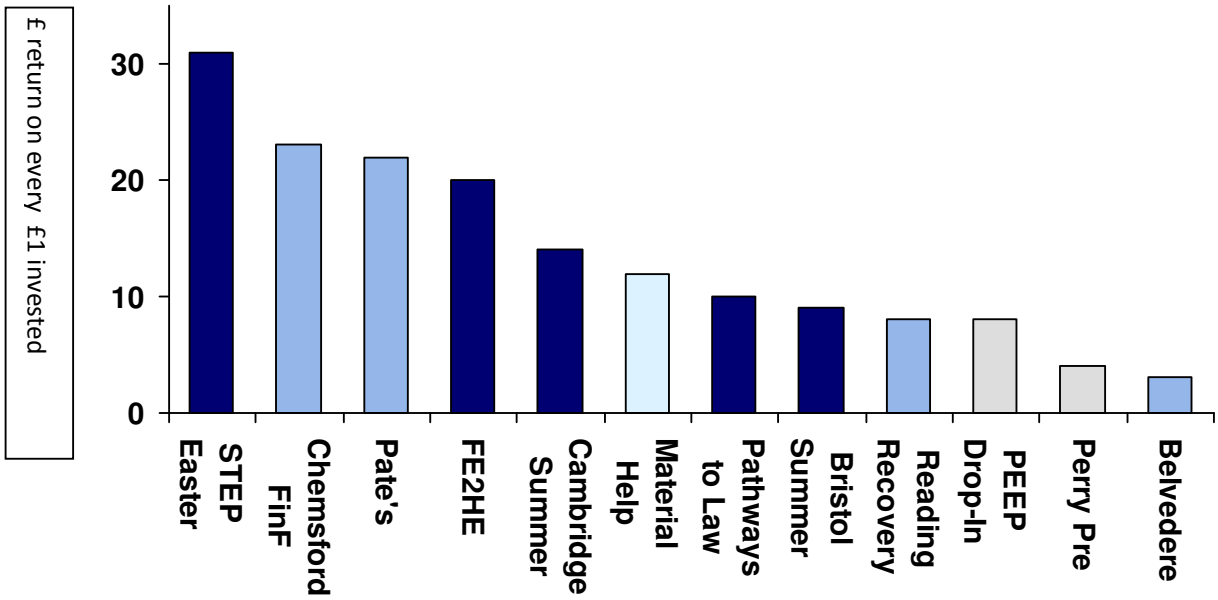
Investments are more effective when focused on targeted on particularly vulnerable individuals, such as those at highest risk of falling behind in primary school or bright pupils who may not fulfil their potential. They also find that high impact outcomes – a place at university, for example –and a cost-effective use of resources lead to stronger returns.

Big returns for relatively small investments

BCG compared the investment return and budget allocation with the different stages and intervention types set out in Figure 1. They found that some of the least expensive interventions had the greatest impacts. Application support to leading universities or high performing schools is relatively inexpensive, yet if it helps the candidate successfully gain a place, it can have a huge impact; the same is true of programmes that raise aspirations for non-privileged pupils.

BCG moved from looking at interventions by type to considering specific programmes. As Figure 2 shows, some of the highest returns were achieved by short, highly targeted programmes like the STEP Maths programme at Cambridge, or the help and support with university applications provided by Chelmsford's First in the Family programme.

Figure 2: An overview of returns



Detailed analysis of the projects suggested that the programmes with the highest returns shared a number of common characteristics:

- They were well targeted – the STEP course for example is particularly focused, since all participants have already had Cambridge offers. The Easter school is working only with students reaching the final stage of the application process. FE2HE is similarly targeted on students seeking medically-related courses in higher education.
- Their impact was particularly strong – so, the Pate's project, for example has seen a clear increase in target school pupils going to the local grammar school.
- High return programmes often involve short but intensive work
- They often take place at key transitions in a young person's life, such as pre-school or while considering what to do after A-levels

CHAPTER 4: LEARNING THE LESSONS AND OPPORTUNITIES FOR DEVELOPMENT

Learning the lessons of the BCG analysis is critical for the Sutton Trust. But the lessons are also relevant to other educational charities and to government, as it develops and extends initiatives to improve access and standards.

The Sutton Trust is using the analysis to assess how it invests in projects in the future. Having such a clear picture of the returns from particular projects is not only useful for the Trust; it makes it much easier for potential partners to see the leverage that their investment brings.

BCG's analysis suggests that there are real opportunities to extend some projects with high levels of return.

For example, the Pate's programme of curriculum enrichment in Cheltenham could be extended to help more able students in neighbouring primaries in disadvantaged areas to apply. In 2003, target school applicants did better than before the project, but their success rate of 12% was below the 20% success rate of independent school applicants. An investment of £53,000 could increase the success rate of targeted state school applicants by doing more to support them. There may also be opportunities to extend the programme to other areas with selective schools.

But while individual economic returns provide important information about the potential leverage of projects, they are not the whole story, as the scope for replication is key. The Sutton Trust university summer schools, for instance, prompted the government to adopt a similar model – and the Higher Education Funding Council for England now provides eight times as much funding for summer schools as the Sutton Trust.

The Belvedere Open Access scheme ostensibly had the lowest rates of return, but it includes the costs of delivering education as well as widening access. If the government paid the

costs of educating students on the same basis as it funds state schools, such a scheme could be cost-effectively extended on a voluntary basis to 100 or more independent day schools.

Our choices

These calculations present the Trust with important questions as it considers how to invest its resources in the years ahead. The Trust has a very clear overriding objective - the promotion social mobility by providing educational opportunities for those from non-privileged backgrounds – but within those parameters there are clearly choices to be made about how and where to invest in order to achieve the greatest impact.

The BCG analysis did not extend to research. This is an area that the Trust has expanded in recent years, looking rigorously at inequalities in the education system and robustly evaluating its own projects.

For the Trust, the key questions are these:

- To what extent should it consolidate existing programmes that work well or broaden what it does to support new projects?
- Are there other ways in which we can support bright young people through difficult transition points in their educational lives?
- How can the Trust improve the targeting of its programmes so that they reach those we most want to assist – gifted and talented children from disadvantaged backgrounds or young children growing up in deprived homes?
- Should the Trust include more subject matter within programmes like summer schools or university access programmes, to equip participants with the skills and knowledge to make better applications?
- How does the Trust maximise the leverage it achieves through partnerships with other charities, the private sector and the government, and does that change the nature of what it does or how it does it?

But for government and its agencies, there are lessons too. University access has improved a little in recent years, but not nearly as much as ministers might wish. Summer schools and professional support are very cost effective ways of raising aspirations, and help with applications through programmes like Chelmsford First in the Family can assist disadvantaged pupils to make the most of their talents. In the most recent annual report from the Office for Fair Access (Offa), its director Professor Sir Martin Harris, said:

> In an ever-changing HE landscape, the challenge for the sector is to understand more about student behaviour both pre and post-application, in order to ensure the fairest possible outcomes. In particular, we need to understand more fully how bursaries and scholarships impact on recruitment and retention, and how funds can best be targeted to maximise their chances of widening participation. Experience may well vary between institutions. Some may find that high value bursaries aimed at the very brightest are key to their success while others might have a bigger impact through targeting smaller bursaries to local schools and colleges.[15]

As Offa reviews how best to spend access money – with bursaries not making the expected impact in all cases – this study should help it to make the best use of its renewed access agreements with universities. But it should also help ministers in reviewing the impact of their schools' and early years' interventions. No political party wants to re-introduce selective grammar schools, but for the 165 grammar schools which still exist, they should be open to all on merit: the Pate's programme shows the difference a small investment can make. And as Sure Start expands rapidly, the value of a drop-in centre that targets the hardest-to-reach is shown to be significant.

The model developed by BCG is one that could be applied to all government initiatives, and would be a way of evaluating value for money in education spending. The analysis also shows that the design and focus of a programme can be as important as the amount spent on it - as politicians might put it, we need to reform the system as well as invest in it.

[15] Offa Annual Report and Accounts 2006-7, available at www.offa.org.uk

APPENDIX A: PROJECT COSTS AND ASSUMPTIONS

Project	Cost of programme	No of young people benefiting	Value generated by programme	Return per £1 spent
Belvedere	£1,754,120[16]	38	£4,550,081	£3
Bristol	£56,762	90	£484,908	£9
Cambridge	£72,000	144	£975,293	£14
Chelmsford	£10,000	80	£228,815	£23
FE2HE	£40,000	95	£815,155	£20
Material Help	£30,000	1000	£369,090	£12
Pate's Grammar	£55,000	130	£1,224,479	£22
Pathways to Law	£60,000	50	£610,711	£10
PEEP Drop-In	£100,000	96-185pw	£830,769	£8
Perry Pre-School	£966,734	100	£4,032,861	£4
Reading Recovery	£238,900	100	£1,933,094	£8
STEP Easter	£36,000	70	£1,106,633	£31

[16] Cost of taking one year cohort through the school

Belvedere Open Access

Belvedere Open Access	Data
Cost of programme[1]	£1,754,120
Number of young people benefiting	38
Value generated by programme	£4,550,081
Return per £1 spent	£3

Key assumptions
The Belvedere Open Access Programme allows able pupils from disadvantaged backgrounds to attend the Belvedere School by paying their fees in full or in part. Pupils who attend Belvedere have an increased chance of attending university than pupils at other local schools, and are more likely to attend a top university than a pupil in the top third of a local comprehensive[3] Because attending university increases lifetime earnings and there is a further premium associated with attending a top university[2] attending Belvedere therefore equates to a average premium of £120k [4]

(1)Full financial cost for taking one year cohort through the school
(2)'Graduating and Graduations within the middle classes: the legacy of an elite higher education', Power and Whitty (to be published). BCG Analysis
(3) Analysis of Belvedere sixth form data and sixth form data from Norwich School for Girls, BCG Analysis
(4)In real terms, BCG analysis

Backup

Bristol Summer School

Bristol summer school	Data
Cost of programme[1]	£56,762
Number of young people benefiting	90
Value generated by programme	£484,908
Return per £1 spent	£9

Key assumptions
The Bristol Summer School increases the number of summer school participants who apply to top Universities and increases the number of summer school participants who take up a place at a top university[2]. The summer school increases the percentage of participants applying to 78%[3] and increases the percentage of those applying who take up a place to 50%[4] A degree from a top university, like Bristol, is worth a premium of £79k[5] over a degree from a university outside this elite group

(1) Full financial cost for one year
(2) 'Do the Sutton Trust Summer Schools have an effect on university applications and entries?', Kendall and Schagen (NFER, 2001)
In this instance top Universities refers to the four universities that participated in the study (Oxford, Cambridge, Bristol and Nottingham)
(3) An increase from 50% (Sutton Trust Analysis), BCG Analysis
(4) Based on Cambridge acceptance rates. BCG Analysis
(5) In real terms. 'Graduating and Graduations within the middle classes: the legacy of an elite higher education', Power and Whitty (to be published). BCG Analysis

Cambridge Summer School

Cambridge summer school	Data
Cost of programme[1]	£72,000
Number of young people benefiting	144
Value generated by programme	£975,293
Return per £1 spent	£14

Key assumptions
The Cambridge Summer School increases the likelihood of participants applying to the UK's top universities; and it also increases the number of participants who get in[2]. The summer school increases the percentage of participants applying to top universities[2] by 24% points[3] and increases the percentage of those applying who take up a place by 35% points[4]. A degree from Cambridge is worth a premium of £79k[5] over a degree from a university outside the small group of top UK universities.

(1) Full financial cost for one year
(2) 'Do the Sutton Trust Summer Schools have an effect on university applications and entries?', Kendall and Schagen (NFER, 2001)
In this instance top universities refers to the four universities that participated in the study (Oxford, Cambridge, Bristol and Nottingham)
(3) An increase from 50% (Sutton Trust Analysis), BCG Analysis
(4) An increase from 24% (Sutton trust Analysis) to 59%. BCG Analysis
(5) In real terms. 'Graduating and Graduations within the middle classes: the legacy of an elite higher education', Power and Whitty (to be published). BCG Analysis

Chelmsford First in the Family

Chelmsford First in the Family	Data
Cost of programme[1]	£10,000
Number of young people benefiting	80
Value generated by programme	£228,815
Return per £1 spent	£23

Key assumptions
The programme aims to raise pupils' aspirations by introducing them to the idea of studying at university through in-school activities and visits to local universities. The programme then goes on to provide support during the application process. Based on evaluations from the programme and interviewing the programme manager, it is assumed that the programme will cause 5% of participants to attend university when previously they would not have done so[2]. The value released by this is equivalent, per individual, to £57k in real terms[3] .

(1) Full financial cost for one year
(2) Interview and evaluations from the programme, BCG Analysis
(3) A degree results in an uplift of 26% over an average salary with 2+ A Levels. This increases the present value of lifetime earnings by £57k, assuming an average salary of £29k with 2+ A Levels. Source: "Further analysis of the returns to academic and vocational qualifications", McIntosh (Sept. 2002). BCG Analysis

FE2HE

FE2HE	Data
Cost of programme[1]	£40,000
Number of young people benefiting	95
Value generated by programme	£815,155
Return per £1 spent	£20

Key assumptions
The FE2HE programme targets Further Education pupils and allows them to experience university life through a residential programme. The programme is run by the Health department of Southampton University. It is assumed that this programme raises aspirations and succeeds in increasing applications from students from further education colleges who would not have otherwise applied to university. It is assumed that the programme increases the number of applications from the target group from 30% to 60%[2].

(1) Full financial cost for one year
(2) Source: FE2HE Interview and evaluations and 2005 participant data, BCG analysis. In 2005, 60% of participants applied to Southampton University. Based on discussions with the course leader, it is realistic to assume that 30% of the participants would have applied prior to the summer school. In 2005 50% of the applications to Southampton were successful.

Material Help Project

Material Help Project	Data
Cost of programme[1]	£30,000
Number of young people benefiting	1000
Value generated by programme	£369,090
Return per £1 spent	£12

Key assumptions
Based on assumption that an item which would help a pupil achieve academically (study desk or a particular resource) could be purchased for a cost of £30 per pupil[2] . It is assumed that such a programme could therefore help 1000 participants at a cost of £30,000. It is assumed that this 'material help' will be decisive for 1% of pupils and will help them achieve level 2 qualifications (5 good GCSEs) and will therefore release the value associated with this (discounted at £37k[3])

(1) Full financial cost for one year
(2) Example costs of a desk
(3) In real terms. 5+ A-C GCSEs result in an uplift of 28% over an average salary without 5 GCSEs. This increases the present value of lifetime earnings by £37k, assuming an average salary of £19.5k without 5 good GCSEs. Source: "Further analysis of the returns to academic and vocational qualifications", McIntosh (Sept. 2002). BCG Analysis

Pate's Curriculum Enrichment

Pate's Curriculum Enrichment	Data
Cost of programme[1]	£55,000
Number of young people benefiting	130
Value generated by programme	£1,224,479
Return per £1 spent	£22

Key assumptions
The Pate's Curriculum Enrichment Programme increases the number of pupils from local state primary schools who take up a place at the Grammar School[2]. Pupils who attend Pate's have an increased chance of superior academic results, of attending university and are much more likely to attend a top university (including Oxford and Cambridge) than a pupil in the top third of the alternative local comprehensive schools[4]. Attendance at Pate's therefore equates to a discounted average value of £92k[5].

(1) Full financial cost for one year
(2) Pate's admissions data- 6 pupils from target schools in 2001, by 2003 20 pupils from target schools successfully win a place, BCG Analysis
(3) 'Graduating and Graduations within the middle classes: the legacy of an elite higher education', Power and Whitty (to be published). BCG Analysis
(4) Pate's sixth form data, BCG Analysis
(5) In real terms, BCG Analysis

Backup

Pathways to Law

Pathways to Law	Data
Cost of programme[1]	£60,000
Number of young people benefiting	50
Value generated by programme	£610,711
Return per £1 spent	£10

Key assumptions
It is assumed that there is a salary premium associated with completing a degree in Law. Recent research has shown that monetary value in today's terms of a law degree, over an average of degrees in other subjects, is more than £100k[2]. The Pathways to Law programme is joint venture with the College of Law. As a result of a similar programme run at the University of Edinburgh, 26%[3] of participants apply to study Law, and 49%[4] of those take up places to study Law. It is assumed that the new Pathways to Law programme will have the same results.

(1) Full financial cost for one year and one institution
(2) "The economic benefit of higher education qualifications",PricewaterhouseCoopers LLP, January 2005. Uplift of a law degree is equivalent to £117k in real terms.
(3) Average applications (04/05) from those registered with Pathways. Source: Pathways to the Professions Student Registrations and Admissions Statistics. Nov 2006. Based on interviews with the project officer, it is assumed that prior to the intervention 6% would have applied. BCG Analysis
(4) Average entrance rates (04/05) for those applicants registered with Pathways. Source: Pathways to the Professions Student Registrations and Admissions Statistics. Nov 2006. BCG Analysis. Based on interviews with the project officer, it is assumed that the programme has an impact on application success rates. It is assumed that prior to the intervention 39% of applications would have been successful.

PEEP Shopping Centre Project

PEEP Shopping Centre Project	Data
Cost of programme[1]	£100,000
Number of young people benefiting	variable: 96-185 users per week
Value generated by programme	£830,769
Return per £1 spent	£8

Key assumptions
This intervention runs as a drop in programme. It is assumed that if a parent and child attend regularly, weekly, the child would go on to receive 20% of the benefits expected from a much more intensive programme such as the Perry Pre-School Project (see separate slide). The average number of children attending with this regularity was estimated using weekly attendance figures for children using the room to play. The average of the 3 lowest weekly data points July-Dec 2006 was taken as an indicator of the base number of regular users.[2]

(1) Full financial cost for one year
(2) PEEP data, BCG Analysis. The range of children visiting each week in this time period was 96-185

Perry Pre-School Project

Perry Pre-School Project	Data
Cost of programme[1]	£966,734
Number of young people benefiting	*100*
Value generated by programme	£4,032,861
Return per £1 spent	£4

Key assumptions
The Perry Pre-school project (a US project from the 1960s) ran daily classes and weekly home visits for children identified as being at risk of failing in school during the ages of 3 to 4. The destinations of these pupils and the benefits received by the pupils through increased employment and wages have been tracked in follow up studies. The costs and returns (per participant) have been inflated into today's money[2].

(1) Full financial cost for one year
(2) Lifetime Effects: The High/Scope Perry Preschool Study Through Age 40, Schweinhart et al, 2005. BCG Analysis. Assumed for modelling purposes @ 100 participants

Reading Recovery

Reading Recovery	Data
Cost of programme[1]	£238,900
Number of young people benefiting	100
Value generated by programme	£1,933,094
Return per £1 spent	£8

Key assumptions
The Reading Recovery programme takes children in the early years of primary school whose literacy is already severely behind and puts them through an intensive programme of regular 1:1 tuition. Studies have show that, following the lessons, 79% of pupils attain the literacy standards expected for their age range[2] . Successful graduates of the programme are assumed to have the normal spread of potential and are assumed to have a 75% chance of having access to the normal range of academic outcomes available to readers (ie top 93%[3])

(1)Full financial cost for one year
(2)'The long term costs of literacy difficulties', Gross and the KPMG Foundation, December 2006
(3)Those achieving level 4 and above when they leave primary school.
National Statistics First Release: National Curriculum Assessments at Key Stage 2 in England, 2006 (provisional). SFR31/2006.

Backup

STEP Easter Programme

STEP Easter Programme	Data
Cost of programme[1]	£36,000
Number of young people benefiting	70
Value generated by programme	£1,106,633
Return per £1 spent	£31

Key assumptions
The STEP Easter Programme targets state school pupils who already have a conditional offer from Cambridge and provides them with extra tuition for their STEP paper during a short residential course in Cambridge. Last year, over 50% of participants achieved their necessary grades[2] . It is assumed that there has been an uplift from 30% (the average success rate) as a result of the programme[3] A degree from an top university, like Cambridge, is worth a premium of £79k[4] over a degree from another university in real terms

(1) Full financial cost for one year
(2) Cambridge Access Report, 2006
(3) Based on discussions with the Cambridge Access Department; Cambridge Access Report, 2006
(4) In real terms. 'Graduating and Graduations within the middle classes: the legacy of an elite higher education', Power and Whitty (to be published). BCG Analysis

APPENDIX B: DRIVERS OF RETURNS AND IMPLICATIONS FOR SUTTON TRUST STRATEGY

PROJECT	DRIVERS OF RETURN	IMPLICATIONS
Belvedere Open Access	While the programme has high worth, returns are diminished by significant costs of delivering education as well as access.	Share costs or bring in other funders for similar programmes? What is the potential impact on government policy? (Belvedere itself now state-funded)
Bristol Summer School	High relative value of degree. Successful impact on applications and success rates	Can this become more content driven? Is there a need for a STEP Easter type programme at Bristol to ensure target pupils make their grades? How can this be made more targeted?
Cambridge Summer School	Real impact on applications. Real impact on success rates. High relative value of Cambridge degree	Can the summer school be better targeted? Is there an opportunity to make this more content driven? Is there an opportunity to join this up with other schemes (STEP Easter project or interview practice etc)?
Chelmsford First in the Family	High impact from targeting children who would not have otherwise gone to university. Low cost	How better to target people to whom the most difference can be made?
FE2HE	Significant impact on aspirations. Highly targeted	Can project be extended to help with success rates of getting into university? Can content be added?
Material Help	Low cost per capita. Potentially significant impact.	Is the ST interested in this kind of light touch initiative? Opportunity for research on this kind of scheme?
Pate's Grammar	Significant impact on the number of children attending Pate's. Very high relative value of an education at Pate's. Low cost (as cost of the education is publicly funded)	Opportunity to make scheme more content driven? Other opportunities to influence this key transition point (age 11)? Roll out potential?
Pathways to Law	High relative value of a law degree. Project shown to have real impact	Opportunities to extend this to other disciplines? Opportunity to extend other schemes into the workplace or to become involved in schemes that open up access to elite professions/work experience?
PEEP Drop-In	Investment in early years has a very material impact, even much later in life. There are significant benefits to society not captured in this analysis.	Could we use PEEP as a Gateway to other services to improve returns? Join up programme with other PEEP centres? Better targeting?
Perry Pre-School or similar intensive early years programme	Investment in early years has a very material impact, even much later in life. There are significant benefits to society not captured in this analysis.	Opportunity to target children with more potential? How would this work with less disadvantaged communities?
Reading Recovery	Short but intensive content driven programme has real impact on attainment. This skill opens the door to other achievement	Opportunity for other short but intensive content driven initiatives to drive forward attainment? Other disciplines? Age groups? High ability?
STEP Easter	Very targeted – all participants have Cambridge offers; content-driven; high relative value of Cambridge degree.	Do other specialist exams/university courses need support? Is there potential to become more content driven? Improve targeting?