CEDAR

*Centre for Educational Development
Appraisal and Research*

The National Academy for Gifted and Talented Youth:

Evaluation of the Summer School 2003

**Dr Dimitra Hartas
Mairi-Ann Cullen
Professor Geoff Lindsay**

Centre for Educational Development, Appraisal and Research

University of Warwick

THE UNIVERSITY OF
WARWICK

CONTENTS

EXECUTIVE SUMMARY

An evaluation was carried out of the second year of functioning of the National Academy for Gifted and Talented Youth (NAGTY) with an emphasis on the summer schools as experienced by the students, their parents and the course leaders. The evaluation included pre and post questionnaires sent to students and their parents, as well as interviews with students and course leaders. Specifically, a pre-summer school experience questionnaire was sent to students and a post-summer school questionnaire was sent to both students and parents. Also, a sample (n=87) of students who had responded to the first questionnaire were interviewed at the end of the three-week period at all five sites to obtain their views on the summer school experience. Finally, 26 of the 28 course leaders involved were interviewed during the third week of the summer school.

Main findings

NAGTY has built upon the successful inaugural summer held at the University of Warwick in 2002. This success has been generalized across all five sites used in 2003. The majority of students and their parents felt overwhelmingly positive about the summer school experience. Similarly, almost all course leaders interviewed stated that the running of the summer school has been a success.

Specifically,

➢ Around 98% of students attending summer school at all 5 sites stated that, overall, summer school has been a worthwhile experience;

➢ Between 50% and 60% of students stated that they would like to attend summer school again next year; and

➢ Around three quarters (75%) of students were very positive about recommending summer school to a friend;

Both students and their parents rated the learning/academic, social and residential experience they gained from attending the summer school very highly.

Specifically,

➢ Across sites, more than 95% of students responded very positively about the a learning/academic dimension: i.e., quality of teaching, balance between theory and practical applications and coverage of their chosen subjects;

➢ Sixty to seventy percent of parents agreed that the learning experience at the summer school was relevant to their children's ability and expectations/aspirations. Almost half of parents felt that learning was relevant to their children's individual needs. Parents' opinion was split, however, with regard to whether the summer school experience was capable of preparing their children to make a meaningful transition back to their school.

➢ The overall social experience was also rated very highly by more than 90% of all students;

➢ Between 85% and 95% of students said that meeting like-minded peers and developing long-term contacts with NAGTY were social aspects of paramount importance.

➢ More than 90% of students expressed very positive views about the formal interactions they had with the residential assistants, and the support that was provided by residential staff and counsellors.

Other key issues identified from this evaluation include:

The process of defining and expanding NAGTY's role

During last year's evaluation, the issue of defining and expanding NAGTY's role was raised. This year, findings suggest that the process of clarifying and expanding NAGTY's role has been successful. There is evidence to suggest that this year's introduction of Academy membership has facilitated access for students to a variety of activities and resources. Specifically, in addition to summer school, other activities, including master classes, university-based conferences, holiday schools and on-line learning experiences have been offered. Also, the summer school has been expanded in five locations across England via links with partner institutions.

Access to information and publicity of NAGTY

Access to information for preparing applications was smooth and easy. However, some students and parents received information regarding their arrival at summer school sites fairly late.

➢ There is evidence that this year NAGTY has been more proactive in attracting students from the state sector.
➢ Although the Academy has publicized its role and activities, widening advertisements is an area that needs further consideration.
➢ Parents were satisfied with the feedback they received regarding their children's learning and social participation.

The Diversity of the student body

The student population as a whole was diverse with respect to ethnicity and, to a lesser extent, with special educational needs (SEN)

➢ There was substantial variation in the proportions of students from ethnic minorities across the five sites
➢ Between 20% and 35% were from ethnic minority backgrounds with about 2% - 4% of children coming from Indian and Pakistani backgrounds, 4% -10% Chinese and 6% -18% 'other'.
➢ There was under-representation of students of Black African and Black Caribbean origin.
➢ Across all sites, 95% of students did not report any disabilities or SEN, with only a small percentage (2% to 6%) stating they have special educational needs.
➢ No students reported severe physical or sensory impairments

The length of summer school

The majority of students interviewed felt that the three-week period of the summer school is the right length; course leaders were more divided.

Specifically,

- Out of the 87 students interviewed, 54 said that three weeks is the right length, 24 suggested that the summer school should be longer and 4 thought that it should be shorter.
- None of the course leaders thought that the summer school should be longer than three weeks. Nine said that three weeks is the right length, 12 thought that it should be shorter and 4 did not mind if it was 2 or 3 weeks.

The effectiveness of careers guidance provided to students

- Students' views on the guidance received regarding future education and career choices were divided.
- Parents felt positive with respect to guidance regarding future education and the development of study skills.

The overall benefits from the summer school

- Students saw academic, social and long-term benefits from attending the summer school.
- There were very few drawbacks mentioned by either students or parents.
- The course leaders' views about benefits to themselves were very positive. They saw personal and professional benefits as a result of their involvement in the summer school. These were expressed in terms of enjoyment of teaching, satisfaction from working with this group of students and willingness to teach this group again.

Suggestions for future planning and directions

- Issues were raised with respect to the composition of groups, the length of the teaching day and the 'compulsory' nature of the social activities.
- Tutors' suggestions for changes to the summer school were relatively minor, mainly pertaining to co-operation between institutions, communication between academic and residential staff, course leaders' professional development, administration procedures and widening advertisement for NAGTY.
- A small number of course leaders raised concerns about the use of the label 'gifted and talented', as well as the validity of the selection process for Academy membership.

1.   INTRODUCTION

The National Academy for the Gifted and Talented Youth was instituted at the University of Warwick, launched on 19th of February 2002 and funded by the Department of Education and Skills.   The Centre for Educational Development, Appraisal and Research, CEDAR, was commissioned to undertake the evaluation of the second year of NAGTY operations, with a particular focus on summer schools.

This Evaluation Report focuses on the perceptions and views expressed by students, their parents and course leaders with regard to the academic/learning, social and residential experience they gained from attending the summer school.   During this evaluation we sought to address the following issues:

- The process of defining and expanding NAGTY's role;
- The value of the learning, social and residential summer school experience;
- The effectiveness of guidance provided to students;
- The benefits and drawbacks from attending summer school;
- The overall success of summer schools; and
- The suggestions for future planning and directions.

1.1   Methodology

A variety of evaluation approaches including interviews and questionnaires were employed to collect data on several aspects of the summer school in all five sites, i.e., Canterbury, Durham, Exeter, Warwick and York.   The views of students, their parents and tutors were obtained to look at issues of application / selection, students' learning, social and residential experience from attending the summer school, benefits and drawbacks and parents' and tutors' overall views of the summer school.

1.1.1   Interviews

Interviews were held with twenty-six course leaders teaching on the summer school towards the end of the third week.   They were asked questions about their professional and personal experience teaching gifted and talented young people, their perception of the students' ability and competence, issues regarding workload, teaching styles and adaptation and their suggestions for future changes.

Twenty-six group interviews were also held with students across the five summer school sites. The interviews involved 87 students in all (three groups of five students; five groups of four students; 16 groups of three students and two groups of two students). The students were chosen at random from those who had returned the first questionnaire and whose parents had agreed to the interview.   The sample consisted of 37 males and 50 females, spanning the full 11-16-year-old age range and coming from every subject offered. All interviews were tape-recorded.

1.1.2   Questionnaires

Questionnaires were sent to students at two phases. The first phase (pre-summer school experience; completed by 393 students) was before they attended the summer school in order to obtain preliminary views on issues of NAGTY membership, application / selection, accessing information about NAGTY, and factors influencing their decision to choose subjects and deciding on the summer school location. The second phase (summer school experience; completed by 482

students) took place towards the end of the summer school where students were given the questionnaires to complete *in situ*. After the summer school, a questionnaire was sent to parents to obtain their views on their children's learning and social experience, the perceived benefits and drawbacks and the overall impact of the summer school.

1.2   Data Analysis

Descriptive statistics were applied to both students' questionnaires (pre and post) to provide information on the percentage of students' responses on a series of questions regarding NAGTY activities, demographic information and Academy membership, students' decisions on subjects and location, as well as their summer school experience in terms of learning, social and residential experiences. Also, descriptive statistics were used to analyse the responses on the parents' questionnaires.

Moreover, one-way Analysis of Variance (ANOVAs) were employed to look at possible differences across summer school sites (i.e., Canterbury, Durham, Exeter, Warwick, and York) with respect to a number of variables, including, subject choice, subject rating, summer school gains, guidance, as well as social and residential aspects of the summer school. A second set of one-way ANOVAs was employed to look at differences between sites with respect to demographic information, access to information regarding NAGTY activities, Academy membership and students' influences on their decisions regarding choosing subjects and the summer school location. Finally, a third set of ANOVAs was employed to explore possible differences among the summer school sites regarding parents' responses on a series of questions on their children's learning and social benefits, selection criteria and long-term effects for their children attending the summer school.

With respect to the qualitative analyses of the student interviews, a full thematic analysis was carried out, using the themes of the main questions in the interview schedule as a starting point. One researcher generated the additional categorization through close reading of the interview material and cross-checking was carried out on a sample by another researcher.

RESULTS

2.   PRIOR TO THE SUMMER SCHOOL EXPERIENCE

2.1   NAGTY
2.1.1   NAGTY membership

Regarding membership of the Academy, for students attending the summer school in Canterbury, 64% of them joined the Academy as members in 2003 and 23% in 2002. In Durham, 81% joined in 2003 with only 10% joining the year before. In Exeter, 87% joined in 2003 and 7% in 2002. In Warwick, 59% joined in 2003, 28% in 2002 and 5% in 2001. Finally, in York, 60% joined in 2003 and 30% in 2002. Thus, most students joined the Academy in 2003, as reported by those who attended the summer school in Durham and Exeter sites in particular.

2.1.2   NAGTY activities

Compared to 15%-18% of students attending Canterbury, Durham and Exeter sites, around 38% of those who attended summer school at Warwick and York reported involvement in activities offered by the Academy (e.g., Master classes, university-based conferences), other than the summer school. Although Warwick and York site students, as members of the Academy, appear to be more active in terms of getting involved in a variety of activities, a large proportion of students in all five sites had not been involved in any activities other than summer school.

Table 1: Percentage of students engaged in NAGTY Activities

		Canterbury (n=85)	Durham (n=46)	Exeter (n=70)	Warwick (n=130)	York (n=62)
Involved in other Activities	Yes	18.8	17.4	15.7	38.5	37.1
	No	80	82.6	82.9	60.8	62.9
Other Activities	Holiday School	5.1	1.3	5.7	10.8	14.5
	Master class	7.6	1.8	4.3	23.1	27.4
	Conference	1.7	0.46	4.3	0.8	3.2
	On-line	1.7	-	-	4.8	3.2

For those who had, almost a quarter of students at Warwick and York sites were involved in Saturday Master classes, and around 15% of students at the above sites were involved in Holiday School. However, very small proportions of students reported involvement in activities such as on-line learning opportunities, and almost none reported involvement in twilight taster events.

2.1.3 Information access

When students were asked about accessing information regarding NAGTY activities, including the summer school, between 80% and 90% of those attending Canterbury, Durham, Exeter and York stated that they had easy access to information. The Warwick figure for this was somewhat lower, in that 66% of students found accessing information easy.

Between 50% and 60% of the students attending Canterbury, Exeter, Warwick and York reported that they first heard about the Academy through their teachers at school, with the figure rising to 80% for students attending the summer school at Durham, suggesting that schools in Durham had been more proactive than schools in other sites in disseminating information about NAGTY to a large number of students. The percentage of students who first heard from their parents ranged between 10% and 25%. For those who answered that they had heard about the Academy in other ways, the most common response (n=12) was through the print media. Compared to last years' results, it appears that this year schools had been more pro-active in notifying students about NAGTY programmes and activities. Also, according to the last year's findings, parents were found to play a larger part in accessing information and initiating the process of submitting applications than they did this year.

Table 2: Hearing about NAGTY (%)

		Canterbury (n=85)	Durham (n=46)	Exeter (n=70)	Warwick (n=130)	York (n=62)
Easy information access	Yes	80	91.3	85.7	66.2	88.7
	No	18.8	8.7	14.3	32.3	9.7
First heard about NAGTY	Parents	24.7	10.9	18.6	24.6	17.7
	Relatives	3.5	-	5.7	3.1	3.2
	Teachers	62.4	80.4	62.9	53.1	53.2
	Press	3.5	6.5	4.3	13.8	12.9
	Internet	1.2	2.2	2.9	-	3.2
	Friends	1.2	-	1.4	1.5	3.2
	Other	3.5	-	4.3	3.8	6.5

2.2. Application

2.2.1 The application process

More than half of students in all sites found it easy to complete the application in terms of gathering the necessary materials. Only one third of students attending the summer school in Durham and York reported that they found this process difficult. Across sites, a high percentage of students, around 90%, found the process of obtaining support and guidance from teachers towards the application easy.

Table 3: Completing the application (%)

		Canterbury (n=85)	Durham (n=46)	Exeter (n=70)	Warwick (n=130)	York (n=62)
Application: gathering materials	Very Easy	7.1	10.9	4.3	13.1	12.9
	Easy	71.8	56.5	62.9	60	48.4
	Difficult	1.2	32.6	28.6	20.8	32.3
	Very Difficult	1.2	-	2.9	3.1	6.5
Application: support/ guidance	Very Easy	37.6	37	44.3	45.4	37.1
	Easy	51.8	50	48.6	41.5	53.2
	Difficult	4.7	8.7	5.7	7.7	8.1
	Very Difficult	4.7	2.2	1.4	2.3	1.6

2.2.2 Deciding on subjects

Fifty to sixty percent of students in all sites stated that the nature of the academic course was one of the deciding factors in choosing their subject. Personal interest in the subject matter rated highly (around 90%) especially in Durham, Exeter, Warwick and York summer school sites. Students in Canterbury weighted the factors presented (nature of course, personal interest, relevance to future studies and career) almost equally. Slightly more than 50% of students in Exeter, Warwick and York sites stated that the relevance of the subject matter to their future education and career plans was a factor for choosing their subjects. A relatively small percentage, around a quarter of students, stated that encouragement from their families was also a factor that influenced their decision. For the minority who said that other factors had influenced their choice of subject, the most common factor (n=8) was the influence of a teacher at school.

Table 4: Factors influencing subject choice (%)

	Canterbury (n=85)	Durham (n=46)	Exeter (n=70)	Warwick (n=130)	York (n=62)
Nature of course	56.5	54.3	68.6	50	59.7
Personal Interest	68	95.6	92.9	91.6	87.1
Relevance to future studies	42.5	47.8	55.7	50	56.4
Relevance to future career	40.8	43.5	45.7	49.2	56.5
Family Encourage	28	24	28.6	27.8	33.9
Other	5.9	-	-	-	-

2.2.3 Deciding on location

Subject choice was a highly rated factor for deciding on the location for the summer school by students attending the summer school in Durham, Exeter and York. Interestingly, a smaller percentage of students (around a quarter) in Canterbury, Durham and Exeter felt that timing and geographical area were important factors that influenced their decision regarding location. A higher percentage of students (50%) in Warwick site only saw geographical area as a determining factor. Only a quarter of students in Warwick and York saw the learning objectives set for the chosen subject as a determining factor, compared to a small percentage of students in other summer school sites. The minority who indicated that other factors had influenced their decision on location mentioned such issues as choosing an available course, that friends were also going there or that financial support was available.

Table 5: Factors influencing location choice (%)

	Canterbury (n=85)	Durham (n=46)	Exeter (n=70)	Warwick (n=130)	York (n=62)
Timing	17.8	21.7	24.3	39.2	35.5
Geography. Area	17	15.2	27.2	50	35.5
Subject Choice	52.7	93.5	82.9	62.2	71
Learning Objectives	14.4	13	27.2	15.4	25.8
Other	8.5	-	-	-	-

2.2.4 Supporting evidence

Less than a quarter of students stated that they had not included any extra information to support their application. Personal statements, on the other hand, were favoured by almost three quarters of students across all sites with teacher letters being included by around 50% of students. Related schoolwork was more likely to be included than work that was unrelated to homework requirements. Finally, including a sample of work done from students' own interest was the least reported piece of supporting evidence in all sites.

Table 6: Percentage of students supplying supporting evidence

	Canterbury (n=85)	Durham (n=46)	Exeter (n=70)	Warwick (n=130)	York (n=62)
No extra info	18.8	13	28.6	20.8	14.5
Personal Statement	61.2	69.6	57.1	56.2	71
Teacher Letter	44.2	65.2	57.1	47	56.5
Related School Work	17.8	37	30	23.8	35.6
Un-related School Work	9.3	30.5	21.5	21.5	21
Own Work	10.2	8.7	11.5	12.3	9.7

2.2.5   Alternative plans

When students asked about what they would have done if they had not been at the summer school, around 50% stated that they would have gone on holidays with family / friends with the remaining 50% stating that they had 'no real plans' for the summer. Those who filled in the open answer to this question indicated that they would have spent the time relaxing, attending another course, focusing on their hobbies or sport, with only a very small number saying that they would have got a summer job.

2.3   Selection

2.3.1   Student age

The age of the majority of students attending the summer school across sites ranged between 13 and 15 years old. Around 12% of students at Canterbury, Durham, and Warwick were 12 years old, whereas the percentage of 12-year old students was higher, around 20%, for Exeter and York. Ten percent of students attending the summer school were 16 years old.

Table 7: Age range of students (%)

	13-15	11-12	16
Canterbury	68	12	10
Durham	80	10	10
Exeter	70	12	10
Warwick	75	12	10
York	67	18	12

2.3.2 Diverse backgrounds

Around 50% of students attending all 5 sites stated that the Academy has encouraged participation of students from diverse socio-economic and socio-cultural backgrounds. However, there was a large number of students (around 40%) who felt that they could not comment on this matter, in that they were not aware of the systems that NAGTY has put in place to maximize the recruitment of a diverse body of students.

Table 8: Students' views on the encouragement of diversity

	Canterbury (n=85)	Durham (n=46)	Exeter (n=70)	Warwick (n=130)	York (n=62)
Great Extent	22.4	26.1	22.9	19.2	21
Somewhat	22.4	30.4	22.9	23.8	27.4
Slightly	7.1	10.9	7.1	2.3	3.2
Not At All	3.5	2.2	4.3	1.5	4.8
Don't Know	44.7	30.4	42.9	53.1	41.9

2.3.3 School sector

A large percentage of students, ranging between 65% and 85%, reported being from state schools, with 10% to 20 % from the independent sector. The intake from the state sector was consistent with last year's findings, i.e., 70% of students came from state schools. Also, compared to the last year's percentage (30% from independent schools), this year almost half of this, around 15%, came from the independent sector.   It appears that this year more efforts were made to maximize student recruitment from the state sector.

Table 9: School type (%)

	Canterbury (n=85)	Durham (n=46)	Exeter (n=70)	Warwick (n=130)	York (n=62)
State	74.1	67.4	84.3	67.7	74.2
Independent	17.6	19.6	10	20	22.6

2.3.4 Ethnicity

In terms of ethnicity, between 65% and 80% of children attending the summer school across sites were White with a small percentage (2%-4%) of children coming from Indian and Pakistani backgrounds. Warwick summer school was the exception in that the percentage of students of Indian origin was 7.7%. Overall, these ethnicity figures point to an under-representation of students from Black African and Black Caribbean origin. Of those who ticked 'other' for ethnicity, 28 were of mixed ethnicity and nine were of single ethnicity.

Table 10: Ethnicity (%)

	Canterbury (n=85)	Durham (n=46)	Exeter (n=70)	Warwick (n=130)	York (n=62)
White	65.9	78.3	80	76.2	75.8
Black African	3.5	2.2	-	1.5	-
Black Caribbean	2.4	-	-	-	-
Chinese	4.7	8.7	10	3.8	6.5
Indian	3.5	-	2.9	7.7	3.2
Pakistani	2.4	-	-	3.8	4.8
Other	17.6	10.9	7.1	6.2	8.1

2.3.5 Special Educational Needs

Across all five sites, 95% of students did not report any disabilities or special educational needs, with only a small percentage (2% to 6%) stating that they have such difficulties. These figures are also consistent with last year's results, suggesting that the recruitment of students with disabilities is an area that needs to be considered further.

Table 11: Percentage of students with a disability / SEN

	Canterbury (n=85)	Durham (n=46)	Exeter (n=70)	Warwick (n=130)	York (n=62)
Yes	3.5%	6.5%	4.3%	2.3%	4.8%
No	96.5%	93.5%	94.3%	96.9%	95.2%

The diverse needs of the minority of students with special educational needs were mainly individual as the following list shows:

- Dyslexia (three students)
- Special diets (two students)
- Asperger's Syndrome
- Attention Deficit Hyperactivity Disorder (high level) with Tourette Syndrome and traits of Asperger's Syndrome
- Chronic Fatigue Immune Dysfunction Syndrome
- Diabetes Mellitus
- Dyspraxia.
- Epilepsy
- Recovering from Glandular Fever which had complications.
- Rheumatoid Arthritis
- Speed processing and short term memory

This list indicates the wide range of needs that staff on the summer schools had to be prepared to learn about to be able to offer appropriate support. It also shows that NAGTY was not successful in attracting to the summer school gifted and talented young people with other special educational needs that one might expect in this population, such as profound deafness, visual impairment or physical difficulties.

In open answers on the parent questionnaire, three parents commented on how their son or daughter with special needs had been supported. Two wrote about the 'lack of awareness' of staff, one in relation to dyslexia and one to dyspraxia. On the other hand, one parent wrote positively about how well Asperger's Syndrome had been supported, stating that the social side, 'potentially a huge problem', had been a 'massive success'. It will be important for NAGTY to ensure that staff involved in future summer schools are suitably prepared beforehand as to how they may support the range of special educational needs presented by students.

2.3.6   Parent views on selection

Three quarters of parents stated that acceptance on a summer school should be based upon high ability / aptitude only. The remaining 20% of parents felt that, in addition to high ability, a form of positive action should take place. Specifically, from this sub-group of parents, 16% referred to positive action on the basis of social disadvantage, 9% on the basis of disability, 8% on the basis of ethnicity, and 4% on the basis of gender.

3 LEARNING EXPERIENCE

3.1 Subject choice

Across sites, when students were asked about the reasons for choosing their subjects, 36% stated that they thought they would enjoy it with a quarter stating that their chosen subject was relevant to their future studies and career. A very small percentage chose their subject as a result of being influenced by their parents or teachers. Other reasons for choosing their subject include widening horizons, extending knowledge, and benefiting future studies were stated by the students. Finally, a number of students (n=15) stated that the subject they took was not their first choice or was chosen from limited options where places remained.

Students were also asked to comment on certain dimensions of their chosen subjects i.e., balance of theory and practice, coverage of the subject matter and the quality of teaching. More than 95% of the students attending summer school in Canterbury, Durham, Exeter, Warwick and York responded positively (ranging from good to very good) on these dimensions.

Table 12: Students' opinions on subject choice (%)

	Dimensions	Very Good /Great Extent	Good / Somewhat	Poor /Slightly	Very Poor / Not At All
Canterbury (n =103)	Balance	30.1	59.2	6.8	
	Coverage	49.5	47.6	1	1
	Teaching Quality	59.2	32	7.8	1
Durham (n= 56)	Balance	26.8	71.4%	1.8	-
	Coverage	44.6	53.6%	-	-
	Teaching Quality	58.9	37.5%	-	-
Exeter (n=75)	Balance	33.3	62.7	2.7	1.3
	Coverage	44	50.7	5.3	-
	Teaching Quality	42.7	48	9.3	-
Warwick (n=161)	Balance	47.2	49.7	2.5	0.6
	Coverage	60.9	37.3	1.2	0.6
	Teaching Quality	69.6	29.8	0.6	-
York (n=87)	Balance	42.5	48.3	8	1.1
	Coverage	42.5	54	3.4	-
	Teaching Quality	55.2	37.9	4.6	1.1

The above results are consistent with those that emerged from the interviews. Almost all students interviewed made positive comments about the way the courses had been taught. A frequent comment was about how interesting and enjoyable the courses were. The various themes that emerged are discussed in turn.

There were a number of different subjects across sites with the teaching approaches and the content of each subject likely to vary to a great extent from site to site. Therefore, it has not been possible to compare students' views of teaching quality, balance between theory and practical applications and coverage by subjects.

3.1.1 Quality of teaching /good teachers

Among the three dimensions, i.e., balance between theory and practice, coverage of the subject matter and teaching quality, that are thought to influence subject choice, the quality of teaching was rated more positively than the others by almost 60% of students consistently across sites. Moreover, significant differences regarding the quality of teaching between Warwick and Exeter were found, in that students attending Warwick site rated the quality of teaching much higher than those in Exeter, although students in all groups rated teaching quality highly.

Consistent with the quantitative data, in ten of the 26 interviews, students gave an overall judgement that they were being taught by good teachers ('the tutors are very good', 'really good', 'it's taught very well', 'it's really amazing'). This is not to say that students in other interviews did not think they were being taught by good teachers, simply that they discussed *particular aspects* of teaching, rather than giving an overall view. Those who did were asked to expand on this to say what a 'good teacher' meant to them, producing the following composite list.

A good teacher:
- teaches at appropriate pace;
- teaches at appropriate pitch;
- explains points clearly;
- encourages participation;
- encourages and answers questions;
- shows enthusiasm;
- has a relaxed attitude and a sense of humour;
- understands that different people learn in different ways;
- understands that different people are at different levels of knowledge and understanding.

These views on 'good' teachers and teaching also linked to positive comments made about relationships with teachers and to teaching methods, both of which are expanded on in separate sections below.

3.1.2 Relationships with teachers/teaching assistants

Several themes emerged in the interviews related to the positive relationships the students had built up with the teachers and teaching assistants on their courses. In fourteen interviews, *the easy accessibility of help and of explanations* was discussed, with some particularly drawing attention to how useful the teaching assistants were in this respect.

> "If you needed help, you'd get it. It was very personal."

> "There's plenty of TAs [Teaching Assistants], at least three adults in the class, so they can always go round and help you."

In ten interviews, positive comparisons were made between the relationship with teachers at the summer school and those with teachers at school. The summer school teachers were characterized as *more friendly, relaxed and sociable* than teachers at school.

> "It's more laid back and it's more relaxing . It's not as strict as school. I've got on really well because [the tutors] are willing to communicate with you."

> "They're friendly."/ "Yes. And they don't shout or anything."/ "Yeah, not like teachers at school, shouting."

> "It's not like you'd expect in a normal school. We're friends with the teachers. They'll come down and they'll eat with us; talk with us. I don't see them more as a teacher, more as a friend who knows more and is trained to help us along. It's cool.'"/ "It's easier to talk to them and ask questions because you know them a bit more. ... We use first names."

They were also seen as giving *more attention to students* than schoolteachers are able to and as adopting a *more positive approach* than schoolteachers.

> "It makes me feel more confident because somebody is there and talks to me about my writing, whereas at school, I don't have that."

> "Here I get more attention from teachers."

> "It is different in that here tutors approach you about the things that you know and not about what you do not know. It is very positive."

In six interviews, the students' respect for the teachers' specialist knowledge was raised.

> "They are all experts and they all know exactly what they are talking about and can guide us, which is good."

3.1.3 Learning environment

The learning environment created during the summer school was discussed in five interviews, always in positive terms. The range of aspects that were raised were:

- the lack of pressure because of there being no tests;
- the lack of pressure because there was no tight school timetable;
- the focus on one subject;
- being able to wear own clothes;
- getting to sit in comfortable chairs;
- having a more favourable teacher: student ratio;
- having a more informal atmosphere;
- being more interactive.

The implied contrast here was with the learning environments in students' schools.

3.1.4 Teaching methods/styles

In a number of courses, a range of tutors was used to teach different aspects of the course. The students interviewed enjoyed this variety and the exposure to different teaching styles although they also noted that they liked the consistency of having a course leader.

> "I liked the variety of lecturers and then having one course leader gave consistency'/ 'Yes, it was good having one course leader who we know."

> "We have four different teachers with quite different styles so that's quite good as well."

The wide variety of teaching techniques used within teaching on the courses was seen as positive although a few negative comments were made about individual methods.

Lectures were probably a new experience for most of the students. It took them time to get used to this approach to teaching and learning but there was evidence that some recognized the benefits. There was an issue about the length of some lectures that could easily be addressed in future summer schools.

> "Three hours of lectures in the morning is a bit much just sitting listening – I get a bit tired."

> "Sometimes I feel that I don't get much out of the visitors who come and give lectures. Some of them are very challenging. The good thing is that after the lecture on poetry, I realized that I like poetry and now I am willing to try on my own."

> "The first week was all lectures and was a bit difficult but now it is OK. I get a lot of knowledge and understanding."

With one exception, those who had been taken on *fieldtrips* relevant to the subject they were studying enjoyed these very much. They were found to be 'interesting', 'fun', 'inspirational'. Those who experienced *group work* were very positive about the educational and social benefits of this approach to teaching and learning.

> "It's great because we can stimulate each other and our combined ideas can help us go to a new level, we can push each other on."

> "It's quite good learning what other people think about things. We can help each other. We can discuss what we've just learned with each other. That's not done in school – you don't discuss things in breaks. Here you can discuss things. ... All different peers have different opinions and when expressed that helps you to understand another point of view."

> "You have to be willing to work in groups all the time. It's been good for making friends ..."

Debates and discussion more generally were also viewed as 'very helpful to learning' and an excellent opportunity to 'just make yourself heard.' The practice in voicing opinions that group work and discussion afford is an important way to help students gain the confidence in themselves that two course leaders mentioned was lacking in some.

Other teaching methods mentioned in positive terms were:

- paired work;
- individual work;
- role play
- presentation of work to an audience
- creative activities
- experiments.

The benefits of using a wide variety of teaching approaches were that this broke up what was a long teaching day, engaged the students and helped them to learn more easily.

3.1.4 Course material

When students were asked about course materials in terms of their range, coverage and degree of challenge their views differed across sites. Specifically, there were differences in:

- the range of materials covered during teaching between students who attended the summer school in Exeter (M=1.68) and those in Durham (M=1.35) and Warwick (M=1.37). Specifically, students' responses at Durham and Warwick were more positive compared to those from students attending Exeter.

- the coverage of the subject matter by the tutor between Warwick and York sites. Specifically, students attending Warwick (M=1.42) were more positive than those attending York (M=1.61).

- the level of challenge experienced in the summer school between Canterbury and Warwick sites. Specifically, students attending the Warwick site (M=1.61) felt that the level of challenge was more appropriate than did those at the Canterbury site (M=1.82).

Consistent with the quantitative data, students in eight interviews commented positively about the wide range of material that was covered during the summer school course. The quotes below give a flavour of this.

> "Every day we learn a different aspect of Chemistry and this is interesting."

> "It expands your horizons about economics and business."

> "We've covered different areas and within that lots of sections."

In ten interviews, the students discussed their enjoyment of studying subjects or topics within subjects not covered at school.

> "We've been doing stuff we don't do at school."/ "It's been extending our knowledge."

> "I've never done anything like this in school before. It's given me the chance to do different areas of history I wouldn't have had the chance to."

"We've been doing stuff I've not done before which has made it interesting for me, such as visual scripts and site specific performance, which I'd not had a chance to, hadn't heard of before."

In a small number of interviews (n=4), the depth of detail in which material was covered was highlighted.

"We've had lots of poems, a play and a novel and they've taught each in detail superbly."

"They've gone into it in pretty good detail. They give us the gist then work their way up from that. Then after the lectures, they go over it in more detail."

In a further six interviews, the sheer amount of what was covered was exclaimed about by some as "I've learned a lot.", while in one case, students had noticed that they had learned a lot more from one teacher than from another.

3.1.5 Balance between theory and practical application

Some subjects studied were by their nature more practical than others, such as drama, creative writing and engineering, and students on such courses enjoyed this aspect. In other interviews, such as those for maths and physics, the good mix of theory and practice was commented on. In only one interview were the students unhappy with the balance between theory and practice and this was only during part of the course (Advanced computing). In an open answer on the questionnaire to students, 29 indicated that they would have liked more emphasis on the practical application of the subject studied.

Learning goals

In three interviews, students made the point that, at times, they had not been sufficiently clear about the direction of the learning. This uncertainty about the purpose had resulted in them finding tasks 'boring' or 'pointless and abstract'; once goals had been clarified, they realized why what they had been doing was useful.

Students in two interviews spoke about enjoying the opportunity to choose their own learning goals or at least to be involved in discussing what the learning goals should be.

"You're allowed to really choose where you want to go with many of the topics."

"There's more discussion about the idea of the lesson. It's like a conversation back and fore [i.e. between the tutors and students]."

Views on the 11-16 age range

During the interviews, a direct question was asked about how the 11-16 year old age range had worked in practice. In ten interviews, students who were not on courses divided by age made positive comments about being taught in mixed-age groups.

"I like it being from 11 to 16-year-olds; it's a good idea. You get to work with people of different ages. It's an opportunity you don't get at school. You can make friends with people older and younger than you."

"In class, it helps a lot because some people know more than you do and they come around telling you how to do it and you get to learn more, the children and the teachers and the assistants."/ "And you can always do things at different levels so no-one really gets left behind."/ "You can pace yourself. You can go slower or you can move on to new things."

In other interviews, arguments for groups being divided by age centred on maturity, especially in subjects such as English, Philosophy and Psychology where level of maturity made a difference to the contribution that could be made in discussions, and on level of knowledge, in subjects such as maths (although it was acknowledged that age did not always correlate to level of knowledge).

"If we're all in one group, it's either too hard for the younger ones or too easy for the older ones." (NB another view was that the division should not be by age but by level of maths) (Maths group, divided by age)

"I think the age range 11 to 16 was a little too much. I think 14 to 16 would have been better. I'm not saying 11 year olds aren't gifted and talented but in terms of mental maturity, and especially if we're having a discussion, it's difficult for them to connect with you or for you to connect with them, because it might not be a lot in years but in mental development it's a lot." (English group, not divided by age)

3.1.6 Parent views on learning experience

Sixty to seventy percent of parents agreed that the learning experience at the summer school was relevant to their children's ability and expectations/ aspirations to a great extent. Almost half of them felt that learning was relevant to their children's individual needs. Parents' opinion was split with regard to whether the summer school experience was capable of preparing their children to make a meaningful transition back to their school.

No significant differences were found between sites in parents' responses regarding the extent to which the learning experiences at the summer school were relevant to their child's ability, aspirations/expectations and individual needs. Interestingly, differences were found when parents were asked about whether the summer school was capable of preparing students to make a meaningful transition back to their school. Specifically, parents of students who attended Canterbury were more positive than those attending York about the ways the learning experience acquired had prepared their children for the transition back to school.

Table 13 : Parents' views on match of learning experience with their child's needs (%)

	Great Extent	Somewhat	Slightly	Not At All
Ability	69.3	27	1.7	-
Expectations/ Aspirations	58.9	32.1	6.5	0.3
Individual needs	55.8	35.5	4.8	1.4
Transition	36.3	33	13.2	13.5

3.1.7 Students' views on guidance

When students were asked about whether they received guidance regarding future education and career choices, the majority of their responses ranged between 'slightly' and 'not at all', pointing to a minimum input from the summer school with respect to this kind of provision. Students in Canterbury in particular rated access to guidance regarding future education and career choices more favourably than those at the other four sites. Also, students attending York (M=2.39) felt more positive than those attending Warwick (M=2.77) with respect to receiving guidance regarding future education. However, no differences were found across sites with respect to career guidance.

Table 14: Students' views on guidance (%)

Guidance		Very Good /Great Extent	Good / Somewhat	Poor /Slightly	Very Poor / Not At All	Missing Values
Canterbury (n=103)	Future Education	13.6%	39.8%	23.3%	22.3%	1%
	Career Choices	14.6%	36.9%	18.4%	29.1%	1%
Durham (n=56)	Future Education	19.6%	33.9%	25%	19.6%	1.8%
	Career Choices	19.6%	30.4%	23.2%	26.8%	-
Exeter (n=75)	Future Education	10.7%	29.3%	29.3%	30.7%	-
	Career Choices	10.7%	26.7%	28%	34.7%	-
Warwick (n=161)	Future Education	7.5%	34.8%	31.1%	26.7%	-
	Career Choices	7.5%	31.7%	29.8%	31.1%	-
York (n=87)	Future Education	21.8%	35.6%	24.1%	18.4%	-
	Career Choices	13.8%	23%	35.6%	27.6%	-

The findings from the interviews suggested that the main source of guidance about future education and careers in all five sites was informal chats with RAs and tutors.

> "Well, I'd quite like to go in for Psychology and there's about four or five RAs who are studying it."/ "The RAs introduced themselves at the beginning and told us what they had studied and said we could come and talk to them whenever."

> "We've been talking to the teachers because, as we say, we're friends now, and some of them are doing PhDs in philosophy and classics and it's made me think when I go to university, maybe I'll want to do philosophy. They sort of set you thinking about what you want to do."/ "I think you just pick up things by talking to the teachers, how they've done things."

Students on particular courses also mentioned being given information about university courses related to the subject being studied. In York, in addition, careers talks had been arranged for those students who were pre-GCSE and for those who were pre-A-level.

3.1.8 Parents' views on guidance

In terms of guidance concerning future education routes, career choices, study skills and support for individual needs, around 40% of parents said that this had been somewhat achieved. Around a quarter of them felt that guidance had been achieved to a great extent for future education, study skills and individual support, but not for career choices.

Table 15: Parents' views on guidance (%)

	Great Extent	Somewhat	Slightly	Not At All
Future Education	27.9	38	17.5	11.8
Career Choices	12.1	40.3	25.6	17.2
Study skills	25.9	48.7	17.7	3.4
Individual Needs	28.5	41.4	19.7	6.2

3.1.9 Parents' views on future education, training or work

When parents were asked about how the summer school prepared their children for future education, training or work by gaining an insight into university life, re-evaluating their strengths and limitations, enhancing motivation and using NAGTY as a point for support in future, no significant differences were found across the five sites. With regard to whether the summer school prepared students for future education, training or work, around half of all parents felt that the summer school helped their children to a great extent to gain an insight into university life and enhance their motivation. More than a quarter said that the summer school helped their children to re-evaluate their strengths and weaknesses and to use NAGTY as an on-going support for the future.

Table 16: Parents' views on the preparation provided by the summer school for future education, training and work (%)

	Great Extent	Somewhat	Slightly	Not At All	Missing Values
University Life	53.5	34.9	7.3	1.7	2.5
Motivation	51.8	35.5	8.2	2.3	2.3
Strengths/ Limitations	34.9	44.2	13.2	5.1	2.5
On-going Support	45.9	37.7	9.6	3.1	3.7

4   SOCIAL EXPERIENCE

4.1   Students' views on social experience

Overall, the social experience at summer school was rated very highly by more than 90% of students across all five sites. Specifically, around 95% said that meeting like-minded peers was a social aspect of paramount importance. Also, benefiting from social activities and forming long-term contacts with other members of the Academy were seen as important social aspects of the summer school by almost 85% of all students.

Table 17: Students' views on social experience (%)

Social Experience		Very Good /Great Extent	Good / Somewhat	Poor /Slightly	Very Poor / Not At All
	Overall Social Aspects	51.5	45.6	1.9	-
Canterbury (n=103)	Like-minded peers	60.2	30.1	7.8	1.9
	Long-term Contacts	64.1	28.2	6.8	1
	Overall Social Aspects	67.9	32.1	-	-
Durham (n=56)	Like-minded peers	83.9	12.5	1.8	-
	Long-term Contacts	67.9	23.2	7.1	-
	Overall Social Aspects	69.3	26.7	4	-
Exeter (n=75)	Like-minded peers	68	28	2.7	1.3
	Long-term Contacts	46.7	33.3	18.7	1.3
	Overall Social Aspects	42.2	45.3	9.3	3.1
Warwick (n=161)	Like-minded peers	64	29.2	4.3	2.5
	Long-term Contacts	56.5	31.7	8.7	3.1
	Overall Social Aspects	64.4	26.4	8	1.1
York (n=87)	Like-minded peers	65.5	29.9	4.6	-
	Long-term Contacts	59.8	33.3	6.9	-

Looking at differences in students' overall social experience between sites, it was found that students attending Canterbury, Durham, Exeter and York were more positive about the overall positive aspects than were students attending the Warwick site. Also, differences were found regarding the development of long-term social contacts with students and Academy members between Exeter and Canterbury and Durham, with students at Exeter feeling less positive about it compared to those at Canterbury and Durham. Durham students in particular saw the development of long-term contacts as an important social aspect.

4.1.1 Making friends

Socializing with like-minded peers was also found to differ significantly across sites. Specifically, there were differences found with respect to socializing with like-minded peers between Durham and Canterbury and Warwick, in that this social dimension was rated as being more important by students attending Durham than those in Canterbury and Warwick.

During the interviews, the students were asked their views of the social aspect of the summer school and how this compared to socializing at school; how being with 11-16 year olds had worked at a social level; and what they thought of the organized activities and events. A very strong theme to emerge from the interviews was the ease with which people made friends during the summer school.

Students had arrived with stereotypical images of what other 'gifted and talented' young people would be like. Phrases, such as, 'everyone would be geeky and straight into their books', 'everyone else would be wanting to go to their rooms and read books', 'everyone would be in suits and stuff, really posh', 'everyone would be all swotty', were used to describe their initial thoughts and expectations.

Instead, each summer school was made up of a social mix of different ages and of different social, geographic, ethnic and cultural backgrounds as well as different temperaments and characters. Many of the students interviewed commented on how much they enjoyed and benefited from being part of this social mix. For example, young people who attended single sex schools were able to socialize in a mixed environment; those who were not used to being part of a multi-cultural group gained this experience; those who went to faith schools had the opportunity to mix with young people of other faiths or with none.

> "The corridor is a really nice mix of ages and it's really nice to mix socially with that sort of people; as much as you can at school, you just don't."/ "It's like hierarchy in our school – second year, third year, fourth year."

> "There's different races as well on some corridors which is quite good to learn things about different people's cultures because we don't have many foreign people in my school. I think that's quite cool."

> "It's a good opportunity for (name) because she goes to an all girls school so she's in a classroom with boys as well."/ "Yeah, I've found that really interesting because I haven't been taught with boys since I was 9; that whole 'boys are alien!' age so I can't remember being taught in a classroom with boys."

> "It's great how lots of different people have come from all over the country – great because you can meet lots of different people who have all got different temperaments – great to meet different characters from all over the place."

Despite the wide social mix, a strong sense of commonality emerged, evident in the interviews across all five sites. This commonality was made up of being with others who had chosen the same course, who had similar interests, who operated at similar intellectual levels and it created a social space where these clever young people did not fear being put down or being the object of teasing or jealousy. As a result, even some people who normally tended not to make friends found that in this milieu they did.

"I tend not to make friends; definitely not really talk to people. We've been chosen as gifted and talented and you tend to have the same interests, hobbies and stuff so you can talk. You find out things about people which are the same so you can talk to them about them so I've talked to a lot more people than I usually do."

"We're on one course, all together. We have similar interests, the same levels. We can share ideas and not be put down."/ "We're all on the same course and people are not jealous because we all have special talents. We're all good at different things."

As well as the fact that the students confounded stereotypes and found common interests, other factors helped them to make friends easily on the summer schools. These other factors were:

- organized introductory activities (for example, the long tour of the buildings at Exeter; the two minute slot to speak about themselves at York)
- bonding with those on their course;
- meeting people during the organized activities;
- being organized into small groups with an identified Residential Assistant (RA);
- knowing they were 'stuck with' these people for three weeks and therefore taking the initiative to approach others in friendliness.

The *quality* of friendships made was also a strong theme to emerge in the interviews, especially in Canterbury, Durham and York. The key factors here seemed to be the amount of time people were able to spend together because they studied the same subject and/or chose the same activities and/or were in the same RA group and/or had rooms in the same block or corridor. Students talked about getting to know people 'extremely well', about making 'really solid friendships', about bonding 'really, really, really tightly'.

In most interviews (but not all because of time constraints) students were asked how socializing at the summer school compared to socializing at school. The most common response was that making friends was much easier at the summer school than at their normal schools because of

- the amount of time spent together;
- the manner in which even quiet people were included;
- the wider geographic mix;
- the mixed sex groupings;
- the mixed age groupings;
- the similarity of interests;
- the lack of being misjudged as 'someone who is super-intelligent and studies all the time';
- the way in which being intelligent did not make you 'stick out'.

In four interviews, students described how the summer school was better than school because there was no peer rivalry, jealousy, bullying or teasing. In two interviews, the anti-intellectual culture among peer groups at school was compared to the atmosphere at the summer school where it was fine to be clever and to want to talk about intellectual topics. One girl spoke about the pressure on her at school to do well in everything and how making a mistake was seen as a major issue. This compared to the sense that it was acceptable to make mistakes and ask for help and support during lessons at the summer school (see Academic Experience).

<u>Views about the 11-16 year age range</u>

The mixed age range worked particularly well at a social level in Canterbury where the RA groups and residential corridors were mixed across ages and subjects. Older and younger students interacted and made friends and the younger students found it helpful to have older students to talk to if they were upset. The maturity of the younger ones was highlighted and age was viewed as a 'pretty artificial' division.

In the other sites, where RA groups were sorted by age, it was the learning groups and the social activities that brought students together across the age range.

> "I've not found real difficulty with the age thing, to be honest. I'm 16 so I'm one of the oldest. I'd say most of my friends are the 14-15 category but I do talk to some of the much younger ones as well."/ "In the social activities, I can't really see the difference between people who are 16 and people who are 11. We're all the same really and it's like being at school because secondary school is 11-16 year olds and it feels just the same as that so it doesn't really make a difference. ... The RA groups are by age and mixed across subjects but you do make friends with people who are older and people who are younger. In the social activities, you are encouraged to mingle so you make a lot of new friends."

Altogether in eighteen interviews across all five sites, the students thought the 11-16 year old age group had worked out fine in practice.

On the other hand, in twelve interviews, also across all sites, some of the problems of the age range were raised or points made about how different age groups had been treated:

- the earlier bedtimes for younger students was raised as a problem – it reduced the time the younger ones had to socialize and it made an obvious age split that was 'damaging to friendships';
- in Durham, where interviewees reported that there were few younger students, some students thought that staff treated the younger ones differently and the younger ones expressed the opinion that they would have liked to have been treated 'more like adults';
- in Exeter and York, there were rules against public displays of affection in front of the younger ones that some of the older students found difficult;
- some of the students found some of the activities 'patronizing' because they saw them as being for younger people;
- the point was made that some activities such as choosing a film or going into town were organized to cater for the needs of the youngest in the group and again, some of the older students found this annoying.

<u>Views about the social events and activities</u>

There were significant differences found with respect to benefiting from the social activities organized by the summer school between Warwick and three other sites, i.e., Canterbury, Durham and Exeter. Specifically, Warwick students saw fewer benefits than did those in Canterbury, Durham and Exeter.

In the interviews, positive views and negative views about the social event and activities were split almost equally (19 interviews mentioned positive aspects while 20

interviews mentioned negative aspects) but the positive views tended to be all-encompassing ('I've enjoyed just about everything.', 'They're really well organized and they've been really fun.') while the negative views tended to pick up on one particular point. Of course, views about individual activities varied depending on personal preferences. For example, in Canterbury views varied on the musical evenings arranged for everyone to attend (sting quartet, soft rock etc.) but more than one student reflected that, 'It's good to have the experience of it.' Some students with a particular hobby, such as playing a musical instrument or drawing cartoons on the web, missed being able to continue with this while away but there was plenty on offer to keep them busy in other ways.

The positive views about the social events and activities focused on the fun people had had, on the wide range of activities offered, on the new experiences encountered and the opportunities for socializing

> "Very good. It's difficult to make everyone happy and the RAs have done a good job. Some of them are very creative."

> "In the evening you can switch off and do your own thing. The activities are always fun and they change."
> "There's always an activity that someone wants to do or, if not, they want to try and just haven't had the confidence outside of here."

> "It's good fun. The organised things bring everyone together."/ "You just go out and have fun. You get to mingle."

The negative points raised about the social events and activities grouped round three issues, i.e., free time, compulsory participation and age-appropriate activities:

- some students (in seven interviews) spoke about wanting more free time 'just to relax', 'to do nothing', 'to sit and be by yourself' – this issue was raised in a further five interviews when students were later asked to make suggestions about how the social activities could be improved;
- some students (in five interviews) spoke about wanting less compulsion about joining activities if there was nothing to suit personal taste;
- one student in each of three interviews wanted age-appropriate activities, having found particular ones either 'too old' or 'too childish'.

The themes of wanting more free time just to socialize or do nothing and of wanting less compulsion to join activities also came through strongly in open answers on the questionnaire to students, with 150 students writing about the former and 95 about the later.

5   RESIDENTIAL EXPERIENCE

5.1   Students' views on residential experience

For a minority of the students interviewed, being away from home on their own was a completely new experience. Nevertheless, they seemed to have coped well with being away for three weeks:

> "They keep us busy so we don't get homesick."/ "It can be quiet in my room alone but you do get used to it."/ "I miss my brother but I call him on my mobile phone and I e-mail him." [They could use computers in the Students Union]/ "It would have been hard being away from home if I hadn't made friends, but I have so it's fine."

> "I'm having a whale of a time. I don't want to go back to my parents. I like being away."

Most of those interviewed had been away from home before but usually only for a week or so. They too made comments about how the friendliness of the summer school had made being away from home easier.

> "I've been away before but only for about a week but coming here, everybody's been so friendly and you really do feel totally stable – part of a big family."

5.1.1   Accommodation and food

With respect to the residential experience, around 74% of students reported that food was good with a 17% being less positive about it. A much higher percentage (92%) reported positively about the accommodation. Differences between sites were found with respect to the quality of accommodation and food. Specifically, students at Durham rated the quality of accommodation more positively than did students in Canterbury, Exeter and York. With respect to the quality of food, students attending Exeter were more positive than students in the other four sites, i.e., Canterbury, Durham, Warwick and York.

Consistent with the above results, in twenty-one interviews drawn from all five sites, positive comments were made about the standard of accommodation ('they're nice rooms', 'they're comfortable, light, airy rooms', 'it's a simple room but there's enough there', 'there's everything you need and it's cleaned quite regularly'). The students particularly appreciated having their own rooms rather than having to share.

> "I like that we have our own room. It's important to have privacy and your own space."

In Canterbury, there was some disgruntlement because some students had *en suite* rooms whereas others had to share bathroom facilities. It seemed to be the unfairness of this situation that rankled with some even though it was clear to others that 'it's just the way the buildings have been designed'. In general, across the sites, sharing bathrooms was seen as causing 'a bit of a rush in the mornings' although, in most corridors and blocks, various systems were devised to make it work, such as some having baths while others showered, or some showering at night and others doing so in the morning.

Unsurprisingly, views on the food provided varied from individual to individual. Students liked to have a choice at each meal and for there to be variety from day to day. From comments made in the interviews and in open answers on the questionnaires to students, it seemed as if there may not have been sufficient choice for vegetarians. Overall, comments on the food varied from 'it could have been worse' to 'brilliant'.

5.1.2 The role of the residential assistants (RAs)

The residential assistants (RAs) played a vital role in the summer schools, being responsible for the students for the whole time that they were not in lessons. When students were asked about the informal interactions they had with residential staff, more than 95% expressed very positive views. Looking at differences between sites, informal interactions with residential staff was rated lower by students attending Warwick compared to those in Canterbury, Durham, Exeter and York. This may be explained by comments in the open answers on the student questionnaire which indicated that students in Warwick felt particularly restricted by the supervision of the RAs (a half of all such comments came from Warwick students).

More than 90% felt that the support provided by the residential staff and counsellors ranged between good and very good. Looking at between-site differences, this type of support was rated higher by students attending Durham compared to the ratings at Canterbury, Warwick and York.

When asked how they had found the RAs during the interviews, the students responded overwhelmingly positively in 26 interviews across all five sites. Their role in planning and organizing the range of activities was appreciated, as was their role *in loco parentis. S*tudents described them as like 'brothers or sisters' or as like 'fathers and mothers' because of how they looked after the students, were always there for them, even in the middle of the night if necessary, and kept confidences. They were seen as friendly, lively, approachable, helpful, kind, knowledgeable about university and responsible without being inflexible. The following quotations offer a flavour of this.

> "Really good!"/ "The RAs are quite young, they can understand us. They're always happy and cheerful and that makes us feel better."/ "They are really lively. And if you have a problem, they'll talk to you and sort it out. And even if you need to talk to them in the middle of the night, they are always there for you."/ "My RA is really flexible although she's not meant to be. She lets us sit up in the kitchen and talk for ages."

> "Brilliant!"/ "Really good."/ "Tell them to choose good ones again. They're all a good laugh."/ "They're there when you need them. You can talk to them like a friend."

> "They all understand that we're away from home in the summer holidays and could be out with our friends and they do help in that area and understand. They don't come down too strict."

> "Very good."/ "They are close to our age and that's nice."/ "Accessible and helpful."

> "Helpful, you can discuss with them, you can talk about university life and career choices."

"The RAs have worked so hard; they are like up twenty-four hours and when you go and knock on their door, they're there for you."/ "They've tried hard to provide activities to stimulate everyone."/ "The RAs have organized activities for each evening (lists a variety of things)."/ "You can tell they've putting in a 100% effort and that's helping us all bond closer together."

The RAs' role as chaperones, having to keep an eye on all the students all the time to ensure safety, was found by some of the older ones to be a bit 'unreasonable'. Others understood perfectly why the rules were in place and appreciated them. The following excerpt from one interview illustrates both views.

"We all love our RAs. They are like surrogate mothers and our friends. We can talk to them but they are also responsible. It must be difficult for them but they've done it really well. They've got the balance right between being responsible and being friends."/ "And the rules are good. That an RA has to be with us and knows exactly where we are. I've felt safe the whole time and this is my fist time away from home for longer than three days. It's good that when we go back and talk to our parents they can know they can trust us to be looked after here."/ "As one of the older ones, I've found the rules quite restrictive. For example, I am 16 and been ironing and using a kettle for years but here I am not allowed to do that without an RA. I understand they need rules but I think they have gone a bit too far."

Overall, the interview data suggest that the residential assistants in all five sites did a difficult and tiring job extremely well. It may be that some greater freedoms can be given to older students in future, perhaps along the lines that would be expected on a school trip.

5.1.3 'Fun' activities

The organization of 'fun' activities was rated as a 'good' residential aspect by almost 85% of students across sites. Views on the organization of 'fun' activities were found to differ between Warwick and the other four sites. Specifically, students attending Warwick did not rate the 'fun' activities as highly as did students in Canterbury, Durham, Exeter and York.

Table 18: Students' views on residential experience (%)

Residential Experience		Very Good /Great Extent	Good / Somewhat	Poor /Slightly	Very Poor / Not At All
Canterbury (n =103)	Accommodation	30.1	64.1	5.8	-
	Food	13.6	61.2	19.4	3.9
	'Fun' Activities	31.1	56.3	12.6	-
	Residential Staff /Counsellor	41.7	50.5	5.8	1
	Age-based Treatment	11.7	33	33	19.4
	Informal Interactions	50.5	46.6	2.9	-
Durham (n =56)	Accommodation	83.9	16.1	-	-
	Food	19.6	44.6	32.1	3.6
	'Fun' Activities	50	48.2	-	-
	Residential Staff / Counsellors	71.4	26.8	1.8	-
	Age-based Treatment	21.4	28.6	25	16.1
	Informal Interactions	75	23.2	-	-
Exeter (n=75)	Accommodation	24	60	16	-
	Food	40	50.7	8	1.3
	'Fun' Activities	53.3	41.3	4	1.3
	Residential Staff / Counsellors	57.3	37.3	5.3	-
	Age-based Treatment	13.3	49.3	22.7	13.3
	Informal Interactions	68	32	-	-
Warwick (n=161)	Accommodation	65.2	31.7	1.2	1.2
	Food	13	45.3	24.8	14.9
	'Fun' Activities	18.6	57.8	15.5	13 (8.1)
	Residential Staff / Counsellors	42.9	44.7	8.1	1.2
	Age-based Treatment	10.6	43.5	26.1	19.9
	Informal Interactions	40.4	49.7	7.5	2.5
York (n=87)	Accommodation	32.2	49.4	12.6	4.6
	Food	23	51.7	17.2	5.7
	'Fun' Activities	37.9	47.1	12.6	1.1
	Residential Staff / Counsellors	49.4	42.5	5.7	1.1
	Age-based Treatment	16.1	42.5	27.6	10.3
	Informal Interactions	59.8	35.6	2.3	2.3

6. THE VIEWS OF THE COURSE LEADERS

One-to-one interviews were held with the course leaders or a nominated tutor of all the subject strands (with two exceptions) offered across the five sites, twenty-six interviews in all. These were analysed thematically, exploring the range of views about each topic addressed in the interview.

6.1 The enjoyment of teaching on the course

The majority of course leaders (n=24) greatly enjoyed teaching on the course. The most frequently given reason for this was the responsive nature of the students:

> "They are very responsive. It's amazing to have a class of children that are eager to participate, not just to ask questions but also to offer opinions and make contributions."

> "I'm enjoying it enormously. It's very energizing to be with 18 students who are enthusiastic and who keep coming up with questions."

> "I'm thoroughly enjoying it. ... The level of interaction is so high. They want to learn and they're interested."

Other reasons given for enjoying teaching on the course so much were:

- the experience of working with colleagues ('sharing ideas and developing ideas with colleagues has been very good');
- the challenge the course represented ('the challenge of translating research and concepts into language the children can understand'); and,
- for a minority, that it built on work they were doing with other groups of gifted and talented young people.

The two course leaders who did not enjoy teaching on the summer school gave individual reasons. One had had to work 'non-stop to exhaustion' and had found the age and ability range too great. The other found that the lack of selection resulted in his course containing a number of students who 'should not have been selected. These students upset the cohesion of the group.' The concerns of the other tutors interviewed on these matters are described below; for them, though, these aspects had not prevented them from enjoying the experience of teaching on the summer school.

6.2 The personal value of the experience of teaching on the summer school

The majority of course leaders (n=21) found teaching on the course was a valuable experience personally. In the main, this was because of what they learned about teaching. They spoke about this in terms of developing skills to teach this age range over a long day and the applicability of these skills to teaching first year undergraduates. For example, the long teaching day 'encourages you to think about breaking up the tasks and teaching styles' and the wide age range provided experience of 'how to reach a more diverse audience'. Seven course leaders explicitly stated that what they had learned about teaching would be useful in their undergraduate teaching.

> "For my undergraduates, I will now teach differently; I'll be more interactive, break them up into groups."

"We have had to readjust our ways of teaching quite considerably for these younger people with shorter attention spans but we think that possibly this could apply equally to first year students and we may rethink what we do with first year students in the university in the light of our practice for the summer school."

"I will develop these ideas into other forms of teaching."

Other reasons for finding the teaching a valuable experience personally were:

- the 'energizing', 'uplifting' effect of teaching enthusiastic, motivated students;
- the beneficial experience of 'bonding with' a team of colleagues ('considerably different in my experience of running a department over a single subject area');
- the 'opportunity to learn more' both from students and from guest speakers;
- the positive experience of teaching a small group of students over an extended time ('I liked the compact course with continuity from session to session');
- the personal satisfaction of feeling that 'I am contributing something'.

For individual reasons, four course leaders did not find teaching on the summer school personally valuable, one because he was retiring, another because he had been exhausted by it and the remaining two as follows:

"In terms of intellectual value or my career progression, it is of limited value."

"Ideologically, I don't like the fact that the students were accepted on the fee basis."

6.3   Workload

Three fifths of the course leaders (n=15) found the workload heavy. They used phrases such as 'quite substantial really', 'quite gruelling', 'pretty heavy', 'very hard work', 'all consuming', 'incredibly hard work'. The preparation beforehand, the three weeks delivery, the adaptation of prepared material in response to the needs of the group, the marking and the writing of reports all added up to a demanding workload and long hours.

"I am regularly working until 1am and quite often getting up at 6 am to prepare. ... I prepared as much as possible before the course started but I am not experienced at teaching this level so that limits the preparation I could do and a lot has to be done day by day. So the workload is very heavy."

As all this was an 'add-on' to full-time academic jobs, they also had to cope with the awareness that other work they should have been doing was building up too.

"I would endorse that [it took seven weeks out of the summer (a comment made in last year's report)], if you add on the time planning the courses and the week or ten days it's going to take me afterwards to catch up with the backlog of work which I've just shelved."

"I thought I'd be able to get on with other work while the summer school was on but I've only been dealing with this."

Course leaders were also aware that their own research was suffering as a result of taking the time to be involved in the summer school.

> "Three weeks delivering means actually 9-10 weeks preparation. We are a research active department therefore it is difficult to cope. It was very difficult this year from the workload point of view."

> "It has taken a lot of my time and that has had an effect on my research which I am concerned about."

The remaining two-fifths of course leaders described the workload using words and phrases such as 'manageable', 'not particularly difficult', 'not too bad', 'relatively easy', 'not very demanding'. The reasons for this marked contrast in perception related to differences in modes of preparation and delivery and in experience. This group had organized things so that preparation and delivery were shared among a group of people and they tended to have experience with the age range or to have found it easy to adapt material prepared for undergraduates.

> "I've not found the planning for this course significantly different than planning for university undergraduate work."

> "I organized the course so a lot of the work is done by other people."

> "Me and another teacher designed the course, springing off our first year undergraduate module. We are all teaching from our research strengths. It's designed for us and makes sense to us."

> "We have a team of six people so that has spread the load. ... Our resources were already prepared."

> "We share the work among a group of colleagues so it is not very demanding in this respect."

Several of the Warwick course leaders found the workload this time better than the previous year because they were able to use the same materials with adaptations, and at least one had also spread the workload among more people. At the other sites, course leaders recognized that the work involved in preparing for this year would 'payoff' if the same or similar course was run in future years. A few made the point that it would have been helpful to have had organized contact with Warwick staff who had prepared and taught on courses last year.

> "It would have certainly helped me (I should have done this and I didn't) to have talked to some of the people involved in delivering the pilot summer school at Warwick. We were given names and I just never got round to calling them in person, and I should have done that because I realize now that there are things that they could have probably have told me. I guess, as a piece of feed-back, I think it would have been nice, it would have been really helpful if someone had forced that to happen; if we'd actually had a round table meeting. It maybe needs to be divided into faculty, you know, for their interest areas and what have you, where some of the previous course leaders were able to share their experience with people who are new to the game."

This opportunity to share materials and experience is something that perhaps NAGTY could consider building in for the future.

6.4   Tutors' perceptions of students

When asked how they were finding the group of students, overall positive comments were frequent:

> "It's a pleasure to work with them."
> "They're very, very nice."
> "What I really liked was the enthusiasm they had."
> "They are very nice to teach because they are much more reactive than regular undergraduates."
> "They are a great bunch."
> "They are very lively, very enthusiastic."

Tutors also discussed their views on whether the students were 'gifted and talented', how the group had cohered, how they had found dealing with the age range of 11-16 years, the social maturity of the students and their ability to grasp the subject matter.

6.4.1   'Gifted and talented'

Of the 26 course leaders interviewed, five were unhappy with the use of the label, 'gifted and talented'. One said that a lot of the children had said to him that they did not find the 'gifted and talented' label useful. He thought that was partly because of their awareness of how it made other children feel but also because it could lead to those labelled being bullied because of the 'anti-intellectual culture in the UK'. He thought it was only useful 'in as far as it makes us think about new teaching methods and new approaches to working with children.' Another thought 'gifted and talented' was:

> 'an unfortunate descriptive. I'd be much happier if we didn't have it quite honestly. I think everybody's gifted and talented to some degree."

> "I'm not very keen on the 'gifted' label, but they are exceptionally gifted. I worry about these tags given to children, that they could have negative effects – they think they are gifted and don't do any work. I see that happening at university. Also it's putting too much pressure on them that they feel they have to keep up with this challenge."

> 'I prefer to describe them as 'academically able' because 'gifted' involves certain contentious assumptions.'

One tutor thought the label was 'a shame' and worried that the t-shirt the students wore when they went off campus which bore the NAGTY logo and the label 'gifted and talented' could cause offence to others.

What ever the label means in practice, only a few course leaders thought the group they had could, as a whole, be described as gifted. These few described the characteristics of giftedness in terms of depth of engagement with the subject, their interest in new ideas and their sheer level of interest and enthusiasm for it:

> "They are definitely 'gifted and talented'. That comes through in different ways; for example, the unexpected question or comment which shows that they're engaging with what you're saying, or with what you're reading to them, at a deeper level than you expect. Some really good writing. But even after two or three weeks, some are still a little bit shy expressing themselves to the

full on paper - though I understand that some of these particular students have flowered in creative writing and drama."

"Yes, I do [think they are gifted]. They are so interested and enthusiastic; very gifted. I'm doing things with them that I can't do with my undergraduates. They are remarkable. Their enthusiasm, their curiosity, their inquisitiveness. They go for new ideas. I think it's about attitude rather than ability. If you are interested, you can be gifted and talented. Motivation but also highly intelligent. It's very encouraging. I think a positive response to a challenge is the key to success."

It was much more common for course leaders to view the group as encompassing a range of ability with only a minority satisfying their, pretty much individual, definitions of giftedness. For example, one thought that 'giftedness' related to the manner in which information was processed and, unlike the course leader just quoted, did not believe that being 'extremely interested and motivated' in their subject constituted giftedness.

"I think there may be a tiny, tiny minority of them who are gifted, five at the most from this summer school who seem to be qualitatively different in the sense that they seem to process information differently and so on. ... The biggest group for me are simply normal, relatively bright children, sparky children who happen to be very, very interested in their subject. ... I don't think there's anything different about them apart from the fact that they're extremely interested and motivated in their subject area."

Other conceptualisations of this range of students, with only a minority being gifted, included the following:

"One is gifted because he has that ability to see to the core of the problem which marks you out as being rather special. The rest are academically very capable through to academically very good indeed. In the labs, they are quicker on the uptake than first year undergraduates. But to say if they are really 'gifted and talented', I would need acquaintance with someone's writing and academic performance over time."

"Four plus of the 13 are 'gifted' – that is, they have the ability to maintain concentration on exercises that demand thinking in new ways; openness, a sense of enquiry, able to communicate clearly; able to be perceptive of other people; engagement with the material; reliability; support for others. In other words, what we'd be looking for in our undergraduates."

"To me, the 'gifted' in maths are those to whom it comes naturally. They are one step ahead of you and the other students. They can see where it's going. 'Talented' young people will understand what you do; will stay in step with you. Out of the 17 students, six or seven are gifted. The rest are very able and talented."

"Some are gifted; others academically able; and some are motivated and hard working. You get all these things."

One course leader approved of having a mix of gifted and those who were simply 'motivated and hard working' as he thought it was 'less elitist'.

> "I think from a democratic point of view it is good to have gifted as well as those who are motivated and hard working all being together. It is less elitist."

A small number of tutors questioned whether any in the group taking their subject could be described as 'gifted and talented' rather than keen and hard working.

> "They are really keen. Whether they are the top 5% or not, I don't know. I have kids in my school who are just as good."

> "I thought that I would see very sharp, talented, quick and keen to learn. What I see is normal kids who are motivated."

> "It is hard to say that they are gifted. The 14-15 year olds should be above the GCSE standards, but they are not. Almost all of them have the required basic skills, the motivation and the good teaching behind them but very few have the spark, the desire to explore writing. This group is not representative of the high flyers."

The variation in perceptions of the students may reflect the fact that this year applications for the available places were mainly allocated on a 'first come first served' basis. Equally, it may indicate that some course leaders conceptualised 'gifted and talented' not as the top 5% but as the top 1% or even the top 0.1%

6.4.2 Group cohesion

Group cohesion was raised as an issue in 14 of the interviews: in half of these perceptions were positive and in the other half, perceptions were negative. Positive comments included:

> "The social cohesion of the group is fine. We have created groups across age and ability and this has worked very well. These arrangements have supported them in terms of friendships and academically."

> "Cohesion as a group is very good, you have a whole variety – always get one who is annoying, just one in this group, but on the whole there is a good balance between young ones who are quite stimulating and make – because they're young they are ready to interact and contribute to the class without any inhibitions and that has meant the older ones have been more ready to interact and less shy.   The older ones have taken quite a responsible role for the younger ones, so there has been almost like a family atmosphere – it's very nice."

> "Social cooperation has been excellent.   I think this is partly a function of the things they are doing in the evening, which look very well looked after here. Residential Assistants and the site manager are giving them a lot of constructive activities in the evening that they seem to be enjoying and that means they have a number of ways of relating to each other outside the classroom."

The negative perceptions of group cohesion related in the main to having 'too varied' a group in terms of age range, ability range, maturity and levels of self-confidence but also to having students in the group who simply did not want to be there.

> "I think the group is too varied. I take it that one of the aims of this kind of activity is to free very bright students from contexts in which they have to in

some way compromise or conceal their brightness or can't just straightforwardly get on with it. The danger here is that some very bright students are held back by the fact that they are still mixing with those who are distinctly less good than they are. Those who are less good, though very clever in the context they come from, may be intimidated by the context in which they are having to work."

"There's the range of ages from 11-15 and the differences in maturity. It's a mixed ability group. We've split them up into age groups for activities. We thought they'd be homogeneous. And the difficulty is, how do you prevent the older and really bright ones dominating?"

"In terms of group cohesion, there seems to be a gender gap with respect to self-confidence. In the group, there are four boys and 13 girls, and the boys are self-confident and articulate and they tend to dominate the group. The girls have expressed an interest in doing Drama in order to enhance their self confidence."

"I recruited nine people to this course. The other people wanted to do other courses and got shuffled to me. That's bad news. I have won most of them over to interest in the subject. But the dynamics of the group were not healthy. I asked some of these people why they had come and they said things like that they wanted to get away from their parents, various things but *not* that they wanted to study my course."

Not surprisingly, these course leaders found 'considerable' challenges in making such groups work. Perhaps anticipating such problems of group cohesion, a minority of course leaders had insisted on reducing variation by limiting the age range for their course, and/or the ability range.

"I deliberately insisted on 14-16 year olds only and the top 1% of ability. Maths attracted a lot of students and I wanted to narrow the range."

Others were not in a position to do this as take-up of their course had been limited.

6.4.3   The age –range

The age range for the summer school was 11-16 year olds and course leaders were encouraged to offer courses for the full range. As mentioned above, some did limit the age range usually to 14-16 year olds. Others regretted not having done this – 'I'd have them as separate strands in the future', 'I regret keeping the age range wide', 'separating the age groups by age would help'.

On the other had, some found that the wide age range worked rather well with the older ones listening to the younger ones and vice versa.

"It is interesting to note that the older, brighter children modify the work for the younger ones, a good way to collaborate and learn."

Most put in a lot of effort to find material and tasks that would work on different levels to suit the range of ages.

" The age range was broad, 11 to 16. So when we designed the course we designed with this in mind, with a lot of open ended tasks that meant they

could then develop their subjects that they were following to the best of their ability."

"We had the full age range and that has been quite a challenge to deal with. ... We deliberately tended towards practical based teaching, working on the assumption, which proved to be correct I think, that they may know quite a lot about biology in theory, but they probably won't have done very much in practice. And that seems to have paid off for us because for a good proportion of the course they were starting at the same point and that's helped immensely. I'm very pleased that we weren't running a classroom-based course. It would have been very much more difficult to deal with the range of people that we've got in groups."

Students felt that the fact that some of the teachers on the courses had experience of teaching the 11-16 year old age range while others had not was not lost on them. They recognized that this affected how they were taught.

"[Name] had taught kids our age and the lower age whereas the other ones were university teachers so they're used to lecturing, not us working our way through."

"I think it's been a shock to the lecturers; they're not used to teaching younger people; they're not used to teaching the way we are used to being taught so you have to alter the way of thinking.
You have to adapt to them?
(All) Yes."

Students also recognized that the wide age range and the ability range could make it hard for the teachers to adopt the appropriate teaching pitch. Far more comments, however, were made about how accurate the teaching had been pitched, despite the wide range of students.

"The group is a mixed ability range and that has been dealt with very well."

"They've coped with the different ages well. It's not been too slow for the older ones or too quick for the younger ones."

This also came through in comments made in eight interviews about the level of challenge, indicating that teachers on these courses had got this 'about right'.

6.4.4   Understanding of subject matter and social maturity

The ability of the students to grasp the subject matter was raised by only four tutors, each of whom spoke of this positively.

"Their grasp of the subject matter is fantastic. They recall subjects, they catch us on tiny details that we haven't explained, they have really enquiring minds, almost right the way across the board."

The variation in levels of social maturity within the subject groups was raised by nine course leaders. This was seen as varying across individuals and within individuals at different times. It was not seen as necessarily being related to age (although there was an element of this) or ability. The summer school experience was seen as an important way of developing social maturity.

'Some of the children are still learning formal rules and etiquette of discussions; sometimes they get a little bit too excited."

"I've also observed difficulties with social/communication skills and team work. I think the summer school experience would be good for them to develop these areas. These areas are as important as the academic ones."

"Their social maturity varies enormously and is not age correlated."

6.5 The selection of the students

Although the issue of the selection of students was not included as a direct question in the interview schedule, the topic arose naturally from the discussion of the group of students or at the end of the interview. Overall, those who discussed this topic wanted to know more about how students had been selected and some would have liked an active role in the process, arguing that they were, after all used to selecting students for university places. Two would have liked, ideally, to have spoken to the students and perhaps to their parents 'just to separate out those who really want to be here from those who were pressurised by their parents to be here'.

6.6 Teaching 'gifted and talented' young people

The course leaders were asked if they had shaped their teaching in any specific way/s to suit working with gifted and talented young people. Most (n=17) agreed that they had by adapting the material, the pitch, the presentation and the flexibility of their teaching. Taken overall, the range of ways this had been done is represented by the following list:

material
- by being 'bold with what we've tried to do with them'
- by being designed to develop [subject] ideas around application, logic and understanding;
- by concentrating on 'breadth, variety and fun', on 'extension'

pitch
- by pitching the teaching 'at the level I thought would be the full extension of the capacities of a very bright child that age'
- by 'setting challenges'
- by 'constantly explaining why we do such and such and where we from there'.

presentation
- by giving them 'individual attention and reassurance'
- by being 'as hands-on as possible';

flexibility
- by being 'flexible and responsive' to them
- by taking into account short term concentration.

A smaller group of tutors believed that their teaching had been shaped not so much by the students being gifted and talented but by:

- the length of the teaching day which encouraged breaking the time up with activities;
- the standard undergraduate course ('somewhat tailored');
- the age of the students which encouraged adapting the material and presentation to make it 'more playful; they prefer group discussions to lectures'.

6.7   Willingness to teach such a group again

Encouragingly for NAGTY and the future of these summer schools, the majority of course leaders (n=16) said they would like to teach such a group of students again. Some made the point that having prepared the material it would be a shame not to use it again while others made comments such as, 'I've never enjoyed teaching as much'.

Seven course leaders hesitated about committing themselves again, mainly because of one of two factors identified– either the impact on their own careers or the lack of group cohesion they had experienced this year which had made teaching challenging.

> "Doing this sort of thing disadvantages a university lecturer quite considerably when it comes to the annual promotions round. It's a very cynical thing to say, but it's true - because it means a year, effectively, that you don't do research.   And therefore, unless some posts were created which didn't depend upon your having annually x number of research assessment points, people are going to be reluctant to make an annual commitment. You have to think about it, I'm afraid, in these terms, because once you take out the seven weeks, there's no time left – I'm going to go straight from this to admissions interviewing and resits and I'm going to get maybe two days to read in the British Library and no holiday of course – that's out of the question! So if I hesitate about repeating the experience, it's not to say that I haven't enjoyed it very much, because I have."

> 'I would like to teach a *cohesive* group of *14-16* year olds.'

> 'I would if I could teach a group of 14-16 year olds only and those who chose the subject as their first choice."

Only one course leader said that he wouldn't like to be involved again and this was because he did not approve of the lack of selection and of the change from a free course to one for which students had to pay.

7.   OVERALL EXPERIENCE OF THE SUMMER SCHOOL

7.1   Benefits and drawbacks

7.1.1 Students' views on benefits

Initial views and thoughts on the potential gains from the summer school were solicited by asking students to complete a questionnaire before they arrived at the summer school. According to these preliminary findings, support with homework was expected to be the least likely gain from attending summer school. About three quarters of students in Durham, Exeter, Warwick and York felt that finding out about university life would be a potential benefit, with the percentage of students in Canterbury being lower, i.e., 50%, regarding this. Also, between 75% and 90% of students across sites stated that making friends would be an important outcome of attending summer school. Moreover, expanding their knowledge of the chosen subject was a very common response from students across sites, in that a great percentage, higher than 90%, chose this as a potential gain. Finally, around 50% of students in all sites thought that attending summer school was going to help them with future career choices.

Table 19: Students' prior views on potential benefits of the summer school (%)

	Canterbury (n=85)	Durham (n=46)	Exeter (n=70)	Warwick (n=130)	York (n=62)
Homework Support	8.5%	6.5%	15.7%	7.7%	9.7%
University life	42.5%	73.9%	72.9%	70.7%	75.8%
Make friends	57.8%	91.3%	87.6%	81.6%	75.8%
Knowledge	72.2%	100%	88.8%	96.3%	96.8%
Career Choice	32.3%	47.8%	50%	43.9%	54.8%

In terms of *actual* gains from attending summer school, 67% of students across all five sites stated that it had helped them to develop problem solving skills to a degree (ranging from somewhat to a great extent); 75% stated that it had helped them to become independent learners; 92% said that this experience had expanded their horizons regarding their chosen subject; 89% said it had stretched their limits; 73% stated that it had supported their personal interests and hobbies; 56% said that it will support them with their school work and, finally, 79% felt that it had helped them to find out about some aspects of university life.

It appears that a high percentage of students viewed the summer school experience as capable of expanding their horizons with regard to their subject, as well as helping them find out about university life. Thus, among the gains acquired from summer school, expanding horizons and finding out about university life were rated more positively than other potential gains (e.g., development of problem solving skills and personal interests).

Comparisons between the five sites regarding actual gains from attending summer school showed a significant difference with respect to finding out what university life would be like. Specifically, students at Canterbury, Exeter, Warwick and York felt that they found out more about university life that those who attended the summer school at Durham.

Students' views on the development of problem solving skills were found to differ between Canterbury and Exeter, in that Exeter students were more positive about this particular gain than were the Canterbury ones. Also, stretching their limits acquiring knowledge of their chosen subject was found to differ between Durham and York sites in that students attending Durham felt 'more stretched' than those attending York. Finally, the views expressed regarding supporting their personal interests and hobbies were more positive at Exeter compared to those expressed by students at Durham.

Table 20: Students' views on the gains made as a result of the summer school

	Potential Gains	Very Good /Great Extent	Good / Somewhat	Poor /Slightly	Very Poor/ Not at All
Canterbury (n=103)	Problem Solving	14.6	41.7	25.2	14.6
	Expanding Horizons	60.2	31.1	5.8	2.9
	Personal Interests	35.0	34	20.4	9.7
	University Life	41.7	29.1	15.5	13.6
Durham (n=56)	Problem Solving	19.6	48.2	21.4	7.1
	Expanding Horizons	64.3	30.4	3.6	-
	Personal Interests	23.2	42.9	19.6	14.3
	University Life	44.6	39.3	12.5	-
Exeter (n=75)	Problem Solving	28	46.7	24	1.3
	Expanding Horizons	57.3	33.3	8	1.3
	Personal Interests	42.7	40	12	5.3
	University Life	40	38.7	14.7	6.7
Warwick (n=161)	Problem Solving	19.9	51.6	16.1	11.2
	Expanding Horizons	69.6	24.2	4.3	1.2
	Personal Interests	37.9	39.1	16.1	6.2
	University Life	42.2	37.9	14.9	5
York (n=87)	Problem Solving	16.1	44.8	28.7	6.9
	Expanding Horizons	58.6	29.9	10.3	1.1
	Personal Interests	29.9	35.6	25.3	8
	University Life	50.6	27.6	14.9	6.9

The students interviewed were asked to think of the overall experience of the summer school and reflect on the benefits. The benefits identified grouped into three main themes:

- academic benefits;
- social benefits;
- benefits for the future.

However, these were intertwined as the following quotation indicates.

"The benefits are meeting new people, hearing other people's point of view, learning something new about the subject you're interested in, seeing university, having a bit of a taster of university life. Everything about it has been a benefit. I don't think there's been any downside to it really."

<u>Academic benefits: gains in subject knowledge, skills and understanding</u>

By their nature, the comments about gains in subject knowledge, skills and understanding were specific to individual subject areas. The following quotes give a flavour of this:

"It's developed our skills in languages." (Modern Foreign Languages)

"I've learned to look more closely at the detail of the use of words and language." (English)

"It has expanded my knowledge of world politics." (Politics)

"I've gained a more advanced understanding of maths." (Maths)

"We've learned to use lab machines and scientific tools, learned correct terminology." (Biology)

"We've got more depth and understanding because they have shown us how things are related and interwoven." (Physics)

The gains in subject knowledge and understanding identified by students are important because they indicate that the teaching and learning on the summer school had led at least some students to begin to understand the distinctive nature of individual academic disciplines and the particular ways of thinking required. For example, students taking the Philosophy course said they had gained a lot of knowledge, for example, about critical thinking, fallacies, a wider perspective on things, that it had extended and deepened thinking, developed skills in argument, and in thinking independently. Likewise, those researching Health and Disease stated that they have learned how to use SPSS, to set up an experiment in psychometrics, read the British Medical Journal and engage in critical thinking. Students taking History commented on learning how to look at things from different perspectives and not be biased to one point of view, understanding that historians are like detectives.

Students also commented very positively on the subject knowledge they had gained from new experiences - either through the opportunity to explore subjects not covered at school or to learn new aspects of school subjects.

"I've learned to do stuff that I wouldn't have learned at my school because at school it's just really easy." (Maths)

"We have looked at some seventeenth century sonnets and things like that which I'd never read before." (English)

"It's been something interesting that we don't get to do at school." (Psychology)

"Some of the subjects I've never actually heard of before, but now I know how to do them and I've understood it." (Maths)

"This is not done at school. We've had the chance to learn something new." (Researching Health and Disease)

"We've done a lot of things we've never done at school." (Physics)

"New skills of interpreting, researching, evaluating." (History)

In addition, students saw as a gain the fact that the learning they had done on the summer school could be built on and followed up later.

"We've been started off in the languages so we can carry on if we want to." (Modern Foreign Languages)

"We did some work on robotics and now I'm interested in taking that further or taking maths to degree level maybe." (Maths – Canterbury)

"When I get home, I'm planning to try out most of the stuff we've learned and take it further."(Computing)

One of the other academic benefits was *the opportunity to learn with others of similar ability*, enabling learning at a fast pace, increased engagement with learning, and peer learning.

"We are all high ability so it has been much faster learning."

"Meeting people of the same ability. At school, I get bored and switch off. Here I can argue with others. You get a feel for the Academy and realize you're not just alone."

"Because we are all intelligent, here the children and the teacher can help in class [unlike in school where only the teacher can help]."

Students also spoke about the benefits of learning *outside the pressures of a set curriculum and exam system*. This enabled greater involvement in setting learning goals, greater independence in learning, enhanced enjoyment and greater breadth of knowledge.

"Here you can have more say in what you do because you are not working to a set syllabus."/ "Yes, it's good because it's not focused on exams."

"I was thinking of educational independence as well because at school it's exams are everything, exams just dominate your life and you learn in your own way

here. You find out that there's more to education than what they tell you at school. It's like this whole new world."

"We've looked at areas of subject that are not on the school curriculum."

"They are not teaching for an exam, they're teaching stuff because it's enjoyable. It's not just out of a text book, there's variety."

Other academic benefits identified by a small number of students include:

- gaining an understanding strengths and weaknesses
  "It's easier to find the weaknesses in a group where everyone's the same ability. When you're in a group where you are slightly above everybody or the majority, then it seems as though you don't have as many weaknesses – not being arrogant."

- experiencing preparation for university
  "We've gained knowledge about what university life will be like. The teaching but also how students spend their evenings and living here."

- being challenged
  "I've been challenged more than at school. We're being taught at first year undergraduate level."

- experiencing learning at a quick pace
  "It's great to go at such a quick pace when learning a new language. In one day here, we learn more than in a week at school."/ "It's great to learn so much so quickly."

- enjoyment in learning.
  "We can really enjoy ourselves which you can't do at school."

- experiencing learning from peers
  "We learn off each other. With the different age groups, like people who have done their GCSEs, you learn a lot from them."

Generic study skills

Gains in generic study skills focused mainly on learning to take notes - from lectures or simply taking independent notes in class. This is a useful skill for all stages of future learning.

> "I've learned to take notes and stuff in lectures and to work with lecturers."

> "It's your responsibility to write your notes in lectures and to make sure you understand. In school, we just copy stuff off the board."

Equally important was the evidence that some students had gained a sense of themselves as more independent learners.

> "Independent. You can be independent in what you do and you don't have to follow everything the teacher has to tell you to do."/ "Kind of made you not, like, rely on the teachers. At school, I always make the teachers do all the work and here because, like, they give you a start and they leave you to find

out the rest, it kind of helped me to work on my own without really needing help."

"My ability to work independently has been developed."

Others learned idiosyncratic ways of making studying work for them.

"I've learned that it's easier to do certain things if you're not sitting down – if you're on the floor, just drawing outside or something."

Finally, other academic benefits the students spoke about were:

- the depth and breadth and amount of learning;
- the broadening of minds/opening of horizons;
- the focus on one course enabling 'a much better type of learning than school';
- the opportunity to share ideas with others.

Social benefits

The social benefits were summed up as:

- new friendships
"Making new friends that I want to keep for life if I can."

- increased independence
"Independence – doing our own washing and ironing"; "learning to be away from home and finding it alright"

- increased confidence
"Increased confidence"; "Social confidence for a lot of people"

- learning tolerance
"Tolerance – because you can't really afford to really fall out with people so I've learned to, with people that I'd maybe snap at, I've learned to just breathe and count to ten and then ignore that they said that or whatever."

- being accepted
"Being accepted here."/ "Being allowed to be smart and individual"

- enjoying new social activities/enjoying the range and variety of social activities
"The range of activities and the variety."; "New social activities too"

Students also reflected on gaining personal and social skills from their summer school experience. The main gain in terms of personal and social skills was in levels of confidence. As the quotations illustrate, this linked to points made earlier about the availability of help and of the range of teaching methods used, such as group work, discussion, role play and presentations, which encouraged students to speak in class.

"I've got more confidence to speak up because we've done things like role play."

> "Confidence. It helps social confidence and lesson confidence because I would never have presented anything in front of my class."

> "I've found I'm not afraid to put my hand up and ask questions anymore ... whereas at school, I'd be a bit self-conscious about saying in front of the class, I don't understand something."

Other personal and social skill gains from the teaching and learning on the summer school were social skills in general and independence.

> "Social skills for, like, discussion in class and the social side of the summer school."

> "We've gained independence. At school we wouldn't be trusted with the equipment."/ "Here we are treated like adults."

A few students also talked about how important it had been to be able to keep in touch with their parents via the mobile phones that they had been allowed to bring. Also, a few students mentioned how their existing friends had reacted when told the news that they were going to the summer school.

Benefits for the future

The benefits for the future were at three levels:

- immediate benefits on return to school;
"It will help with future study at GCSE and A-level."

- medium to longer term benefits of the preparation for university;
"You get a taste of university life. You see how the accommodation is, the lectures, the tutors."

- longer term benefits in relation to future careers.
"Good for my CV."/ "It's given me ideas for future careers. I always wanted to be a lawyer. Now I don't want to be a lawyer anymore; now I want to do something involving maths."

Also, a small number of students commented on gaining an advantage for the future:

> "I think we've got an advantage for when we go back to school. We've learned so much that we can use this knowledge that we learned."

7.1.2 Potential dislikes and actual drawbacks

Quantitative analyses showed that, prior to attending the summer school, between 30% and 40% of students thought that not having a summer holiday would be an aspect of the summer school they would not like. A quarter of students thought that the course might not be interesting, whereas less than a quarter thought that it might not be relevant to their future education and career choices. Finally, around 50% of students in all sites stated that missing family and friends was a potential dislike.

Table 21: Students' prior views of their potential dislikes about the summer school (%)

	Canterbury (n=85)	Durham (n=46)	Exeter (n=70)	Warwick (n=130)	York (n=62)
No Holiday	37.6	41.3	28.6	34.6	29
Course not interesting	23.8	39	27.2	33.8	22.2
Course not relevant	10.2	15.2	24.3	15.4	12.5
Miss family/friends	35.7	56.5	42.5	48.4	58.1
Other	15.3	-	-	-	-

In seven of the interviews held towards the end of the summer school, the students thought there had been no drawbacks at all.

> "I wouldn't say there was a bad thing about it really."

> "There's no drawbacks really. I'd like to come here any time."

For others, the main drawback mentioned was how sad they were going to be when they had to leave the summer school ('Leaving will be the drawback!')

Missing out on summer holiday time

Although missing out on summer holiday time was mentioned as a drawback in eleven interviews, many of these students added that they didn't mind that.

> "It's cut the holiday in half but that's not a negative thing because I wouldn't have done anything so worthwhile in the three weeks anyway."

> "You lose half your summer holidays but it's worth it."

However some did mention that family holidays had been interrupted or given up to enable the student to attend the summer school. Others had been given a lot of coursework or other schoolwork to do over the summer holidays and expected problems in fitting that in as well as the three-week summer school.

Missing out on other things

In twelve interviews, students mentioned missing out on a range of other things as a drawback of being on the summer school. They were aware that they were missing out on things going on at home, on time with their friends, on the parties and films other friends were enjoying, on their hobbies and activities they could have done at home. Others spoke of missing out on time with their families, of being homesick and of missing their dog.

Other drawbacks

In fifteen interviews, a number of other drawbacks were mentioned, each by a very small number of individuals. These included:

- the bedtimes;
- the rules against hugging or touching the RAs;
- the food;
- the lack of free time;
- the extent of supervision;
- the delay in receiving detailed information about the summer school;
- the fees (not everyone had supportive schools or parents willing to fund it – one girl sold her clarinet to help pay the cost).

7.1.3   Parent views on gains / drawbacks

When parents were asked about the drawbacks from their children attending the summer school, parents of children attending Warwick felt that distance from home and friends was a slight drawback, compared to those in Canterbury and Exeter sites.

When parents were asked about drawbacks from attending the summer school, around half of them stated that not having a proper summer break and being away from family and friends were not important drawbacks. Around three quarters did not see attending the summer school as being irrelevant to their children's future education plans or causing difficulties in their children adjusting back to their school, or raising expectations that cannot be met at school. Finally, around 67% felt that financial pressure was slight or non-existent, but for about one in ten this was an important concern. In open answers, some parents commented that their child's school had not contributed the school share of the cost. A number of parents made strong appeals for information about summer school dates and courses to be available before Christmas if possible and certainly by January so that family holidays could be booked around it.

Table 22: Parents' views on benefits and drawbacks of the summer school (%)

	Great Extent	Somewhat	Slightly	Not At All
No break	5.6	16.6	22.3	52.7
Irrelevance	5.1	8.5	10.4	73.8
Distance	5.6	16.3	24.5	51.3
Financial Pressure	9	20	31.3	36.9
Adjusting back	3.4	9.6	16.1	65.9
Raising expectations	11.8	17.7	25.9	41.1

7.2   A worthwhile experience?

Across sites, students' responses on whether the summer school experience was worthwhile ranged from 'very worthwhile to worthwhile'. Specifically, almost all students (98%) attending summer school at all 5 sites stated that the summer school experience was worthwhile.

When asked if they had any other comments about the overall experience of the summer school, most of the students interviewed took the opportunity to sum up their hugely positive views of their time at the 2003 summer school. The following quotations offer a flavour of these comments.

"I'd recommend it to anyone in the Academy."

"It's been an amazing experience that I'll never forget."/ "Everyone has worked hard , the pupils, the RAs, the lecturers."/ "Everyone has put so much effort in that you just feel grateful to be part of it."/ "I feel very honoured, as well."/ "Yes, you feel really privileged to be here."

"It's been a life-altering experience."

"Just that I really like it, I'd like to stay longer, and that there's not one bad thing, I don't think, about it. It was really good."/ "It's been fantastic."

"I can't pick up on anything negative – it's been the best. The activities we do ... /.. and the learning we've done. It's been so unlike school learning, a lot of it."/ "I don't want to go home. It feels too short!"

Table 23: Students' overall views about the summer school (%)

Site	Very Worthwhile	Worthwhile	Not Very Worthwhile
Canterbury (n=103)	71.8	27.2	-
Durham (n=56)	87.5	10.7	1.8
Exeter (n=75)	76	24	-
Warwick (n=161)	73.9	24.8	1.2
York (n=87)	77	21.8	1.1

7.3 Students' views on impact on family life

More than half of all students said that their participation in summer school has had an impact on family life in terms of re-arranging summer holidays.

Table 24: Students' views on impact on family life (%)

		Very Good /Great Extent	Good / Somewhat	Poor /Slightly	Very Poor / Not At All
Canterbury (n =103)	Summer Holidays	24.3	37.9	18.4	18.4
	Financial Pressure	6.8	18.4	31.1	42.7
Durham (n=56)	Summer Holidays	21.4	41.1	16.1	19.6
	Financial Pressure	5.4	17.9	32.1	42.9
Exeter (n=75)	Summer Holidays	29.3	38.7	17.3	14.
	Financial Pressure	6.7	20	30.7	41.3
Warwick (n=161)	Summer Holidays	32.9	25.5	20.5	21.1
	Financial Pressure	9.3	24.2	24.8	38.5
York (n=87)	Summer Holidays	31	27.6	19.5	21.8
	Financial Pressure	8	19.5	31	40.2

When they were asked about potential financial pressure, around 70% of the students stated that this was not an issue. In terms of looking for significant differences between sites on making arrangements for summer holidays and putting financial pressure on parents / guardians, no significant differences were found.

No significant differences were found between sites regarding students' views regarding the impact on family life in terms of putting financial pressure and making arrangements for summer holidays.

7.4 Parents' views on feedback

Around 40% of parents were somewhat satisfied with the level of feedback they received with respect to their children's learning and social participation.

There were significant differences found in parental responses between sites regarding the level of feedback they received on their children's learning and social participation. Specifically, regarding feedback on learning, parents of children attending the summer school at Exeter were less positive compared to those in all the other sites, i.e., Canterbury, Durham, Warwick and York. Following the same trend, parents at Exeter were less positive on the feedback they received regarding their children's social participation, compared to the responses received from Canterbury and Durham.

Table 25: Parents' views on feedback (%)

	Great Extent	Somewhat	Slightly	Not At All
Learning	31.3%	42.8%	12.1%	7.3%
Social	18.6%	44.2%	20.3%	10.1%

7.5   Length of the summer school

7.5.1   Students' views on the length of the summer school

In the group interviews with a total of 87 students, students were asked directly about their views on the length of the summer school:

- 24 students thought the summer school should be longer than three weeks;
- 54 students thought three weeks was the right length;
- 4 students thought the summer school should be shorter.

Those who thought the summer school should be longer mentioned academic and social reasons, as well as sheer enjoyment of the whole experience.

"Three weeks is the minimum! In the first week, you're making friends, in the second week you're just getting into it. I'd like it to be two weeks longer."

"From the learning aspect, it really needs more than three weeks."

"I think three weeks is too short. They are cramming so much in – social stuff and trips, there's only about three or four teaching days in the week."

"It should be longer. I love it here!"

Those who thought the three week summer school was about the right length tried to balance the social and academic gains made that they believed required three weeks against the loss of holiday time and the time away from family and friends; they also referred to the importance of the middle week.

"I don't think it should be any shorter because the impact of the course makes an incredible impression on you and you really need time to catch up with that."

"If it was shorter, you wouldn't get so much covered and you wouldn't get to know so many people."

"Three weeks is about right because you get to cover most things in the course and you are not away from your parents that much, and you still have a couple of weeks left before you go back to school."

"I think three weeks works well – you have one week to work up, one to work really concentratedly and one week to wind down."

"The middle week is really important when you are not thinking about the beginning or the end."

"Three weeks is a long time but it is so worthwhile. I'd be thoroughly upset if it is changed to two weeks."

Only four students interviewed thought the summer school should be shorter. These gave individual reasons.

"Two weeks would have been an optimum. Three weeks is dragging a little."

"Three weeks is half your summer holiday."

"I want to get back to reality again, visit the shops."

"From the social aspect, it is too long."

Overall, then, the students interviewed wanted the summer school to remain as at least three weeks long.

7.5.2   Tutors' views on the summer school length

In the individual interviews with the course leaders/tutors, a direct question was asked about the length of the summer school:

- None thought the summer school should be longer than three weeks;
- 9 course leaders thought three weeks was the right length;
- 12 course leaders thought the summer school should be shorter;
- 4 course leaders did not mind if it was two or three weeks.

Those who thought three weeks was the right sort of length for the summer school thought that this length suited the material and approach of their course.

"Three weeks is about right because you need that time to get through the amount of material."

"Courses have natural rhythms and if I had to do it in two weeks I would have to either change the course altogether or structure it very highly. The way it is fits well for three weeks; if you make it two, there will be a loss in terms of students' feelings of ownership."

"As far as the material is concerned, as far as the teaching is concerned and their developing understanding of how to do biology, the third week has actually been incredibly helpful to us because, over the first two weeks, we've been gearing people up, both in terms of knowledge, but also in terms of skills and approaches, to the way in which we think about doing research in biology. And it's only this week, for me, that we've really had an opportunity to explore what that means in practice."

"It's been good for us because it has allowed us depth and breadth. In two weeks, we would be able to do less. And it seems to work well for the social side of the teaching groups."

Those who thought future summer schools should be shorter identified several reasons for this: enough could be covered in two weeks, it would be less tiring for the students, it would take less time away from students holidays and, crucially, less time away from busy research-active academics.

"I think we can achieve a huge amount in two weeks and it would really condense and compress ideas."

"Two weeks might be sufficient. They don't have many holidays anyway and I think in two weeks you can get the same fun, excitement about maths. Three weeks is a long period. And from our point of view, the summer period is important to do research and this year our research suffered. Of course, now we have the material it is easier next time but still three weeks delivery time is difficult – staff tend to go on conferences and annual leave at some stage, preparing research. It's still going on – the summer school is just an add-on."

"It's too long. I can see they are a bit tired this week. They're missing home. Also three weeks out of six is a lot. They need a break."

"The students seem to be managing at the academic level; they are still interested. But I think it is too long from the time and effort required from academics. I think it will be better at 2 weeks. And who knows how many were put off by it being three weeks."

Those course leaders who did not mind if the summer school was to be two or three weeks in the future believed they could easily adapt their course to a two-week one if necessary.

"It does not make any difference to me whether it is two or three weeks. I can adapt the material accordingly."

While discussing this issue of length, two tutors suggested that it might be a good idea if future summer schools coincided with the last week or two of the state school term, as this would take less time out of the school holidays. In addition, three believed strongly that the length of the teaching day was too long.

7.6 Future plans

More than 50% of all students stated that they would like to attend summer school next year, with those attending the Warwick summer school scoring around 60%. Similarly, around three quarters (75%) of students across sites said that they would recommend summer school to a friend. Also, across sites, students were equally positive with regard to attending the summer school next year and recommending it to a friend.

In open answers on the questionnaire, it became clear that for a substantial minority (n=30) who did not plan to attend summer school next year, this was because they would be too old unless the upper age limit were to be raised. In open answers on the parent questionnaire, the issue of provision by NAGTY for over 16s was also raised.

Table 25: Students' future plans (%)

Coming next year	Site	Yes	No	Possibly
	Canterbury (n=103)	59.2	1.9	12.7
	Durham (n=56)	50	3.6	12.5
	Exeter (n=161)	55.3	2.7	17.3
	Warwick (n=161)	60.2	3.1	12.4
	York (n=87)	50.5	2.3	11.5
Recommend to a friend		**Yes**	**No**	**Possibly**
	Canterbury (n=103)	69.9	6.8	11.6
	Durham (n=56)	85.7	1.8	12.5
	Exeter (n=75)	82.7	4	4
	Warwick (n=161)	75.2	3.1	6.2
	York (n=87)	72.4	2.3	3.4

The interviews with students indicated that, to a certain extent, the effects of the summer school on students' thinking about their own futures depended on how certain they already were about what they wanted to do when they left school. For example, for those who already knew they wanted to go on to university, the summer school experience had confirmed this choice or made them more determined to do so. Some who had little idea of what they wanted to do found a sense of direction about which subject they wanted to study further; others were no clearer about the future than they had been before.

8. SUGGESTIONS FOR FUTURE IMPROVEMENT

8.1   Students' suggestions

When students were asked to state whether there was something they would like to improve with respect to the overall learning experience, the majority said that there was nothing in that the work was fun, informative and challenging. A few students suggested that having a 'get to know each other session for both students and tutors' might be a good idea.

8.1.1   Design and teaching of the courses

When asked this question, the students in a third of the interview groups had only positive comments to make with no suggestions for improvements.

> "I don't think the teaching could have been improved. ... the teaching was superb."

> "I can't honestly say there's been anything bad about it because each teacher has their own style and so we come to respect that."

The suggestions that were made for improvements to the design and teaching were, naturally, mainly specific to individual courses. These focused on the range of material and the teaching methods. For example, some students said that they would have liked to learn a bit more about cultures and languages, to be exposed to unusual aspects of the subject that they normally would not do at school, to have more computer access and to be given more handouts. They also spoke about being introduced to a wide range of Drama techniques, more emphasis on mechanical engineering, and a wider range of writing forms such as journalism.

Two issues arose which are perhaps worth more general consideration: the composition of the groups and the length of the teaching sessions or day.

8.1.2   Composition of groups

The issue about the composition of the groups was to do with the wide range of knowledge, experience and understanding that was evident in groups of 11-16 year olds. This was raised in four interviews but links to the views expressed by a substantial number of tutors that the wide age range caused problems. In one interview, the group agreed that it might have been better to split the group by age. In another group however the same idea was discussed and rejected, the students arguing that it was fairer to make the separate groupings based on knowledge and experience of the subject and recognising that age was not necessarily the key factor. Differences in knowledge and experience were also raised in two other groups. The key issue seems to be whether or not NAGTY's aim is to organise summer school courses around a group tending towards homogeneity in knowledge and experience and/or in age or whether a heterogeneous group is aimed at.

8.1.3   The length of sessions/teaching day

Two student interviews raised the issue of the length of the teaching sessions and one the length of the teaching day. This was also raised by 25 students in open answers on the student questionnaire. Again, these points link to comments made by some course leaders. This is an issue about optimal conditions for learning – it

may indeed be that the length of individual sessions and of the overall teaching day could be reviewed in the light of comments by tutors and students.

8.1.4   Other suggested improvements

In seven interviews suggestions were made for minor refinements to the *course content*; these mirrored the sorts of comments course leaders made when asked how they would change their course. In nine interviews, similarly minor suggestions were made for adjustments in the range and variety of *teaching methods* used. Such comments were also reflected in open answers on the student questionnaire. The interesting thing here is that the students cared enough and were astute enough to be able to make such suggestions.

In one interview, the students agreed that they would have preferred to have been taught only by tutors used to teaching school-age children, a comment also made by a small number of students in open answers on the student questionnaire.

The overwhelming impression from the interview data is that the students enjoyed interesting courses that were well taught and from which they gained a range of educational benefits.

Overall, in terms of groupings, some students suggested smaller classes, separate classes according to age with more specific age groups and provision for those who need more stimulation. Regarding the lectures, a small number of students stated that they would have liked 'more teaching rather than lecturing' with more pupil involvement. With respect to the learning day students felt that shorter and more frequent lessons with more breaks would have been better for concentration.

Social activities

In five interview groups (three from Exeter, one from Warwick and one from York), the students had no suggestions for improvements to the social activities of the summer school, instead making comments such as:

> "I don't think I have anything negative to say; it's all been very good."

> "I think it's pretty sound."/ "Yeah, really sound."

Suggestions for improvements made in the other interviews focused around four issues, issues also reflected in open answers on the student questionnaire:

- the bedtimes;
- the over-protectiveness of the RAs
- the lack of free time (see section above);
- more facilities.

After complaints from parents, the bedtimes in Canterbury had been changed from a later to an earlier time and this caused some disapproval – the issue was raised in four of the five student interviews there. Most of the students interviewed wanted the times to be made later again, even by half an hour, although some thought they should simply be made more flexible to cope with individual sleeping habits and needs. Wanting later bedtimes was also raised during one interview in each of the Durham, Exeter and Warwick sites. Just to prove that you can't please everyone all

the time, three students spoke about being 'absolutely knackered' or 'shattered' by the time their bedtime came and wanted to be allowed to go to bed earlier.

In one interview each from the Canterbury, Durham and York sites, the issue of the RAs being 'over-protective' was raised. These students understood why the level of supervision was so high but they thought there were 'too many restrictions' with one saying he felt 'quite oppressed almost'.

A small number of students mentioned wanting access to particular facilities:

- a bit more physical space – the Students Union is too cramped'
- access to a computer at all times [to send and receive e-mails from parents
- enough RAs so that there could be one energetic activity, one thinking activity and one chill-out activity every evening;
- access to campus, or nearby, shops.

8.2   Tutors' suggestions

8.2.1   Changes to courses

None of the course leaders interviewed wanted to make major changes to the content of their courses for future years, rather the emphasis was on minor adjustments and refinements. These included ideas such as the following:

- including more 'getting to know you' activities early on ('teaching is about relationships and you have to spend time talking to people')
- being more focused ('less material and greater depth')
- including more inter-disciplinary activities
- including more interactive learning materials.
.
At a structural level, a small number wanted to split the age group or to develop two, or even three, more specialised courses out of the material used this year.

8.2.2   Changes to summer school

Suggestions for changes to the summer school were also relatively minor and across a range of issues: though some engendered strong feelings in individuals, no issue was raised by a large number of the course leaders interviewed. The issues raised can be broadly grouped into general administrative issues potentially relevant to NAGTY and all sites and more site-specific issues.

Taking the general administrative issues first:

- two course leaders thought that communication with NAGTY at Warwick had not been very good;
- three thought that NAGTY should ensure the summer schools were advertised more widely to ensure that news of the summer schools penetrated through to more schools;
- one thought that there should be more co-operation between institutions to make things easier;
- one had very strong feelings that the amount of red tape was too great ('prescribed, formalistic assessments and learning outcomes') and that the level of inspection was too high;

- one wanted the age specification of courses to be adhered to and for all students to know exactly what sort of course they were coming to;
- one wanted the administration procedures to be improved over allocating students to first or second choices;
- two wanted better selection of students, more stringent than the first-come, first-serve approach adopted this year;
- one wanted better information about the students before the course started;
- one thought not enough money had been allocated within the non-teaching budget.

At a site-specific level, issues raised included:

- an awareness that some students, especially the older ones, had found the constraints a bit 'oppressive' or 'heavy-handed' (raised in Canterbury and Durham);
- a desire to have joint planning across the subjects offered to allow for 'more integrated courses' (Canterbury);
- a need for more formal meetings between academic and residential staff to ease communication and to improve understanding of the demands being placed on students (Exeter and Durham);
- a preference for students to be sited in one area of the university rather than scattered across different sites (Exeter);
- a dislike of the written feedback system 'simmers' used in the York site;
- the need to provide suitable teaching rooms for all courses (York);
- the need to provide plenty water in teaching rooms - the summer was very hot but other summers may be too (York).

The fact that no single 'burning issue' emerged when course leaders were asked about suggestions for changes to the summer school suggests that the current model works well. If appropriate attention is paid to the issues raised in this report, the NAGTY summer schools look set for a successful future.

9. SUMMARY OF FINDINGS

➢ The majority of students joined the Academy as members in 2003 with a small number joining the year before. In addition to the summer school, around one third of students had been involved in other activities offered by the Academy including master classes and university-based conferences, with a very small number of students taking up on-line opportunities.

➢ Most students found accessing information about the Academy easy, stating that teachers at schools were their main source of information. The latter suggests that schools have been pro-active in terms of disseminating information to students and parents about NAGTY.

➢ The nature of the course and personal interest in the subject matter came out as the most important factors in deciding on subjects initially. When deciding on location, a large number of students were influenced by subject choice primarily, with around half of the students attending the Warwick site stating that geographical location was also a determinant factor.

➢ Around half of all students felt that the Academy had encouraged participation of young people from diverse socio-economic and socio-cultural backgrounds, with a large percentage of students coming from the state school sector.

➢ Regarding ethnicity, the majority of students (65% to 80%) were White with a small percentage of students of Indian and Pakistani origin. The ethnicity figures show an under-representation of students of Black African and Black Caribbean origin.

➢ With regard to disability and SEN, a great percentage of students (around 95%) did not report any disability or special educational needs, pointing to the need to consider issues of access, recruitment and entitlement to gifted programmes for students with SEN.

➢ Enjoyment and relevance to a future career were the most frequently stated reasons by students for choosing their subjects. When asked about certain dimensions of their subjects, the quality of teaching was rated very highly by students across sites. The balance between theory and practice, range of materials, level of challenge and coverage of the subject matter were also rated positively.

➢ The majority of parents agreed that the learning experience was relevant to their children's ability and expectations / aspirations. Also, most parents reported that the process of receiving feedback regarding their children's learning and social participation was satisfactory.

➢ Students across the summer school sites expressed divided views on receiving guidance regarding future education and career choices (between 40% and 50% were positive and 50% to 60% were negative). Parents expressed similar views regarding guidance for career choices only, whereas they were more positive about guidance regarding future education, the development of study skills and support for individual needs. With regard to whether the summer school had helped students for future education, training and work, many parents felt that summer school participation had helped their children to a great extent to gain an insight into university life and enhance motivation, as well as increased their understanding of their strengths and limitations.

➢ Across sites, the overall social experience was rated very highly by both students and parents. Social aspects such as meeting like-minded peers and developing long-term contacts with NAGTY were viewed as being very important.

➢ With respect to the residential experience, the role of the residential assistants was seen as being vital by a large number of students. Also many students expressed satisfaction with the support provided by residential staff and counsellors, and by the organization of 'fun' activities.

➢ When students were asked about potential gains, prior to going to the summer school, they felt that support with homework was the least potential gain. On the contrary, acquiring knowledge regarding their subject and making friends were seen as potential gains. Regarding the actual gains, developing problem-solving skills, expanding horizons, supporting personal interests and finding out about university life were rated very highly by most students. Also, they reported social benefits in terms of meeting new friends, socializing with like-minded peers, gaining self-confidence and developing tolerance and understanding. Overall, students felt that they benefited by attending the summer school academically, socially and in terms of future education / career. Similarly, parents also felt very positive about the summer school experience and its benefits.

➢ The majority of students did not see any major drawbacks from attending the summer school other than missing out on summer holiday time, friends and home. Some saw a number of drawbacks in terms of lack of free time, the extent of supervision, delays in receiving detailed information about the summer school and bedtimes.

➢ Thinking about the drawbacks that their children might have experienced, parents felt that not having a proper break and adjusting back to school were minor concerns. However, one in ten parents stated that financial pressure was a concern. Also, raising expectations that might not be met at school was a concern for almost three quarters of parents.

➢ The majority of students and their parents felt that, overall, the summer school experience was very worthwhile, with a large number of students stating that they would like to attend the summer school next year and that they would recommend it to a friend.

➢ The course leaders' views were very positive, overall, in that they saw personal and professional benefits as a result of their involvement in the summer school. These were expressed in terms of enjoyment of teaching, satisfaction from working with students that are intelligent, enthusiastic and responsive, and willingness to teach this group again. Some felt that the workload was high, stating that their university research was likely to suffer. A small number of course leaders raised concerns about the use of the label 'gifted and talented', as well as the validity of the selection process for Academy membership.

➢ With respect to the length of the summer school, the majority of students and course leaders felt that 3 weeks is the right length.

➢ Regarding suggestions for future improvement, there were issues raised by students with respect to the composition of groups, the length of the teaching day and the 'compulsory' nature of the social activities. Tutors' suggestions for changes to the summer school were relatively minor, mainly pertaining to co-

operation between institutions, communication between academic and residential staff, course leaders' professional development, administration procedures and widening advertisement for NAGTY.

10. CONCLUSIONS

The second year of NAGTY operations have been undertaken with a high level of success. The summer school experience has been valuable socially and academically. Students and their parents felt that the overall learning, social and residential experience has been very worthwhile. There are a number of academic, social and long-term benefits mentioned by both students and their parents, reflecting on very few drawbacks, mainly with regard to missing out summer holidays, lack of free time and the extent of supervision. The course leaders also expressed positive views about their professional and personal involvement with the summer school.

NAGTY has made significant progress in terms of identifying and developing a clear role within the national and international provision for gifted and talented young people. This year, NAGTY has expanded its role above and beyond the establishment of summer school to include other activities such as master classes, university-based conferences and on-line learning experiences. Also, this year, partner institutions were involved offering summer schools in five different locations across England.

There is evidence to suggest that NAGTY has been proactive in terms of encouraging students from the state sector. However, in terms of ethnicity and SEN, the recruitment of students of Black African and Black Caribbean origin, as well as students with disabilities or SEN requires further consideration.

There are issues identified by our evaluation which will need to be addressed.

➢ Accessing information regarding the application process was smooth although a number of parents and students felt that information required to prepare them for their arrival at the summer school came late.

➢ The length of the summer school (3 weeks) was seen as appropriate by the majority of both students and course leaders. There were some concerns raised however with regard to the length of the teaching day and the composition of the groups in terms of age range, ability and social maturity.

➢ Although this year the Academy ensured wider publicity than last year's, the view expressed was that there is still room for widening advertisement for NAGTY. Issues regarding selection criteria, the contested nature of the label 'gifted and talented', the co-operation between institutions, the communication between academic and residential staff, course leaders' professional development and administration procedures were also raised.

APPENDIX: Subjects

Sites	Subjects	Frequencies	Percentages	Total
Canterbury (n =103)	Citizenship/Politics/ Law	19	18.4	
	Creative Arts	19	18.4	
	English	11	10.7	
	Classics	-	-	
	Modern Language	18	17.5	
	Maths	34	33	101 cases
Durham (n=56)	English	12	21.4	
	Culture	16	28.6	
	Philosophy	16	28.6	
	Psychology	12	21.4	56 cases
Exeter (n=75)	Computing	13	17.3	
	Classics	10	13.3	
	Drama	13	17.3	
	History	11	14.7	
	Maths	16	21.3	
	Geography	10	13.3	75 cases - 2 missing
Warwick (n=161)	Chemistry	15	9.3	
	Creative Writing	18	11.2	
	Engineering	16	9.9	
	Drama	17	10.6	
	Ecology	14	8.7	
	Economics	15	9.3	
	Politics	15	9.3	
	Maths	36	22.4	
	Sports	14	8.7	161 cases 1 missing
York (n=87)	Biology	17	19.5	
	Maths	17	19.5	
	Physics	17	19.5	
	Health /Disease	17	19.5	
	Understanding	17	19.5	87 cases 2 missing

In those sites (i.e., Canterbury, Exeter, Warwick and York) that Maths was offered as a subject a relatively large number of students took it, suggesting that it is a popular subject.

Acknowledgements