



Surfacing Bubbles of Submerged Talent: Report on a Research-Based Intervention for Urban Scholars

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About the Brunel Able Children's Education Centre (BACE)

The Brunel Able Children's Education (BACE) Centre was launched in 1997 as the first university-based research Centre in the UK, designed to conduct research into aspects of identifying and making appropriate provision for gifted and talented students, aged 4-16. Our research has made, and continues to make, a significant contribution to our knowledge and understanding of educating students of high potential.

Our main goal is to continue to plan and conduct programmes of innovative and high quality research into the best ways of nurturing the gifts and talents of the most able in our schools. A significant part of our work is devoted to exploring ways of identification and fulfilment of 'submerged talent' in areas of social deprivation; this report presents the key findings of a project within this category.

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Executive Summary

The Urban Scholars Programme

The Urban Scholars Programme is a unique 4-year intervention programme for urban students aged 12-16. The programme was launched as a pilot in 2000 by the Brunel Able Children's Education (BACE) Centre, starting initially with a small group of students. The programme has since expanded and now is set up as a research site. In this report we present the findings of the programmes based on 100 scholars who attended the programme from 2006-2010.

The Urban Scholars Programme is offered based on the belief that education is at the core of an enlightened and fulfilling life. The scholars attend the programme, held on the university campus, one Saturday a month. The scholars, who are selected by their schools, come from 30 schools across 9 London Local Authorities (LAs). Schools were issued with selection criteria to support teachers in their search for students who have the potential for high achievement, from disadvantaged backgrounds who may not necessarily be achieving their best. Students on free school meals and from families with no history of Higher Education form a significant part of the membership of the cohort. The programme adopts a multi-faceted approach, incorporating an interactive teaching style. Specific teaching is offered in Mathematics, English, Critical Thinking and Science. Motivational speakers speak to the scholars; the scholars' parents are also supported and undergraduate ambassadors work with the students offering role models.

The Urban Scholars Programme Design

Aims of the programme

The aims of the programme are as follows:

- Aim 1. Increased engagement with learning.
- Aim 2. Increased academic achievement.
- Aim 3. Increased aspirations.
- Aim 4. Increased Higher Education (HE) orientation.
- Aim 5. Increased understanding of self and life-world.

Research Design

The programme employed a unique methodology, combining quantitative and qualitative data sets embedded within Design Experiment techniques— used for refining the final programme model. The realisation of the complexity of the design of an appropriate intervention programme, which was to take account of emerging data analysis, led us to adopt a *Design Experiment methodology*. By following the principles of the design experiment model we were able to construct practical activities and study their effectiveness and impact. Students' responses to specific features of the programme could be monitored.



Key findings

- The Design Research methodology provided us with a means to produce an artefact which has undergone successive cycles of refinement.
- Although quantitative results were useful in monitoring the effectiveness of the programme, qualitative data expressing the students' and parents' real voices have added to the authenticity and the real-life dimension to the findings of the Urban Scholars Programme.
- All the 5 aims of the programme have been achieved. The level of achievement had varied but we are confident that we now have a replicable model for wider use –either as a whole programme or its components.
- Critical thinking skills, an important programme component and part of the aim of engagement with learning, were highlighted as being an important skill gained by scholars. Scholars felt they were able to approach a diverse range of situations more analytically.
- Overall, scholars achieved above what their schools predicted for them in their GCSE exams. There was no difference in the achievement of results of the Urban Scholars across the 9 Local Authorities.
- Scholars had increased aspirations, as there was an increase in the number of scholars stating they wished to follow a 'professional' career.
- We have evidence of the scholars developing an enhanced understanding of self and life-world. 69% of scholars felt the programme had helped them gain confidence. Scholars also felt the programme had developed their social skills and taught them about their learning styles, enabling them to learn more efficiently.



Chapter 1: Introduction to the Urban Scholars Programme

Talents and gifts may be submerged, but not eradicated by social disadvantage. This is the principle on which we operate our Urban Scholars Programme.

Casey, R. and Koshy. (2002)

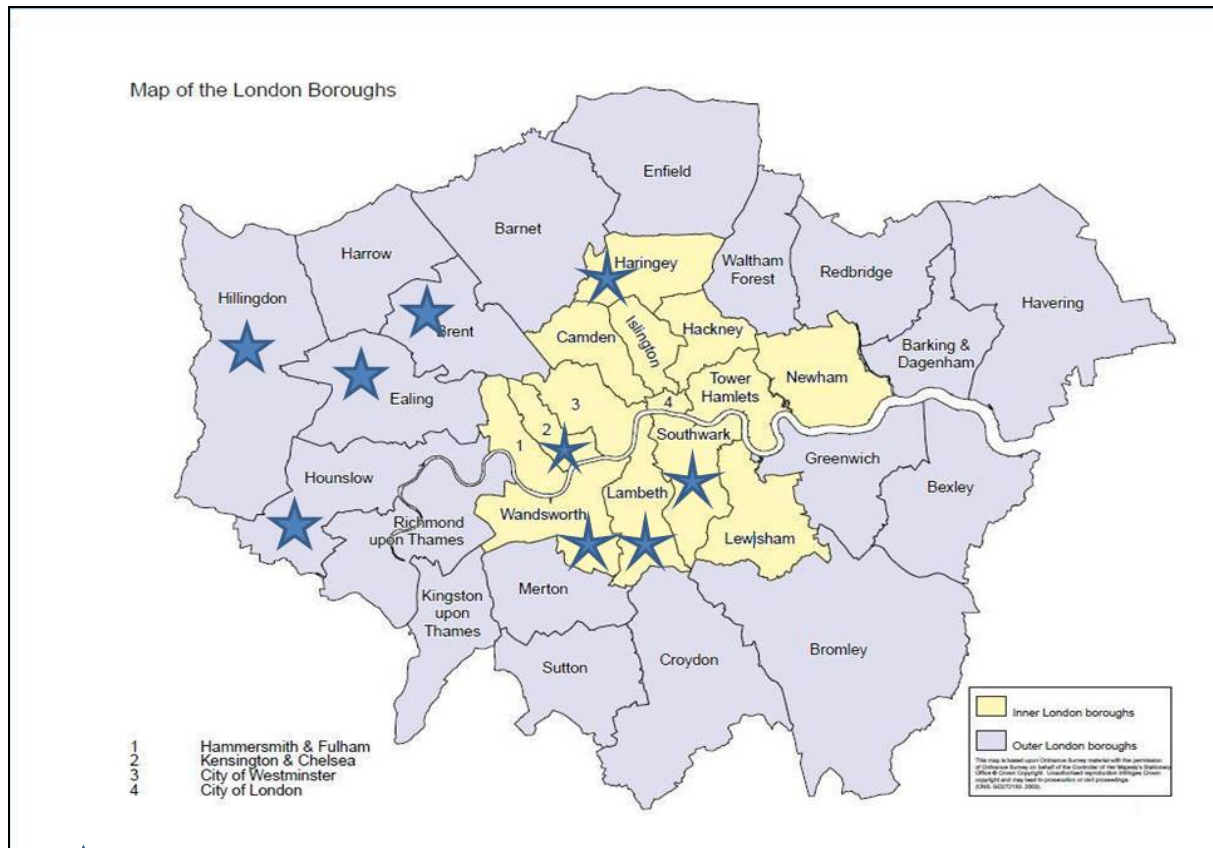
1.1 The Urban Scholars Programme


The Urban Scholars Programme is a unique 4-year intervention programme for urban students aged 12-16. The programme was launched as a pilot in 2000 by the Brunel Able Children's Education (BACE) Centre, starting initially with a small group of students. The programme has since expanded and now is set up as a research site. In this report we present the findings of the programme based on 100 scholars who attended from 2006-2010. A grant from CfBT enabled us to appoint a Research Assistant (0.5 fte) who has carried out the data analysis and supported with the dissemination.

The Urban Scholars Programme is offered based on the belief that education is at the core of an enlightened and fulfilling life. The scholars attend the programme, held on the university campus, one Saturday a month. The scholars, who are selected by their schools, come from 30 schools across 9 London Local Authorities (LAs). The LAs involved are presented in Figure 1.1 below. Schools are issued with selection criteria (presented later in this Chapter) to support teachers in their search for students who have the potential for high achievement from disadvantaged backgrounds who may not necessarily be achieving their best. Students on free school meals and from families with no history of Higher Education form a significant part of the membership of the cohort. The programme adopts a multi-faceted approach, incorporating an interactive teaching style. Specific teaching is offered in Mathematics, English, Critical Thinking and Science. Motivational speakers speak to the scholars; the scholars' parents are also supported and undergraduate ambassadors work with the students offering role models. Particular efforts are made to recruit undergraduate mentors from similar backgrounds to the scholars, as we have found from our pilot programmes that many of them have developed a feeling that '*university is not for the likes of us*'.



Figure 1.1: Map of the London LAs involved



 =Local Authorities involved in the Urban Scholars Programme. Original map from www.statistics.gov.uk/geography/downloads/london_boro.pdf

1.2 Addressing the need: The search for and fulfilment of submerged urban talent

Why did the BACE centre set up the Urban Scholars Programme? In the past decade, it has been well documented that pupils from disadvantaged backgrounds are the least likely to reach their full potential as they are less likely to be recognised by schools, and their circumstances often prevent their success (Casey and Koshy, 2002; Ofsted, 2001; Smith, 2008; Van Tassel-Baska, 1998). Further, students from disadvantaged backgrounds lack high aspirations, as they have insufficient knowledge, guidance and role models (DfCL/DCSF, 2008). Previously, it has been suggested that disadvantaged pupils were under-represented in Higher Education (Archer and Hutchings, 2002), although more recent reports show that whilst more disadvantaged students are now attending university, they are more likely to go for the 'safe option', attending universities lower in the league tables and/or ones which require grades well below their achievements (Kelly, 2010 and Sutton Trust, 2010).

Three continuing major policy initiatives of the UK government provide the backcloth to the intervention programme. First was the introduction of a *gifted and talented* (G&T) education policy (Department for Education and Employment, 1999) with a special focus on the identification of and provision for inner-city students whose gifts and talents lie submerged in most cases due to their environment of social and economic deprivation. The second was the Widening Participation Policy, which was designed to

encourage students from poorer families to join universities (Blunkett, 2000) and finally, the government's efforts to enhance social mobility so as to widen access for poorer children to professions such as medicine, law and the civil service which are currently dominated by affluent families (Cabinet Office, 2009). All three policies are designed to raise the achievement and aspirations of students from lower income and working class families so that their life chances are improved.

Despite all these efforts, the achievements of gifted and talented pupils from disadvantaged backgrounds have not improved. The 'Narrowing the Gap' agenda in 2009 highlighted the fact that only 5.9% of children who received FSM in primary schools and 7.3% in secondary schools had been identified as G&T, compared to 9.1% and 14.2% of children not receiving FSM in the respective schools. In General Certificate of Secondary Education (GCSE) examinations (sat at age 15/16), the proportion of identified G&T pupils receiving FSM achieving 3 or more A*/A grades was 34.1%, compared with 59.7% of identified G&T pupils not receiving FSM (Department for Children, Schools and Families, 2009).

1.3 The Urban Scholars Programme Design

The BACE centre initially set up the Urban Scholars Programme in response to a request from the Director of a Local Education Authority, who felt their most able students were unable to fulfil their true potential due to circumstances within their urban schools.

1.3.1 Aims of the programme

The aims of the programme have remained the same since its inception and are as follows:

- Aim 1. Increased engagement with learning.
- Aim 2. Increased academic achievement.
- Aim 3. Increased aspirations.
- Aim 4. Increased Higher Education (HE) orientation.
- Aim 5. Increased understanding of self and life-world.

Our definitions of these aims are provided alongside the evidence supporting the programme's impact on them.

1.3.2 Programme Rationale and Components

The design of the programme was centred on evidence regarding urban students' needs. Two authoritative studies in the USA on talent development of students from urban areas also provided guidance. The first study, conducted by Van Tassel-Baska (1998), based on a survey of 25 districts that serve disadvantaged higher ability students, identified the following interventions as effective:

- Early and systematic attention to the needs of the students.
- Parental and family involvement in the education of the student.
- Experiential and 'hands on' learning approaches.
- Activities that allow for student expression.
- Mentors and role models.



- Building on strength and differential learning styles.

The second study highlighted several indicators influencing the achievement of talented students from urban areas:

- Academic guidance.
- Realistic plans for the future.
- Network of high achieving peers.
- Personal traits: strong self-efficacy, sensitivity, independence and inner-will.
- Belief in self and resilience.
- Supportive adults: teachers, parents, mentors, coaches.
- Parental expectations (Reis *et al*, 1995).

The above study also identified circumstances which were likely to lead to underachievement:

- Family: strained relations with family members, inconsistent role models and value systems and minimal parental academic guidance and monitoring.
- Personal: behaviour problems, unstructured use of time, confused or unrealistic aspirations, insufficient perseverance and inappropriate coping strategies.
- School: inappropriate curricular experiences, lack of appropriate work habits, negative interactions with teachers, lack of rewards.
- Community: a hostile urban environment which involves violence, ethnic prejudice and limited opportunities for constructive entertainment and inappropriate peer pressures.

We included elements in our intervention programme in order to address specific aspects that emerged through the on-going data gathering and analysis. All the students followed the same programme. The sessions were taught by university staff except when specific expertise was needed when external speakers were brought in. Teaching sessions followed a specific set of guidelines that included students learning advanced content, carrying out in-depth explorations, being engaged in higher-order thinking skills and being given opportunities for creativity and meta-cognition. Although it is not possible to provide very detailed descriptions of all the components of the intervention programme within this report, we present the various strands in the following section.

- **Teaching of specific skills** – sessions addressing basic subject knowledge and skills, critical thinking skills, problem solving skills, presentation skills, study skills and time management were introduced.
- **Adult interactions and support** - included parents days, involvement of undergraduate mentors, careers education and outside speakers
- **Academically challenging activities** – carrying out personal projects and working with peers.

The following programme components were monitored closely during the pilot project, 2000-2004, and were retained in the present programme:

Critical Thinking: Students were provided with a course in Critical Thinking which was written by the university tutors and was designed to encourage them to think critically, analyse, reason and derive informed conclusions and decisions. It was included in the programme because of its role in contributing

to a democratic society (Ennis, 1995). The training they received in Critical Thinking was intended to permeate their thinking in other areas of the curriculum (OCR, 2000) as well as in real life situations. In the pilot programme, there was evidence of students developing confidence in putting forward arguments, developing a questioning attitude and anticipating other people's points of view. The Critical Thinking sessions were also listed as one of the *most useful* and *enjoyable* components of the programme by the students and their school tutors during 2000-2004.

Problem-solving skills: In the past few years problem solving tasks have been used for selecting bright students by many universities, acknowledging that it is an effective way of selecting gifted students for university education. It is described as particularly useful in the context of selecting students from disadvantaged backgrounds, who do not always perform well in national tests. During the pilot programme we offered problem-solving situations in Mathematics lessons which introduced them to processes useful in all areas of the curriculum. The aim was to encourage students to produce conjectures, seek relationships between elements within a situation and generate the production of valid solutions. Students were also given opportunities to develop their own algorithms/methods and solve problems without excessive reliance on taught rules and procedures. One area which received a very useful response from the students was problem-based learning where groups of students worked on *real world* topics, which were also related to school subjects. These sessions proved useful in convincing students that there are many pathways through a problem and towards the need for seeking or generating new knowledge. A strong message that comes through was the importance of team work in solving problems and the role of co-operation for success. In the present programme, we extended the teaching of problem-solving through a wider range of subjects and topics.

Outside speakers: We invite outside speakers from a wide-ranging background to share their experiences with the students. Indicators of people's achievements after overcoming difficulties of financial status, language and class and race problems were highlighted by speakers. The outside speakers generally served the students as good role models who had aspired and achieved in spite of disadvantage and adverse circumstances. This component of the programme was retained for the present programme with a more structured monitoring of the impact of the speakers on the scholars' outlook.

Personal projects: From the start of the programme, we had noticed that the students were not used to carrying out focused, in-depth work over a period of time. This shortcoming was addressed through them being asked to select a topic of personal interest, work on that topic for an extended period and to present it to an audience. We adopted Renzulli's Enrichment Triad (1994) as a model for organising the personal projects, which recommends the development of students' early interests and passions through extended projects as a means of talent development. Students carried out an extended research project, which provided them with research and presentation skills.

Career education: Two aspects which emerged from questionnaires and interviews at the start of the pilot programme were: students' lack of awareness of their own abilities and a lack of aspirations to select careers which require university education. We had included discussions and workshops on career choices and university education in the programme to address these aspects. Lectures and workshops on career choices, preparation of Curriculum Vitae and an early look at university entrance form statements are provided. Workshops for parents about career choices and Higher Education

revealed that many had not thought about these issues previously. We felt that many of our students' low expectations of themselves may have been the result of their parents' lack of knowledge of the opportunities available to them through national initiatives, although many of our students were capable of joining universities and following successful careers.

Partnership with parents: Casey and Koshy (2002), in their research found that parents of children from disadvantaged backgrounds did want the best for their children, but their lack of knowledge and experience seemed to make them feel inadequate to provide the necessary support. During the pilot programme, out of the 94% of parents who responded to our questionnaire, 85% of them had no university education. During parents meetings many articulated, strongly, how they were pleased to have their children attend the programme so that their children may have '*what was denied to them*'. The issue of the cycle of parents with no knowledge and experience of Higher Education opting out of Higher Education for their children was a constant topic of discussion by the parents who were interviewed.

1.4 Theoretical Framework

Many of the students in our intervention programme were recruited from the *gifted and talented* cohorts from inner-city schools which is a government requirement. In this context, the issues relating to identification had to be addressed. The complexities of identifying higher ability students from inner-city areas where true potential was often masked, due to external influences, are well known from previous studies in England (Casey and Koshy, 2002; 2005). These studies had shown that test results were not a true indicator of the potential of students from inner-city schools. Renzulli's (1994) Three-Ring model which emphasises other indicators such as creativity and task commitment as equally important as the level of ability, Gardner's (1983) theory of Multiple Intelligences which provides a framework of identifying diverse talents and Sternberg's (2000) view of giftedness as *developing expertise* were adopted for identifying the gifted and talented students who were to be selected for the intervention programme. Theoretical support for the design of the programme for the individual was provided by Vygotsky's (1978) Zone of Proximal Development and Maslow's (1970) notion of Self-Actualization.

1.4.1 Guidance for selection of pupils for the Urban Scholars Programme

The following guidance was sent to all schools taking part in the programme to help them identify their students who would benefit from the programme.

- A potential to eventually embark on university studies. This is particularly important in the case of parents not having had opportunities for Higher Education or for a student from a relatively disadvantaged background, for any reason.
- An entitlement to free school meals or students who have recently been removed from this category.
- Students experiencing a level of disadvantage which impacts on their performance within school. We would encourage teachers to use their professional judgement when identifying these students.
- Pupils for whom it is felt that schoolwork is not sufficiently challenging or providing



opportunities for enrichment. This may, for some pupils, lead to some disenchantment with school.

- A flair for one or more dispositions; analytical thinking, creative and imaginative responses often evident as the ability to solve problems. A street-wise maturity, which may not necessarily manifest in academic performance, but may be strengthened by being supported by the programme.
- Teacher observation of fast acquisition of new material and capability to think deeply.

Chapter 2: Research Design

2.1 Monitoring the effectiveness of the programme

The programme employed a unique methodology, combining numerous quantitative and qualitative data sets embedded within a Design Experiment methodology– used for refining the final programme model. Methods of data collection and analysis are described. The results of the evaluation are presented under the five aims of the programme, based on robust evidence generated from both quantitative and qualitative information.

2.2 Design Experiment Innovation

The realisation of the complexity of the design of an appropriate intervention programme, which was to take account of emerging data analysis, led us to adopt a *Design Experiment methodology* which has been growing in popularity in recent times (Gorard *et al*, 2004). The compelling argument for *Design Experiment* which is also known as *Design Research*, as put forward by Akker *et al* (2006), is that it stems from the desire to increase the relevance of research to educational policy and practice. The ideas relating to design experiments are not new; a shift from traditional to design-based experimental approaches was used by Brown (1992). By following the principles of the design experiment model we were able to construct practical activities and study their effectiveness and impact. Students' responses to specific features of the programme could be monitored. The context-bound nature of this methodology does not strive towards context-free generalisations, but our research team felt that the adoption of this method has provided us with robust, evidence-based support (Burkhardt and Schoenfeld, 2003) for the design and adoption of an effective model of intervention for addressing government policies and making evidence available for educational practice. The Design Experiment model afforded the data collected before, during and after intervention to be used in the construction and refinement of theories. The iterative cycles have resulted in improvement in theory and refinements of the intervention.

The programme content, learning materials and strategies used on the programme were modified on the basis of on-going feedback from participating students, their parents, university tutors and teachers from schools. The review of the programme has led to many amendments that we believe have contributed to its overall success.

Most of the reported studies using Design Research are persuasive and the achievements are significant, but they seem narrow and confined in the main to tightly structured areas of the curriculum such as mathematics and science. In the work we have undertaken we have attempted to use design research to improve the impact of a large scale, multi-faceted intervention programme aimed at raising the educational achievement and aspirations of youngsters in challenging circumstances within urban areas. At the same time we were seeking to learn lessons about the conduct of design research in the context of this intervention, the Brunel Urban Scholars Programme. Our aim is to offer some procedural lessons we have learnt in the conduct of developing our study.

2.3 Data collection

The data collection was an ongoing process throughout the duration of the 4-year programme. 83 out of 100 scholars completed the full 4 years of the Urban Scholars Programme, thus receiving the 'full' intervention. This represents an 83% retention rate. As students left, the programme places were offered to new students to maximise the benefit to the students, although their data are not included here. To reiterate, the data presented here are from 83 students who completed the full 4 years, as they represent the full intervention cohort.

A mixture of quantitative and qualitative data collection methods were used. The Urban Scholars Programme is a sociological intervention in which we were interested in finding out how the programme influenced a range of aspects in the scholars' lives, as are reflected in the aims of the programme. Academic enhancement, which is one of the aims of the project, demographic details and attendance levels were measured quantitatively, whereas the other aims - greater engagement with learning, attitudes to future and perceptions about how the programme had influenced their thinking - were assessed using authentic interviews and comments gathered through continuous feedback on the different components of the programme. These comments have been greatly valued by practitioners as powerful evidence and provide real insights into the effectiveness of the programme. Descriptive information often opened up new avenues for exploration, leading to both refinement and additions to the programme. Through individual interviews and discussions with students, we were able to gather personal insights and interpretations of how the scholars responded to the programme.

Quantitative/Qualitative Data Sets

- Questionnaires, comprising open-ended questions, which had the flexibility to quantify certain elements. These were completed by scholars at the start and end of each academic year. Analysis of the questionnaires was used throughout the duration of the programme to make refinements. In order to measure the impact of the intervention, for the most part results from only the first and last questionnaires will be presented here.

Questionnaires were generally completed whilst at the university. As is to be expected, attendance was not always 100% and so there were some questionnaires missing. Final numbers for the start of the programme were 80 (out of 83) and for the end of the programme questionnaire 67 (out of 83). This should be borne in mind when considering the frequencies of responses presented in the analysis later on.



Quantitative Data Sets

- Key Stage 2 SATs results, predicted KS3 SATs results and final KS3 SATs results.
- Predicted and achieved GCSE results.
- Socio-economic background information on the students.
- Attendance at school and on the programme.
- Statistics about the schools the scholars attended; for example, the percentage of students gaining the benchmark of 5 A*-C GCSE grades.

Qualitative Data Sets

- A sample of 24 (28%) scholars was interviewed each year about the programme and their hopes for the future.
- Skills and attitudes trajectories of a sample of the scholars, conducted in sessions at the Urban Scholars Programme.
- Focal group; this is a self-nominated group comprising scholars from both West and South cohorts which provided us with feedback immediately after sessions on each day's programme, so that changes could be made in response to the scholars' comments. The focal group responses served to provide rapid feedback for the purpose of refining the programme content and delivery. These responses, along with the student trajectories we kept, were valuable to the programme team to make refinements to the programme.
- Whole intervention group interviews; gathering 'student voices', focusing on their thoughts on the programme, on being 'Gifted and Talented' and their needs at school, their thoughts about their schools and their hopes for the future.

Chapter 3: Findings

In this Chapter, we present our findings based on the analysis of the range of data sets.

3.1 Supporting engagement with learning (Aim 1)

Before presenting the evidence of scholars' engagement with learning, we provide our working definition for engagement with learning. Our broad definition was as follows: increasing interest and liking for school, increased interest in academic subjects, increased interest in and enjoyment of the Urban Scholars Programme.

This definition was further subdivided into 2 main categories; firstly, engagement with school/learning which included:

- Like/dislike for school.
- Engagement with lesson content in school.
- Enjoyment of challenge in school.



- Appreciation of learning new things and/or skills.
- Lessons from the Urban Scholars Programme being used elsewhere.

Secondly, engagement with the Urban Scholars Programme, which included:

- Enjoyment of challenge on the programme.
- Like/dislike for the Urban Scholars Programme.
- Appreciation of learning new things and/or skills. When considering the programme, we specifically focused on the programme components and session content which related to engagement with learning. These were as follows:
 - Critical Thinking skills.
 - Presentation skills.
 - Study/Revision skills.
 - Influence of external speakers.
 - Attitude towards work skills e.g. perseverance, confidence with learning ability, fear of making mistakes.

3.1.1 Evidence supporting engagement with learning in relation to school

Questionnaires showed that the number of scholars who enjoyed school increased over the 4-year period. This demonstrates increased engagement with learning. The interview data provided us with more in-depth insights as to why the scholars enjoyed school more. The main theme that arose was that the programme had helped scholars at school, often teaching them things they felt they would not have learnt otherwise, and thus developing their knowledge.

"[It's] had an impact on my achievement, because of new methods I learnt, like I did Maths with algebra well, and when I learnt it in Brunel, we were taught from a different perspective, and so it did help me in my Maths and everything" (Student 1, exit interview).

"I think so like where you have learnt more information outside of school so whereas like other students might have the information we've learnt in school, I've got that bit extra, so it's helped....Maths, science and English mainly" (Student 2, exit interview).

"When they teach you Maths, they don't teach you straightforward Maths, they use problems and life circumstances, and you're able to take it out and put it into practice, and to think of your future more. You're able to do things that when people ask what you're doing; they are able to understand you more, because it's like a different point of view. You study more things...you learn different poems, stories [to school]" (Student 3, whole cohort interview).

"I come to the programme because I'm driven by the fact I might learn something I wouldn't learn in school" (Student 4, whole cohort interview).

“The English sessions, it does help me...she (tutor) does give a lot of feedback so it does help when I’m writing my essays in English for coursework” (Student 5, whole cohort interview).

“It helps me a lot with my Maths work especially because I’m not really good at Maths and I think I’ve improved a bit in Maths” (Student 6, whole cohort interview).

Scholars also felt the programme had helped with their revision techniques and they had begun to think more analytically and critically due to the critical thinking sessions.

“[It’s helped at school] a lot on the revision side of things, how to do it so I’m not just taking in pointless information. And it’s helped my grades a lot in things like Maths, and English...one day we did something on techniques and I use them quite a lot” (Student 7, exit interview)

“When we had the study skills that really helped me when I was trying to revise, different ways of teaching myself” (Student 9, whole cohort interview).

“[The] programme gives me different ways of thinking about things and different techniques to what school does [for example] when we did revision lists there was so much more that Brunel had done with us than what school usually tells us to do” (Student 10, whole cohort interview).

““It prepares me for exams, like when we do English...they help us out with what we’re going to do in exams...It helps me to see work in a different light and take a different approach to problem solving, being independent...Critical Thinking lessons helped me to see thing in a different way, see there’s an alternative way of trying to do things” (Student 8, whole cohort interview).

Scholars’ parents also agreed that the programme had influenced their critical thinking skills, with their children being able to structure arguments better. Thus, we can see the programme has increased the scholars’ engagement with learning in this respect.

“[Student 12] used to accept what was said, and would accept what you were saying as fact; I didn’t think she had any opinions... [But now] sometimes she’s a right pain in the arse! She reasons with us about going out and offers alternatives...her older sister has noticed that [she is] more assertive in her opinions” (Student 12’s Dad, year 9 interview).

“Her ability to hold her own in an argument etc has definitely improved; her skills at interacting have really improved since she’s been here” (Student 13’s parent, year 9 interview).

3.1.2 Evidence relating to engagement with learning in relation to the Urban Scholars Programme

Questionnaires asked scholars to provide their thoughts on the Urban Scholars Programme. At the end of year 11, more scholars than previously provided both positive and negative comments. The main reason given by scholars for disliking the programme was it being on a Saturday, the ‘early start’ and a long journey. The commentary below highlights the reasons scholars gave for enjoying the programme.

Although we cannot definitively state that the scholars' enjoyment of the programme has increased over the 4 years, the qualitative evidence from the interviews does suggest that scholars feel the positives outweigh any negatives.

Scholars expressed enjoyment of sessions on the programme, as well as a general enjoyment of learning new things (from 22.5%, 18 out of 80, to 30%, 20 out of 67). This shows increased engagement with learning. During the interviews, scholars repeatedly mentioned the programme had helped them develop their study/revision skills, as well as helping to change their attitude towards work and/or school in general. This shows that the programme encouraged them to be more engaged with their learning.

"The session where we did the revision skills, learning how you learn best, like visual, audio and kinetic (kinaesthetic) and um that really helped me with preparing for my exams and like learning it better not just in school but at home" (Student 8, exit interview).

"I tend to see myself working harder, whereas in year 7 I used to be really really bad and year 8 when we started the programme, I kind of became more focused on my learning, it was like a wake-up call" (Student 1, exit interview).

"Probably one of the biggest things, before I had the attitude that maybe I wouldn't want to go to school if I had the choice, but now I would definitely, it's well worth it" (Student 7, exit interview).

"I think I now realise that school is important, that's from talking to ambassadors (Brunel Undergraduates) and finding out how they feel about uni" (Student 15, exit interview).

Parents also felt that the programme had helped change their attitudes towards their work. The following quotes demonstrate that parents feel it had increased their engagement with learning in this respect.

"It's not for every child, it's not very cool to be smart but I think this [the programme] showed her it is. That you can still be both, that you can still have lots of friends as she does and still be smart and do her homework and do this" (Student 16's Mum, year 10 interview).

"It gives him a focus not to lose track of thinking, what is required of him, he has to be hard working to make those study habits" (Student 17's Mum, year 10 interview).

3.2 Support for academic achievement (Aim 2)

Our definition of increased academic achievement was as follows: to improve examination grades, and help scholars achieve or exceed the targets set for them in school.

3.2.1 Brief summary of Key Stage 3 SATs Results

Scholars took their Key Stage 3 (KS3) SATs exams in the summer of 2008, after they had attended the programme for just under 2 years. It was, therefore, important to monitor their progress at this midpoint. The national SATs results in 2008, particularly the English results, were widely criticised by teachers and the media for being inaccurate, and many schools contested the results their children received. After these problems occurred, the government made the decision to abolish KS3 SATs examinations. Therefore, the data presented here should be viewed with caution. Furthermore, as a consequence of these problems, we were only able to obtain results for 77 (out of 83) scholars.

To assess scholars' academic achievement, scholars' predicted scores were compared with their achieved scores. In summary, 67.7% of scholars met or exceeded their English predicted target, 76.2% met or exceeded their Maths predicted target and 74.6% met or exceeded their Science predicted target. We were somewhat disappointed by the English results, despite being encouraged by the Maths and Science results. Although the poor English results could have been due to the problems previously noted, we decided to introduce more English sessions into the programme to encourage the scholars. We were extremely encouraged to see that some scholars exceeded their predicted Maths and Science targets by 2 levels; this is particularly important when we consider their low achievement at the start of the programme. Additionally, it was interesting to note that 9 out of 26 scholars who achieved level 8 in Maths were also predicted to achieve an 8, meaning that they had no room to improve. This equates to 33.8% of the scholars achieving the top mark. This provides more evidence that the scholars did very well in Maths.

3.2.2 GCSE Results

The results presented here are based on 79 responses, as at the time of writing this report, a few scholars were yet to return their grades to us. Some scholars were unable to tell us their predicted grades; later analysis is based on 67 scholars only. Comments regarding the total number of responses received are dealt with later in this section.

On the whole, as can be seen from Table 3.1 below, scholars did well in both Maths and English Language, with only a very small number not achieving a C grade. The mean grade for both subjects was a B, although the number of A*s and As is also very encouraging.

Table 3.1: Scholars' Maths and English Language GCSE Results

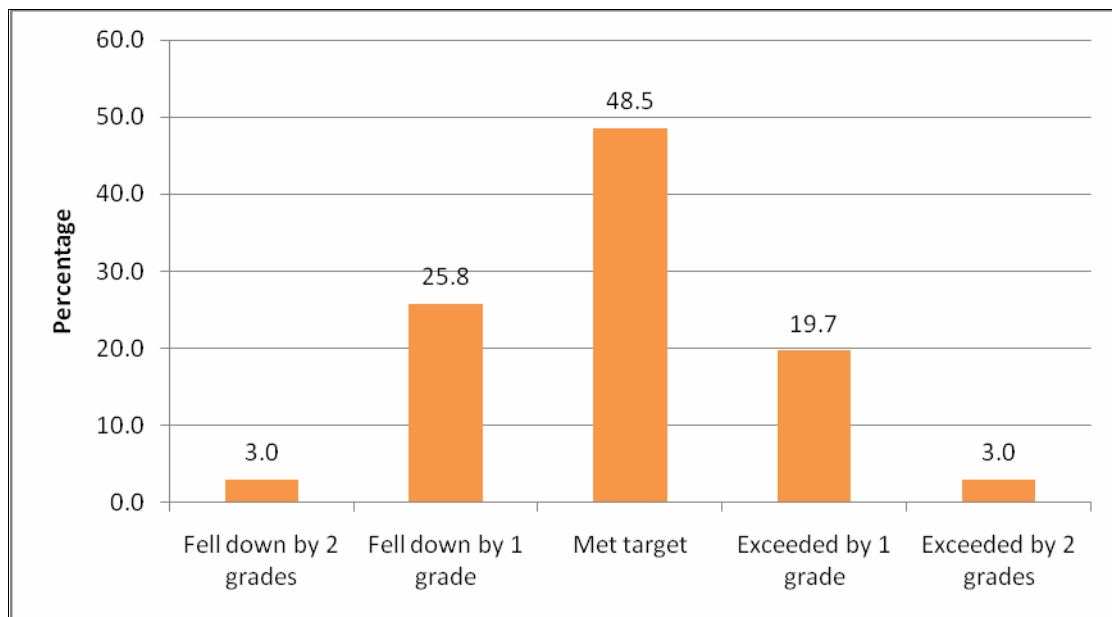
Grade	Maths		English Language	
	Frequency	Valid %	Frequency	Valid %
A*	13	16.5	9	11.4
A	19	24.1	25	31.6
B	28	35.4	27	34.2
C	15	19.0	16	20.6
D	3	3.8	2	2.5
E	1	1.3	0	0
Total	79	100	79	100



3.2.2.1 Predicted GCSE results compared to achieved GCSE results

Whilst it is encouraging to see that the scholars did well overall, it is important to monitor whether scholars achieved the targets set by their schools. Again, we wanted to measure individual's results to see if they had performed as well as was expected. The mean scores were calculated for the best 5 grades (including Maths and English Language), and the predicted grades for those subjects were also calculated. A t-test was conducted using paired samples. The full table of results can be found in Appendix 1¹. The t-test shows that the achieved mean score was significantly higher than the predicted mean score at the 5% level ($p=0.018$). Therefore, we can confidently say that scholars achieved above what their schools predicted for them. Separate t-tests comparing achieved and predicted Maths and English Language scores were run, but these were not significant. Although the following figures are not statistically significant, we felt it would still be useful to assess the number of scholars meeting their English and Maths targets. Figures 3.1 and 3.2 below show that most scholars achieved their Maths and English Language targets, with 71.2% meeting or exceeding their English Language targets, and 75.8% meeting or exceeding their targets in Maths. The English results are particularly pleasing because the results at KS3 SATs had caused us some concern.

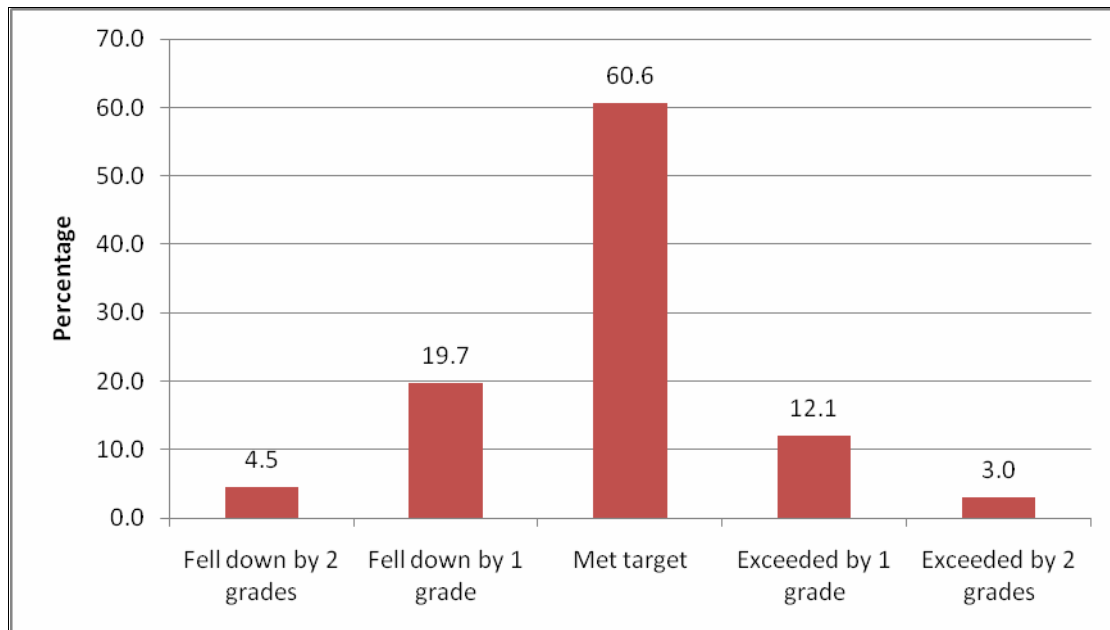
Figure 3.1: Assessment of whether scholars met their predicted English target, by percentage



¹ The t-tests were conducted on 67 scholars' data, as predicted grades were unavailable for 12 students.



Figure 3.2: Assessment of whether scholars met their predicted Maths target, by percentage



Additionally, we conducted a linear regression to assess the expected change in the mean score. Holding other variables constant, we expect increasing the predicted mean score by 1 would raise the achieved mean score by 0.365, significant at the 5% level (shown in Table 3.2). It is interesting to note that the interaction affect of predicted scores and the west cohort² was not significant. This suggests that the achievements of the scholars are the same in all of our Local Authorities.

Table 3.2: Linear Regression testing mean score as the dependent variable

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.518	1.229		3.676	.000
	predicted mean score	.365	.177	.367	2.065	.043
	west	-2.965	1.661	-1.957	-1.785	.079
	cohortwest_interaction	.422	.252	1.849	1.672	.100

a. Dependent Variable: Mean score

3.2.2.2 Key Stage 3 to Key Stage 4 Progression

We also felt it important to monitor their progression over the course of the programme. To do this, their Maths and English KS3 SATs results were compared to their GCSE results. Science results were not compared due to the variety of Science options available at GCSE level. Students are expected to

² Scholars attend the programme in 2 groups, the 'west' group and the 'south' group. These broadly refer to the areas of London where they are from. The west group is made up of Brent, Haringey, Hillingdon, Hounslow and Kensington and Chelsea. The south group is made up of Ealing, Lambeth, Southwark and Wandsworth.

progress to the point that students achieving a level 5 at KS3, would gain a C grade at GCSE, level 6 would convert to a Grade B etc. 91% of scholars met the normal progression target or exceeded by progressing beyond the expected rate in English; thus it seems the extra sessions did help scholars. However in Maths, 50% of scholars had not progressed at the expected rate. We speculate that this may be because the Maths results had already improved to a higher level at KS3.

3.2.3 Limitations of Examination Data

Whilst there are some positive results presented above, the results need to be regarded with some caution. The results presented above are incomplete, as at the time of writing, around 5% of scholars were yet to return their GCSE results to us, and we are missing around 19% of the predicted grades. Additionally, this is a complex, multi-variable situation. We acknowledge that the attainment results will always be influenced by both the school circumstances (teachers, expectations, revision) and individual situations. Another point of consideration is that examinations are not everyone's forte, and test only certain aptitudes. Therefore, the results presented above could be attributed to any of the above and not solely to the impact of the programme.

3.3 Supporting aspirations (Aim 3)

One of the central aims of the programme was raising the aspirations of the scholars, as it was previously noted that low aspirations often mean disadvantaged students choose the 'easy option' and do not achieve or attend places that match their potential. The provision we made on the programme was closely linked to another aim of the programme - raising Higher Education orientation.

Our definition of raising aspirations was; "a move towards more professional, focused and realistic career goals, and a move towards wanting a good life for themselves". This definition was then further subdivided, and so the analysis looked for the following factors:

- Increase in professional careers (both in general and for individual students),
- How career goals have changed for individual students,
- Where the career falls on the National Statistics Socio-Economic Classification (NS-SEC) scale,
- Relationship between final career aspirations and parents career/education (in order to assess for social mobility),
- The effect the programme has had on their career and lifestyle choices, and the effect the information we have provided them with has had.

An authoritative study by the DfCL and the DCSF (2008) on raising aspirations and attainment in deprived communities suggested that the following 4 components were required to raise aspirations:

1. Information-young people and their parents need appropriate and reliable advice in order to make informed choices.
2. Self-esteem- they need to have the confidence that they hold the skills and aptitudes necessary to achieve their goals.



- 3. Inspiration- young people need diverse sources of inspiration through meeting new people and trying out new things.
- 4. Self-efficacy– they need to have belief that they can achieve their goals through hard work, and feel confident that they have a fair chance of success. (DfCL/DCSF 2008, p10).

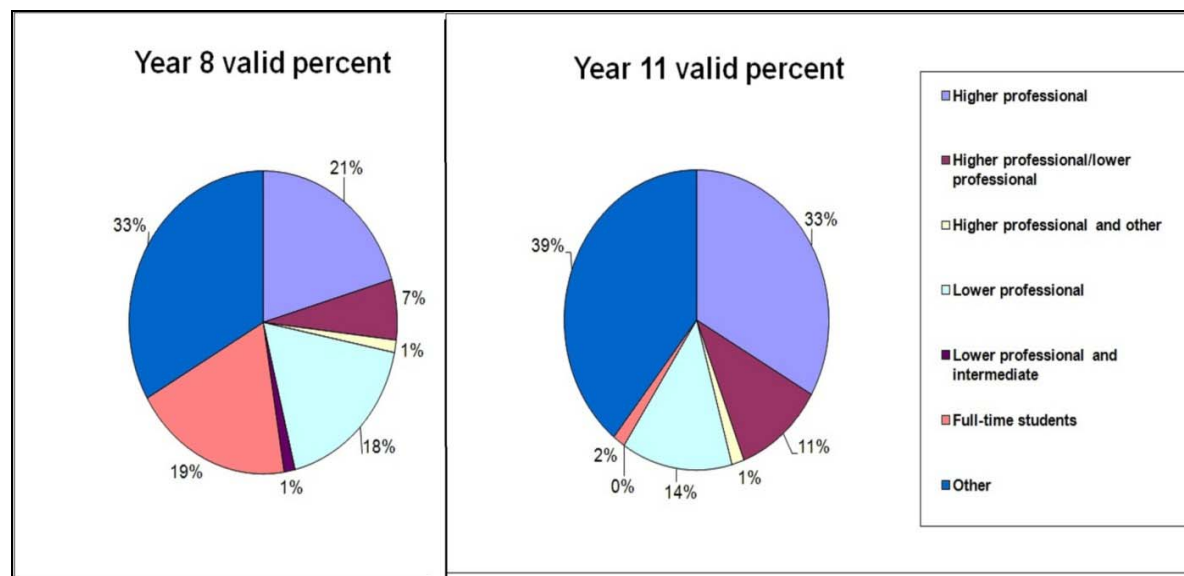
Through two of the main programme components, careers guidance and inspirational speakers, we aimed to provide the above, by broadening their horizons and providing clear information about education beyond secondary school, in order to raise scholars' aspirations.

Raising aspirations is a complex concept and it is difficult to prove a causal relationship. In order to try and overcome these difficulties, we first present data which shows whether aspirations in 'real terms' have increased, and then present data which shows how the Urban Scholars Programme was effective in meeting its aim.

3.3.1 Aspirations Raised in 'Real Terms'?

Scholars' career aspirations increased to some extent, as the percentage of scholars stating they wished to follow a professional career increased by just under 10%, from 31.1% to 40.3%, between the start and end of the programme. This finding was reiterated, as we converted the careers scholars stated they wanted to follow into NS-SEC categories. As shown in Figure 3.3, there was an increase in the percentage of students stating higher managerial and professional occupations as objectives.

Figure 3.3: Summary of NC-SEC



A detailed analysis of each scholar was conducted to assess how their career goals had changed over the 4 years. It was interesting to note that 36.6% of scholars' career aspirations increased, with a further 40% of scholars' career aspirations remaining the same (with them often already being high). Therefore, only the remaining 23% described less clear career aspirations, making this group the minority. Thus there is evidence of increased aspirations in this respect, in most cases.

To assess the programme's influence on social mobility, we compared the students' career goals with their parents' current occupations. This is important; if the scholars' goals were to exceed that of their parents' current occupation, it would suggest scholars had high aspirations. It would also provide evidence to support the idea that 'intergenerational mobility' was possible for this group of people. Our assessment was limited due to the number of parents declining to provide us with their current occupation. Despite this, it could be argued that 48.1% (13 out of 27) families showed intergenerational mobility, as the children articulated their aspirations to achieve more than their parents.

3.3.2 How the Urban Scholars Programme has helped

The evidence presented above shows that overall, the Urban Scholars cohort had raised career aspirations, with more scholars stating a professional career and/or a career which fell into the highest occupational stratification group. It was also shown that a third of individual scholars have raised their career aspirations over the course of the programme. There is also limited evidence to suggest that some scholars have aspirations to exceed their parents.

During the interviews with scholars, we were able to gain more in-depth insight into their aspirations and thoughts about their future. There is evidence to suggest that the Urban Scholars Programme encouraged scholars to raise their aspirations and change their ideas about their future, through the career talks, inspirational speakers, as well as their interactions with the undergraduate ambassadors. As was previously mentioned the DfCL/DCSF (2008) report highlighted 4 areas which were essential for raising aspirations (information, self-esteem, inspiration and self-efficacy). Below we present evidence from the students and parents interviews to show how the Urban Scholars Programme contributed to these key factors. Many of the quotes presented show the programme helping in more than one of the mentioned areas. Thus the quotes are presented under the areas they primarily focus on.

Raising Aspirations area: Information

" [I] realise [now] that school is actually important now...and that's from talking to ambassadors and finding out how they got to uni...[programme has taught me] what I have to do now to get to college, to university" (Student 15, exit interview).

"It gets me to think long-term, if I was going to do a GCSE in something, is it actually going to go towards something that I might do in the future" (Student 7, exit interview).

"[I enjoyed when] the university students came to talk to us about their courses...[enjoyed] when we had to stitch the body...it was an insight, I don't know what I want to be yet...but it helped me to distinguish what I like...Going to a university, it makes you, like, its shown me that it's not that hard...the things they tell you about the student loans...it makes you believe you can do it" (Student 18, exit interview).

"I think it has opened her eyes to what uni life could be like and she has decided either to stay on at school or to go to college or uni which before was in the back end of her head you know college but now she knows what uni life is like that she can stay on campus" (Parent Interview; Student 21's's Mum, Year 10 interview).

"It has also helped, he has always been interested in architecture but now it has broadened his horizons actually and he is interested in engineering not just architecture. He has seen a



lot and heard a lot since he has been there and is now looking into other areas” (Parent Interview, Student 22’ Mum, Year 10 interview).

Raising Aspirations area: Self-esteem

“[Without the programme?] I probably wouldn’t be too sure about where I want to be in 10 years time or something...it kind of makes you think a bit more, without it, I think it would have been a lot more difficult.” (Student 8, exit interview).

“I always wanted to go to university, but it was just always something in the back of my head like not anything that really interested me, but now I definitely want to go to university...seeing the ambassadors...they tell you about university life, about their nightlife, their lessons and everything...once you see someone else doing it you think oh yea that’s interesting...in the beginning when I first started urban scholars I wanted to be a lawyer, but it made me think, and when I sat down and thought about what I actually want to do with my life...[realised] I want to be a social worker...it’s changed my view on what I want to do in life and it’s made me sit down and think” (Student 1, exit interview).

Raising Aspirations area: Inspiration

“Speakers that we had and listened to, learning what their achievements were and how they used to think about school which would be quite similar to most people being negative...when they say and then I decided to knuckle down because I found that I was enjoying this and then you see how far they’ve come then and that was quite inspirational” (Student 8, exit interview).

“The days, you know like career days where they got people to come in and talk about different courses and things like that, because I would always think that education is something like English, Maths, Science, you would never think that fashion courses...things that you can branch out, it really has opened my eyes...made me see that there are different options” (Student 19, exit interview).

“What I really liked about the February programme was the visit from Maximise your Potential.... It really inspired me to keep chasing my dreams and to never quit. His advice would be useful for the future when I am older and when exams are here” (Focal Group).

“In the afternoon we had the amazing speech by Andy which I thought was brilliant because it was a kick start to another exciting year at Brunel. The speech spurred me on and I understand that success comes from within: raw determination, focus and effort. It was a real learning curve for me because when I don’t feel like waking up on a school morning I think about the opportunity I might miss out on otherwise”(Focal Group).

Raising Aspirations area: Self-efficacy

“Well...like Andy said you have to get your arse out of bed...that phrase just stuck in my head, that I have to improve myself to get what I want, so that’s how it would be, work harder and now I’m doing quite good in school.” (Student 14, exit interview).

“What Andy told us about handling our lives was something I added to my routine as well. Such as putting my priorities straight and getting more involved with extra-curricular activities” (Focal Group).

3.4 Supporting Higher Education orientation (Aim 4)

Increased Higher Education orientation was defined as an awareness of their ability to attend Higher Education or an expressed intention of attending Higher Education.

We had noticed that Higher Education (HE) orientation was always quite high among scholars, perhaps because they had been selected for a programme at a university and had seen and experienced the university campus (HE in the first questionnaire was 48.7%). Analysis of the scholars' questionnaires over the 4 year period showed that 92.8% (77 out of 83) of scholars mentioned they wished to progress to HE. As Higher Education orientation was initially high, we felt it important to compare individuals' HE orientation over the 4 year intervention, despite the data being limited due to lack of comparable questionnaires. Analysis showed that 13 out of 34 scholars developed HE orientation during their time with us (40%). We can see that the majority of scholars have HE orientation after visiting the university campus and although it is based on relatively small numbers, we can say that at least 40% gained this as a result of attending the intervention programme. Whilst we cannot claim this is solely the result of attending the programme, the data that follow show the effect the programme had on scholars recognising the role of Higher Education in their futures.

During interviews, scholars also expressed a desire to attend HE; 76.1% of scholars expressed a desire to attend Higher Education during the whole cohort interviews, and 91.6% of our interview sample expressed HE orientation in the final exit interviews. Scholars remarked that studying on a university campus and experiencing the university through a campus tour (which included halls of residence) was an insightful way to see and understand universities. Experiencing university at a young age, as well as the various motivational speakers, careers guidance and advice from the undergraduate student ambassadors was more frequently mentioned by scholars in their year 11 interviews. This is demonstrated by the following quotes:

“It's making me think that maybe I'd like to go to university when I grow up... I just thought like, I saw what Brunel was like...sort of how big it was...it was cool” (Student 29, Year 8).

“Just being around the university is just great, to have a feel of what it would be like, and being in the lecture building as well because I'm sure when you go to your first lecture it could be quite intimidating” (Student 9, exit interview).

“I enjoyed when the university students talked about their courses and the surgeons session. I don't know what I want to be yet, but was an insight, helped me to distinguish what I'd like and what I wouldn't” (Student 18, exit interview).

“It gets me to think long-term, if I was going to do a GCSE in something, is it actually going to go towards something that I might do in the future?” (Student 7, exit interview).



Another key factor suggesting that the programme encouraged Higher Education orientation was scholars stating that the programme had made them want to work harder so they could achieve their goals.

“Like Andy said you have to get your arse out of bed, basically he...that phrase just stuck in my head, that I have to improve myself to get what I want, so that’s how it would be, work harder and now I’m doing quite good in school” (Student 14, year 11).

“I tend to see myself working harder, whereas in year 7 I used to be really really bad and year 8 when we started the programme, I kind of became more focused on my learning, it was like a wakeup call” (Student 1, year 11).

Comments from scholars in the Focal Group also provided evidence that they believed the programme had led them to begin thinking about Higher Education.

“I have used the information about the university experience and the aims from the two presenters. I have started to look forward to my university planning and I have been thinking about how I should organise my future.”

“I thought the January Urban Scholars Programme was a really good day: learning about other people’s experiences in university and how they might have changed it. This has made me think about what I want to do later in life and helped me to understand what can happen with the choices I made.”

“The self discovery questionnaire helped a lot. It taught me a lot of things about me and what I can do to get help school wise and about universities. It also helped me to discover a whole lot of things that I didn’t know about universities and it helped me think over a lot of things that it involved.”

Although questionnaires and interviews showed that many scholars expressed an interest in studying at university, initial interviews and questionnaires had suggested that scholars were unaware of the steps needed to help them get there. This was also highlighted by Urban Scholars Tutors who suggested that scholars had little knowledge of pathways post-GCSEs. During the final interviews and questionnaires, it became apparent that scholars had become more aware of the steps they needed to take, mentioning attending university as a step towards their desired career, alongside or in addition to hard work and achieving good grades. Evidence of this is provided first, with a comparison of the steps scholars stated in their first and last questionnaire, and second, quotes from scholars are provided. We identified 6 key factors which are important to achieving goals and questionnaire responses were monitored for these, and given one point each for mentioning any of the following:

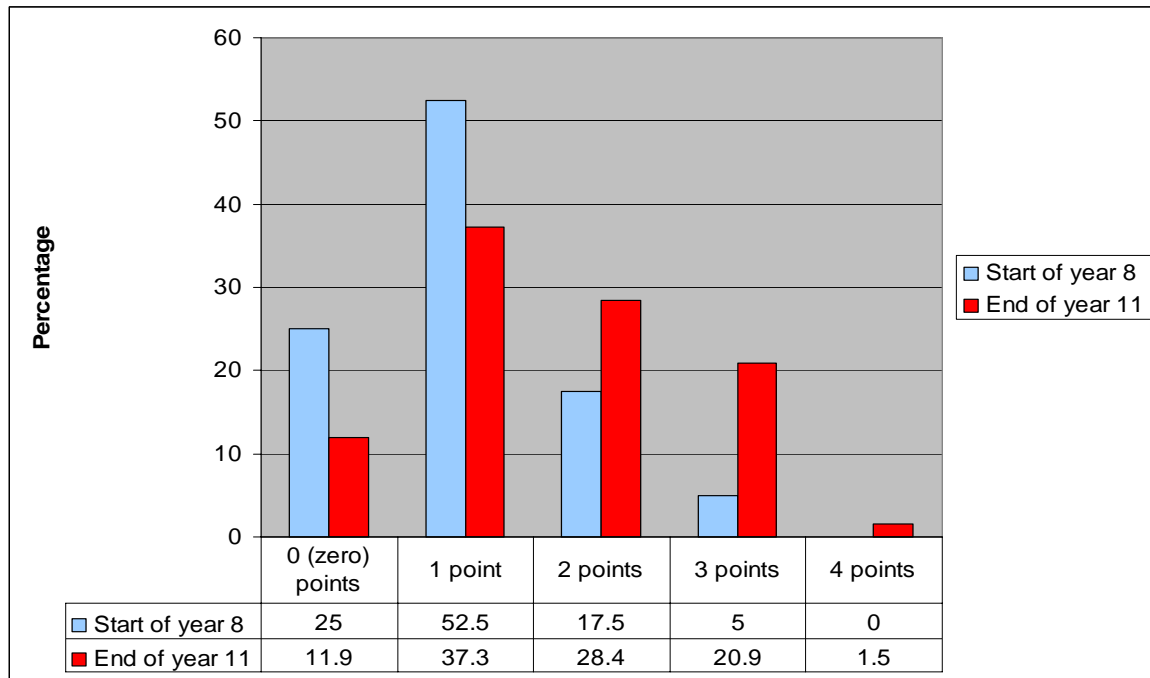
- 1.Attend education to level needed for their desired career
- 2.Hard work
- 3.Determination/perseverance
- 4.Gain work experience
- 5.Do research into best courses/jobs/universities



6. Mention specifically taking a GCSE/A-Level/Degree/Other course required for desired job.

As can be seen from Figure 3.4, scholars gained more points at the end of year 11, suggesting that their understanding of how to achieve their goals had increased. In the pre-programme questionnaires, 25% of scholars were unable to suggest any steps required to achieve their goals; in the post-programme questionnaire this had fallen to 11%. Furthermore, at the start of the programme, only 5% of scholars were able to provide 3 steps to achieve their goals. This increased to 21% by the end of the programme. Quotes from scholars shown in the previous section suggested that the programme had provided them with a lot of information and had encouraged them to think about their future more. This suggests the programme had increased the scholars' knowledge of how to achieve their goals, possibly raising their aspirations and possibly Higher Education orientation.

Figure 3.4: Number of 'points' received describing the steps to achieve their career goals



Focal group data shows how the programme helped scholars understand the steps they need to achieve their dreams and aspirations:

"I've started thinking about the different universities I would like to attend and the courses on offer. Since returning to school I have had to think carefully regarding my GCSEs that I achieve this year, as well as A levels and AS levels I need to enter university".

"The career/ university theme was quite useful and taught me a lot of things about university and the future and what I can do. It made me rethink the fact that 2 years isn't long enough if you are planning to go to a high profile university and into Higher Education or something similar."



3.5 Supporting understanding of self and life world (Aim 5)

One of the aims of the programme was to increase understanding of self and life-world, as it is important to understand oneself and others, and be able to work effectively with them. Our definition was as follows; ‘general understanding of personality and emotions, understanding of own ability and capacity to learn, importance and influence of friends and family, confidence with self and life, ability to work well with others’.

This definition was then broken down further to aid analysis. The key indicators that we looked for were:

- Enjoying meeting new people
- Increased confidence
- Increased understanding of self
- Better understanding of ability and learning style
- Better teamwork skills
- Greater control of self and emotions.

The post-programme questionnaire showed that 90.8% of scholars felt the programme had influenced them in some way. Scholars gave multiple reasons as to how it had influenced them, but the 2 main reasons were as follows:

- Improved confidence, 69%.
- Meeting new people/gaining social skills, 37%.

The interviews provided us with a clearer idea of how the programme helped develop their understanding of self and life world. The following quotes below support the evidence from the questionnaires, and show that as well as scholars enjoying the programme because they meet new and different people, they have benefitted from their increased confidence aiding their teamwork skills. It was also apparent that this confidence made scholars feel more secure in their abilities and encouraged them to believe in themselves:

“[At first] it was quite awkward because we were often asked to work in groups, but seeing that just became the norm and then you just worked with whoever...I’ve definitely taken, built on my confidence and like done more in the class to interact with everybody, like answering questions and all that...not always sitting with your friends, and getting on with whoever you’re put with, meeting new people” (Student 8, exit interview).

“When we had to like talk to the people that we didn’t know as a class that was quite a challenge because I don’t like to speak to people! Near the beginning and sometimes every now and again...it’s just a personal thing, like having the confidence to speak in front of people...at first I didn’t really want to, but like after once or twice it wasn’t too bad” (Student 2, exit interview).



"I think working in a group it really has [made it easier], because before I would be reluctant to, even with people in my own class, but then Brunel made it easier because you know you get thrown into it, you're out of your comfort zone with people you don't know...who don't think the same as you, so you have to learn to work with them" (Student 19, exit interview).

"I've become a good listener, because in the sessions you do have to listen to other people, I'm good with encouraging people now as well, and team work" (Student 5, whole cohort interview).

"I think it makes you more confident and I express my feelings easier, because I remember in the past I had troubles and now I feel a lot better" (Student 30, whole cohort interview).

"My confidence to speak to people, my confidence in general, speaking about things to a lot more people in groups, um, my team-work's been a lot better as well because I've been able to socialise with people that I don't know but still been able to achieve what I needed to" (Student 23, whole cohort interview).

"It's different from the usual environment we're in so we get to mix with totally different people from different parts of London and see how everybody is. We're kind of oblivious to their world so it is nice to mix with certain people" (Student 19, whole cohort interview).

Scholars were asked in the post-programme questionnaire to comment on the things the Urban Scholars Programme had taught them about the way they learnt. On the whole it can be seen that scholars felt they learned best with visual, audio and kinaesthetic activities. Scholars were also asked the question about the drivers and barriers in their learning during the whole cohort interviews. Similar themes emerged from these interviews confirming the findings of the questionnaires. Additional themes that emerged were: working in groups and with friends, a 'good teacher', and verbal discussion about topics. Moreover, scholars suggested that the main thing that held them back in their learning was the distractions caused by other students, 'boring lessons' and their own lack of concentration and involvement in a lesson.

"It has helped me in school, I've learnt, the way that I learn, there was a session that we done it was visual-kinaesthetic, I've learnt myself the way that I learn" (Student 5, whole cohort interview).

"I learn more by visual stuff, if it's just writing, it's not just me but other people in my class if they see loads of writing on the board they can't be bothered to read it...If there's pictures and stuff...it makes it easier for us to understand it and stuff. Say if there is a picture of a cell or something then it would be more easier if it was written beside it" (Student 32, whole cohort interview).

"Physical [work], can't sit down and just read, need to do things, like experiments. If I am reading from a book I have to do activity at end so it actually goes into my head. When I'm revising, I don't sit down quiet I make posters and things, I'm more of a creative person. Things have to be colourful for me to want to look at them" (Student 1, whole cohort interview).



“Doing is more how I learn instead of sitting there writing down what a teacher is saying or copying down a passage I find it easier to do something. It helps when teachers explain, but not too much, it bores me and I lose interest. Discover things for yourself” (Student 2, whole cohort interview).

“A good teacher is one that they see a student struggling and they help them, that has some sort of relationship with the students that they are comfortable enough to speak to them” (Student 5, whole cohort interview).

“A teacher who can teach you but if you need help they’ll answer you, friendly so you can approach them and say I need this and they can explain clearly” (Student 12, whole cohort interview).

“Group work helps you to learn as if you get an idea from your friend and it’s a new idea and you could use that. You can learn so many things from your peers” (Student 19, whole cohort interview).

We were encouraged to see that scholars had recognised the ways in which they learn, as this knowledge should enable them to learn and revise more effectively. In this respect, the programme seemed to have encouraged scholars’ understanding of themselves.

Chapter 4: Key Findings, Impact and the Future

In this Chapter we present a summary of the key findings of our research on the Urban Scholars Programme and its impact. Future directions are also reflected on.

4.1 Key findings

- The Design Experiment methodology has provided us with a means to produce an artefact which has undergone successive cycles of refinement.
- Although quantitative results were useful in monitoring the effectiveness of the programme, qualitative data expressing the students’ and parents’ real voices have added to the authenticity and the real-life dimension to the findings of the Urban Scholars Programme.
- All the 5 aims of the programme have been achieved. The level of achievement had varied, but we are confident that we now have a replicable model for wider use –either as a whole programme or its components.
- There is evidence of greater engagement with both school and learning. Both scholars and parents felt the programme had encouraged them to engage with school, and had helped them with their schoolwork (particularly Maths and English). Scholars stated they enjoyed coming to the programme for the session content and the various skills they acquired.
- Critical thinking skills, an important programme component and part of the aim of engagement with learning, were highlighted as being an important skill gained by scholars. Scholars felt they were able to approach a diverse range of situations more analytically.
- Overall, scholars achieved above what their schools predicted for them in their GCSE exams. There was no difference in the achievement of results of the Urban Scholars across the 9 Local Authorities.



- Scholars had increased aspirations, as there was an increase in the number of scholars stating they wished to follow a 'professional' career.
- There was also some evidence of inter-generational mobility, as just under 50% of scholars had aspirations higher than their parents' current occupation.
- The Urban Scholars Programme helped to raise aspirations by meeting the 4 essential requirements, as highlighted by the DfCL/DCSF (2008), providing *information* and *inspiration*, and encouraging *self-esteem* and *self-efficacy*.
- A key driver of *inspiration* was the motivational speakers who spoke to scholars. Speakers were often from similar backgrounds to the scholars, sharing honest real life experiences relating well to the scholars.
- We were able to identify an enhanced orientation to Higher Education. Students not only had greater orientation to Higher Education, they were able to demonstrate more systematic planning and thought about the steps they needed to take to achieve their goals.

We have evidence of an enhanced understanding of self and life-world. 69% of scholars felt the programme had helped them gain confidence. Scholars also felt the programme had developed their social skills and taught them about their learning styles, enabling them to learn more efficiently.

4.2 Impact

The impact of the Urban Scholars Programme can be considered at different levels. The primary beneficiaries of the intervention are the pupils attending the programme, their families and teachers of 30 London schools in inner-city areas of social deprivation. For the students, attendance at the programme has had a direct impact in terms of improving their aspirations, attitudes to learning and critical thinking skills. Their appreciation of subject-specific learning has also been enhanced. The HE orientation of the students is also greater. The positive impact of working with the university team has resulted in raising the expectations of teachers within the schools as evidenced through on-going data collection and analysis of communications, informal conversations with them and interviews. Teachers have also benefited through professional development (for example, pedagogical and curriculum development and the use of non-traditional methods for the assessment of submerged talent through their involvement with the programme).

Through extensive dissemination of the principles, design and the findings of the project, the programme has had a much wider impact, for example through presentations at the British Association conference, Nuffield conference and several other presentations given by the programme team. Requests have been made for support with replication from a range of audiences.

4.3 Future directions

The Urban Scholars Programme has been offered to over 500 students so far. The findings from both pilot projects (2000-2006) and the present project (2006-2010) presented in this report demonstrate the effectiveness of the project at different levels. We believe that the next step should involve an extensive professional development programme nationally, so that the principles and the components of the programme can be delivered in a number of ways - for



example: in schools, through after school and Saturday programmes and university based programmes targeting young people who need that 'extra support' in order to actualise their true potential.

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Appendix 1: GCSE Results Analysis

Mean scores were calculated from the best 5 achieved GCSE results (including Maths and English language), and the predicted mean scores were also then calculated. Numerical values were assigned to the grades as follows:

<i>Grade</i>	A*	A	B	C	D	E	F	G	U
<i>Numerical Value</i>	8	7	6	5	4	3	2	1	0

Table A1: T-test results of mean score compared to predicted mean scores for the best 5 achieved GCSE grades

	Paired Differences					t	Sig.
					95% confidence interval of the difference		
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper		
Mean score – predicted mean score	0.1891	0.6401	0.0782	0.0330	0.3452	2.418	0.018

Null hypothesis: there will be no difference between the predicted mean score and the achieved mean score.

Alternative hypothesis: the achieved mean scores will be higher than the predicted mean scores.



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